

Модули IGBT ixys купить в Минске

www.fotorele.net www.tiristor.by радиодетали, электронные компоненты
email minsk17@tut.by tel.mob +375 44 758 47 80 velcom +375 29 758 47 80 МТС

Мы не работаем с частными (физическими) лицами.

Мы работаем только с юридическими лицами(организациями) и ИП и только по безналичному расчёту.
подробно смотрите ниже: описание, характеристики, datasheet QR код

Модуль, igbt, ixys купить в Минске

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подробно смотрите ниже: описание, технические характеристики, datasheet, фото, каталог

QR код

YS



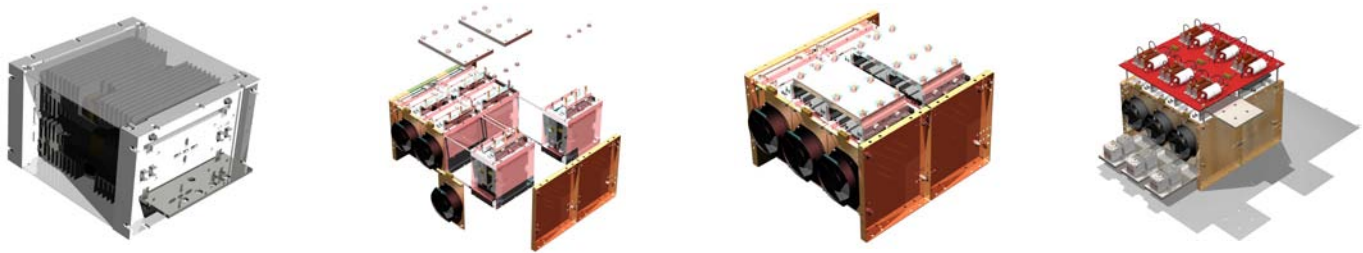
Westack - Modular Solutions

Cooling for each module section is provided by the use of a low noise 115/230 V ac fan which is protected against overloading by an integral thermal cut-out.

Surge suppression and fusing provides reliable and safe operation. Surge suppression (protecting the devices from voltage transients) and high speed fuses (to protect against short circuit) are available. Contact IXYS UK for details.

All plastic components are UL recognised and meet the requirements of the European Union Directive 2002/95/EC covering the restricted use of certain hazardous substances in electrical and electronic equipment.

ISO 9000 provides the standard against which all our products and services are measured.



Westack - Modular Solutions are available in 6 standard configurations, others by request.



Figure 1
Weight 20 kg



Figure 2
Weight 40 kg



Figure 3
Weight 20 kg



Figure 4
Weight 60 kg

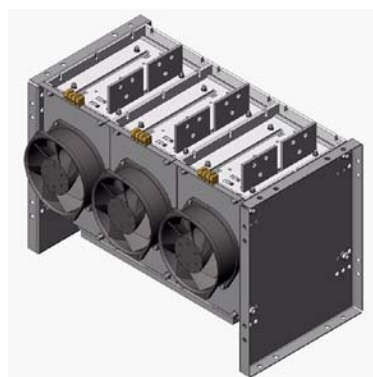


Figure 5
Weight 30 kg

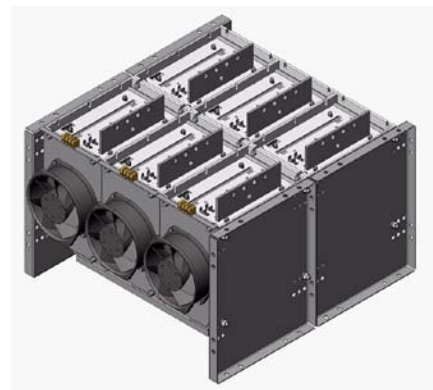


Figure 6
Weight 60 kg

WestackLITE - Modular Solutions

A simple but highly efficient range of stacks incorporating the new **WESPACK** range of phase control thyristors.

Currently available in 3 standard configurations:

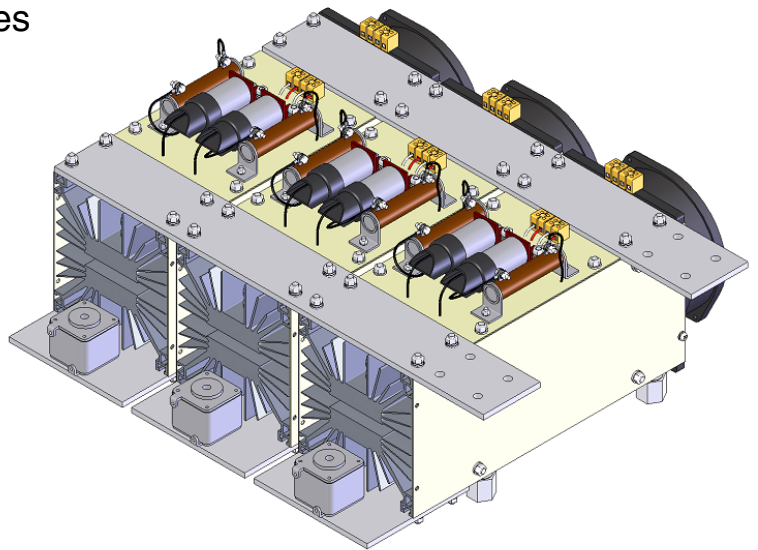
AC voltage regulators

Single-phase bridges

Three-phase bridges

These stacks can easily be modified to meet individual customer requirements.

Fully dimensioned drawings are available upon request from the Chippenham Factory.



Features and Benefits

WESPACK devices provide the maximum power rating for weight and volume without compromising on quality and reliability.



Cooling is provided by means of a low noise dual voltage (230V/115V) ac fan that is protected against overloading by an integral thermal cut-out.

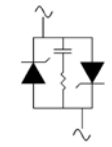
Surge suppression and fusing can be added to protect the devices from voltage transients and short circuits.

ISO 9000 2000 provides the standard against which all our products and services are measured.

AC regulators

Approx. total loss $1.3 \cdot I_{RMS}$

| Assembly Part Number | I _{DC} amps Air Forced 5m/s | | | I _{FSM} amps | I ² t A ² s | Dimensions mm | | | | Mass kg | Device Type and Quantity | Heat Sink Type |
|----------------------|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------------------|---------------|-----|-----|-----|---------|--------------------------|----------------|
| | T _a = 25°C | T _a = 35°C | T _a = 45°C | | | Fig. | W | H | D | | | |
| SXC1195FR | 1195 | 1098 | 997 | 19100 | 1.82x10 ⁶ | 1 | 168 | 415 | 212 | 10 | N1806QK (2) | (2x150, 1x330) |
| SXC1464FR | 1464 | 1348 | 1227 | 32400 | 5.25x10 ⁶ | 1 | 168 | 415 | 212 | 10 | N2367MK (2) | (2x150, 1x330) |
| SXC1788FR | 1788 | 1636 | 1480 | 50900 | 12.95x10 ⁶ | 1 | 168 | 415 | 212 | 10 | N3904HK (2) | (2x150, 1x330) |



Single phase fully controlled bridges

Approx. total loss $2.5 \cdot I_{DC}$

| Assembly Part Number | I _{DC} amps Air Forced 2.5m/s | | | I _{FSM} amps | I ² t A ² s | Dimensions mm | | | | Mass kg | Device Type and Quantity | Heat Sink Type |
|----------------------|--|-----------------------|-----------------------|-----------------------|-----------------------------------|---------------|-----|-----|-----|---------|--------------------------|----------------|
| | T _a = 25°C | T _a = 35°C | T _a = 45°C | | | Fig. | W | H | D | | | |
| SXC1076FB | 1076 | 988 | 897 | 19100 | 1.82x10 ⁶ | 2 | 330 | 415 | 212 | 20 | N1806QK (4) | (2x150, 1x330) |
| SXC1318FB | 1318 | 1213 | 1104 | 32400 | 5.25x10 ⁶ | 2 | 330 | 415 | 212 | 20 | N2367MK (4) | (2x150, 1x330) |
| SXC1609FB | 1609 | 1473 | 1332 | 50900 | 12.95x10 ⁶ | 2 | 330 | 415 | 212 | 20 | N3904HK (4) | (2x150, 1x330) |



Three phase fully controlled bridges

Approx. total loss $3 \cdot I_{DC}$

| Assembly Part Number | I _{DC} amps Air Forced 2.5m/s | | | I _{FSM} amps | I ² t A ² s | Dimensions mm | | | | Mass kg | Device Type and Quantity | Heat Sink Type |
|----------------------|--|-----------------------|-----------------------|-----------------------|-----------------------------------|---------------|-----|-----|-----|---------|--------------------------|----------------|
| | T _a = 25°C | T _a = 35°C | T _a = 45°C | | | Fig. | W | H | D | | | |
| SXC1517FG | 1517 | 1396 | 1270 | 19100 | 1.82 x 10 ⁶ | 3 | 492 | 415 | 212 | 30 | N1806QK (6) | (2x150, 1x330) |
| SXC1871FG | 1871 | 1725 | 1573 | 32400 | 5.25 x 10 ⁶ | 3 | 492 | 415 | 212 | 30 | N2367MK (6) | (2x150, 1x330) |
| SXC2319FG | 2319 | 2125 | 1926 | 50900 | 12.95 x 10 ⁶ | 3 | 492 | 415 | 212 | 30 | N3904HK (6) | (2x150, 1x330) |

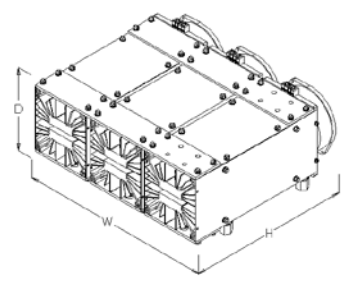
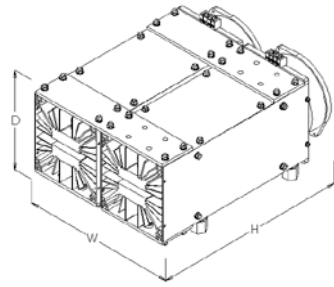
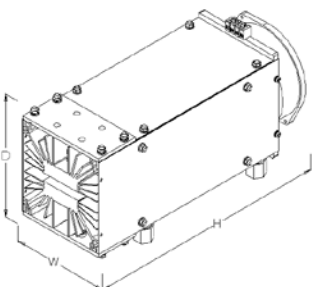
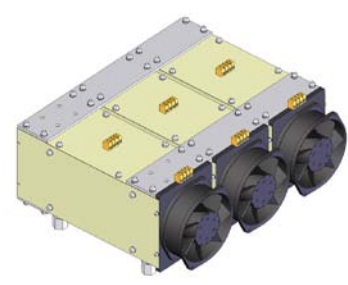
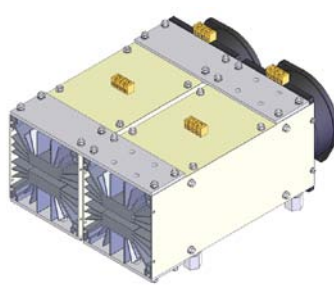
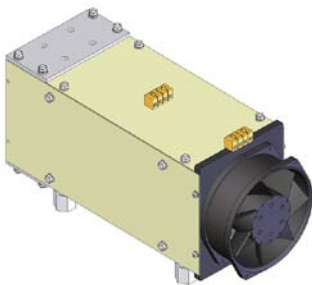
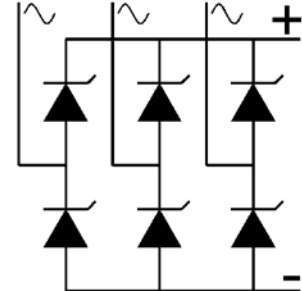
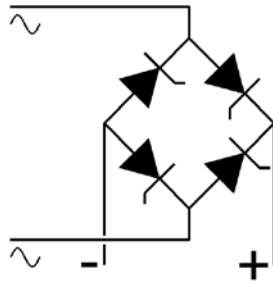
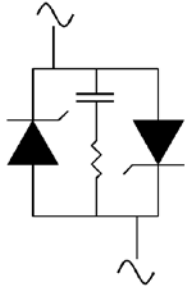
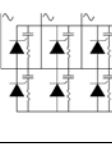


Figure 1
Weight 10 kg

Figure 2
Weight 20 kg

Figure 3
Weight 30 kg

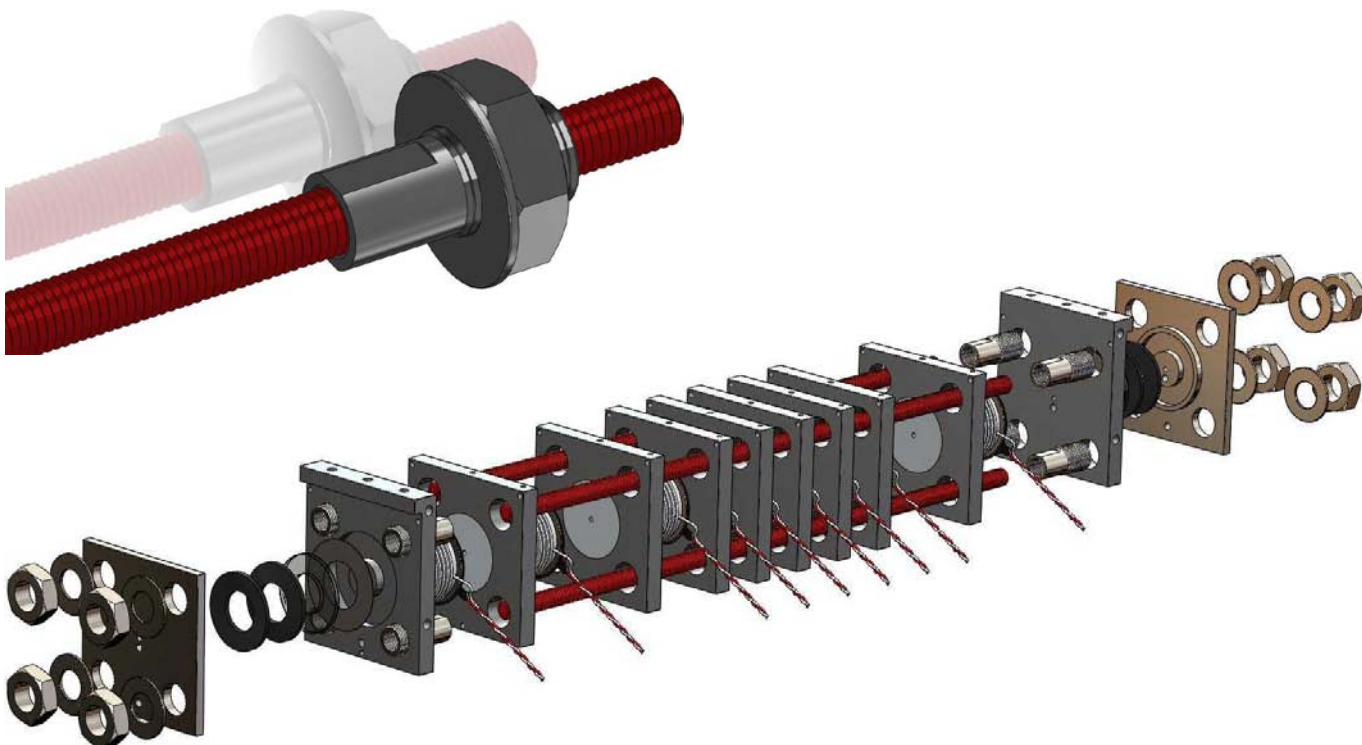
Power Semiconductor Accessories

As part of our continuing commitment to meet our customers' demands, we offer a range of products to support our high power semiconductor devices and our silicon assembly business.

The following pages show a selection of accessories available to our customers, from heatsinks and coolers, to bar or box clamps, to mounting grease!

| Part number | Old Part Number | Accessory |
|---------------|-----------------|---|
| XSGSCX13 | C7149 | Press Pack Semiconductor Mounting Grease - supplied in 1kg tins |
| XST1000M08P | PTFE1000M8 | M8 PTFE tube x 1m length insulation |
| XST1000M10P | PTFE1000M10 | M10 PTFE tube x 1m length insulation |
| XST1000M12P | PTFE1000M12 | M12 PTFE tube x 1m length insulation |
| XST1000M16P | PTFE1000M16 | M16 PTFE tube x 1m length insulation |
| L0001YC600XXX | n/a | 30mm diameter poleface Insulator Capsule |
| L0001QC600XXX | n/a | 38mm diameter poleface Insulator Capsule |
| L0001NC600XXX | n/a | 47mm diameter poleface Insulator Capsule |
| L0001HC600XXX | n/a | 66mm diameter poleface Insulator Capsule |
| L0001ZF600XXX | n/a | 73mm diameter poleface Insulator Capsule |
| L0001TC600XXX | n/a | 75mm diameter poleface Insulator Capsule |

| Part number | Old Part Number | Accessory | Type |
|--------------|-------------------|---|-----------|
| XSL200D8WRC | U9948 | 200mm long single Co-Axial cable, Red / White, M5 ring terminal for Ø75 IGBT & below | IGBT |
| XSL200D8WRCP | U9947 | 200mm long double Co-Axial cable, Red / White, M5 ring terminal for Ø85 IGBT & above | IGBT |
| XSL220C2WRT | | 220mm long twisted pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL300C2WRP | U9900 | 300mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL300C2WS | U9900 (Gate Only) | 300mm long gate wire, Silicone sleeve cable 16/0.2, White, M4 ring terminal | Thyristor |
| XSL350C2WRP | U9723 | 350mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL400C2WRP | U9860 | 400mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL500C2WRP | U9855 | 500mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL600C2WRP | U9775 | 600mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL1000C2WRP | U9734/U9801/U9849 | 1000mm long pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL1000C2WRT | U9952 | 1000mm long twisted pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |
| XSL1100C2WRT | U9779 | 1100mm long twisted pair, Silicone sleeve cable 16/0.2, Red / White, M4 ring terminal | Thyristor |



We can supply discrete parts, kits of parts or complete assemblies to satisfy your requirements. Please contact the Chippenham Factory for further information.

Standard Bar Clamps

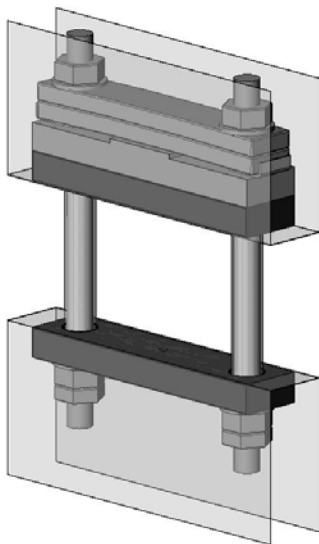
| Part Number ○ Not for new design * | Fixing Centres mm | Rod Size | Capsule Device | | | | Outline No. |
|---|----------------------|----------|----------------------|---------------------------------|-------------------------|--|----------------------|
| | | | Outline | Mounting Surface Diameter mm | Nominal Thickness mm | T _j Max °C | |
| XK0450DA056M XK0450DT056M XK0450SA056M | 65 | M8 | DO-200AA / TO-200AB | 19.0 | 13.8 | 190 | WC2 WC3 WC1 |
| XK0550DA056M XK0550SA056M | 65 | M8 | GTO | 29.5 | 16.0 | 190 | WC5 WC4 |
| ○ XK0900DA056M ○ XK0900DT056M XK0900SA056M | 65 | M8 | Diode / Thyristor | 25.1 | 14.6 | 190 | WC7 WC8 WC6 |
| XK0600DA074M XK0600SA074M | 89 | M10 | Press-Pack IGBTs | 47.0 | 27.0 | 190 | WC10 WC9 |
| XK1000DA074M XK1000SA074M | 89 | M10 | Press-Pack IGBTs | 47.0 | 27.0 | 190 | WC12 WC11 |
| XK1100DA076M | 89 | M10 | DO-200AB / TO-200AC | 34.0 | 26.2 | 190 | WC13 |
| XK1130DA076M XK1130DT076M XK1130SA076M | 89 | M10 | DO-200AB / TO-200AC | 34.0 | 26.2 | 190 | WC15 WC16 WC14 |
| XK1800DA076M XK1800DT076M XK1800SA076M | 89 | M10 | Wespack PCT | 38.0 | 14.0 | 190 | WC18 WC19 WC17 |
| XK2100DA076M XK2100DA076ML XK2100SA076M XK2100SA076ML | 89 | M10 | GTO | 47.0 | 27.0 | 190 125 190 125 | WC21 WC20 |
| ○ XK2140DA076M ○ XK2140DA076ML ○ XK2140DT076M ○ XK2140DT076ML XK2140SA076M XK2140SA076ML | 89 | M10 | DO-200 / Thyristor | 47.0 | 26.8 | 190 125 190 125 190 125 | WC23 WC24 WC22 |
| XK2700DA076M XK2700DT076M XK2700SA076M | 89 | M10 | Wespack PCT | 50.0 | 14.0 | 190 | WC26 WC27 WC25 |
| XK2000DA114M XK2000SA114M | 132 | M12 | Press-Pack IGBTs | 75.0 | 26.0 | 190 | WC29 WC28 |
| XK2500DA114M XK2500SA114M | 132 | M12 | Press-Pack IGBTs | 75.0 | 26.0 | 190 | WC31 WC30 |
| XK2500DA116M XK2500DA116ML XK2500SA116M XK2500SA116ML | 132 | M12 | GTO | 63.0 | 26.0 | 190 125 190 125 | WC33 WC32 |
| ○ XK3000DA116M ○ XK3000DA116Mx XK3000SA116M XK3000SA116ML | 132 | M12 | DO-200AD / Thyristor | 63.0 | 33.0 | 190 125 190 125 | WC35 WC34 |
| XK3500DA116M XK3500DA116ML XK3500SA116M XK3500SA116ML | 132 | M12 | GTO | 75.0 | 26.0 | 190 125 190 125 | WC37 WC36 |
| ○ XK4000DA116M ○ XK4000DA116ML XK4000SA116M XK4000SA116ML | 132 | M12 | Diode / Thyristor | 73.0 | 36.8 | 190 125 190 125 | WC39 WC39 |

Standard Bar Clamps

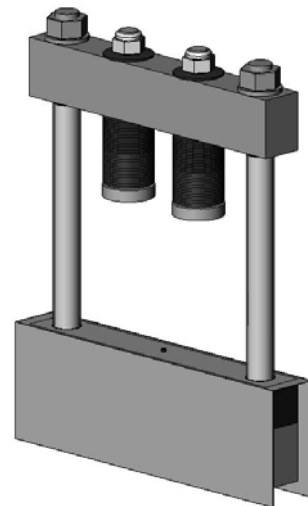
| Part Number ○ Not for new design * | Fixing Centres mm | Rod Size | Capsule Device | | | | Outline Ref. |
|---------------------------------------|----------------------|----------|-------------------|---------------------------------|-------------------------|--------------------------|--------------|
| | | | Outline | Mounting Surface Diameter mm | Nominal Thickness mm | T _j Max °C | |
| XK5000DA128M XK5000DA128ML | 146 | M16 | GTO | 75.0 | 26.0 | 190 125 | WC40 |
| XK7000DA128M XK7000DA128ML | 146 | M16 | Diode / Thyristor | 75.0 | 26.6 | 190 125 | WC41 |
| XK3060DA140ML XK3060SA140ML | 154 | M12 | Press-Pack IGBTs | 85.1 | 26.0 | 125 | WC43 WC42 |
| XK9000SA160M XK9000SA160ML | 180 | M16 | Thyristor | 99.3 | 35.8 | 190 125 | WC44 |
| XK9000DA160M XK9000DA160ML | 180 | M16 | Thyristor | 99.3 | 35.8 | 190 125 | WC45 |
| XK6120DA180ML XK6120SA180ML | 196 | M16 | Press-Pack IGBTs | 125.0 | 26.0 | 125 | WC46 WC47 |

* For new replacement part see page 150

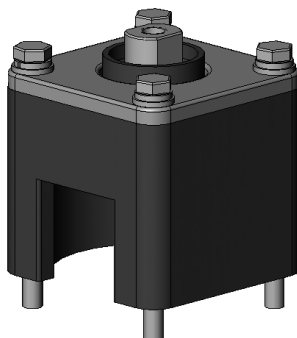
Outline drawings are available from pages O-01...O-29



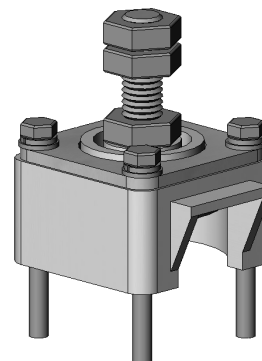
WC 18



WC 45



WC 50



WC 48/49

Bar Clamps - new range!

| Range | Part number | ### = Force kgf | Max cell dia mm | T _{JMAX} °C | xxx = max Z - dim range mm | Outline |
|---------------|------------------|---------------------|--------------------|-------------------------|----------------------------------|---------|
| XSK042 | XSK####DA042Mxxx | 0500/0900 | 42 | 190 | 025-076* | WC58 |
| | XSK####DT042Mxxx | 0500/0900 | 42 | 190 | 025-076* | WC59 |
| | XSK####DF042Mxxx | 0500/0900 | 42 | 190 | 025-076* | WC60 |
| XSK054 | XSK####DA054Mxxx | 0900 | 54 | 190 | 025-076* | WC58 |
| | XSK####DT054Mxxx | 0900 | 54 | 190 | 025-076* | WC59 |
| | XSK####DF054Mxxx | 0900 | 54 | 190 | 025-076* | WC60 |
| XSK056 | XSK####DA056Mxxx | 0500/0900/1500 | 56 | 190 | 038-120* | WC58 |
| | XSK####DT056Mxxx | 0500/0900/1500 | 56 | 190 | 038-120* | WC59 |
| | XSK####DF056Mxxx | 0500/0900/1500 | 56 | 190 | 038-120* | WC60 |
| XSK065 | XSK####DA065Mxxx | 0500/0900/1500 | 65 | 190 | 038-120* | WC58 |
| | XSK####DT065Mxxx | 0500/0900/1500 | 65 | 190 | 038-120* | WC59 |
| | XSK####DF065Mxxx | 0500/0900/1500 | 65 | 190 | 038-120* | WC60 |
| XSK075 | XSK####DA075Mxxx | 0900/1500/2200 | 75 | 190 | 038-120* | WC58 |
| | XSK####DT075Mxxx | 0900/1500/2200 | 75 | 190 | 038-120* | WC59 |
| | XSK####DF075Mxxx | 0900/1500/2200 | 75 | 190 | 038-120* | WC60 |
| XSK087 | XSK####DA087Mxxx | 1500/2200/3000 | 87 | 190 | 038-120* | WC61 |
| | XSK####DT087Mxxx | 1500/2200/3000 | 87 | 190 | 038-120* | WC62 |
| | XSK####DF087Mxxx | 1500/2200/3000 | 87 | 190 | 038-120* | WC63 |
| XSK103 | XSK####DA103Mxxx | 2200/3200/4000 | 103 | 190 | 038-120* | WC61 |
| | XSK####DF103Mxxx | 2200/3200/4000 | 103 | 190 | 038-120* | WC63 |
| XSK112 | XSK####DA112Mxxx | 2800/3200/3800/4500 | 112 | 190 | 038-120* | WC61 |
| | XSK####DF112Mxxx | 2800/3200/3800/4500 | 112 | 190 | 038-120* | WC63 |
| XSK120 | XSK####DA120Mxxx | 3800/4500/5000 | 120 | 190 | 050-120* | WC61 |
| | XSK####DF120Mxxx | 3800/4500/5000 | 120 | 190 | 050-120* | WC63 |
| XSK126 | XSK####DA126Mxxx | 3800/4500/5000 | 126 | 190 | 050-120* | WC61 |
| | XSK####DF126Mxxx | 3800/4500/5000 | 126 | 190 | 050-120* | WC63 |

* contact factory for available sizes



WC 58



WC 59



WC 60



WC 61



WC 62



WC 63

Outline drawings
on O-01...O-29

| Range | A | A1 | B | C | C1 | D | E | F | G | H | Fixing |
|---------------|--------|--------|--------|-------|-------|--------|-------|-------|-----|-------|--------|
| XSK042 | 69.85 | 74.89 | 54.00 | 15.88 | 21.04 | 42.00 | 8.64 | PCF | PCF | 12.70 | M6 |
| XSK054 | 82.55 | 86.04 | 65.00 | 15.88 | 21.04 | 54.00 | 8.62 | 34.93 | PCF | 12.70 | M6 |
| XSK056 | 95.25 | - | 70.00 | 25.40 | - | 56.00 | 12.19 | PCF | PCF | 9.53 | M8 |
| XSK065 | 104.39 | - | 79.00 | 25.40 | - | 65.00 | 12.19 | PCF | PCF | 12.70 | M8 |
| XSK075 | 112.78 | - | 89.00 | 25.40 | - | 75.00 | 12.19 | PCF | PCF | 12.70 | M8 |
| XSK087 | 127.00 | - | 102.00 | 25.40 | - | 87.00 | 12.19 | PCF | PCF | 19.05 | M8 |
| XSK103 | 144.78 | 154.11 | 118.00 | 25.40 | 36.00 | 103.00 | PCF | PCF | PCF | 19.05 | M8 |
| XSK112 | 165.02 | - | 132.00 | 25.40 | 36.00 | 112.00 | 16.56 | PCF | PCF | 25.40 | M10 |
| XSK120 | 172.72 | - | 140.00 | 25.40 | 36.00 | 120.00 | 16.56 | PCF | PCF | 25.40 | M10 |
| XSK126 | 181.10 | - | 146.00 | 25.40 | 36.00 | 126.00 | 16.56 | PCF | PCF | 25.40 | M10 |

PCF = Dimension is dependent on clamp force and cell height. Please consult factory

All dimensions above in mm and relate to outline drawing notation

Bar Clamps for WESPACK™ and GTO range

| Part number | Rod Size & Length mm | Insulator Size & Length mm | Fixing centres | Pole Face | Clamp Forces | „Z“ mm | „D“ mm | Fig. No. |
|------------------|----------------------|----------------------------|----------------|-----------|--------------|--------|--------|----------|
| XSK1500DA076038 | M8 x 90 | M8 x 60 | 89 | 32 | 10kN to 20kN | 38 | 27.5 | WC51 |
| XSK1500DA076076 | M8 x 130 | M8 x 95 | | | | 76 | 62.5 | |
| XSK1500DA076101 | M8 x 160 | M8 x 120 | | | | 101 | 87.6 | |
| XSK2000DA076038 | M8 x 95 | M8 x 60 | 89 | 38 | 13kN to 20kN | 38 | 25.9 | WC52 |
| XSK2000DA076076 | M8 x 130 | M8 x 95 | | | | 76 | 61.0 | |
| XSK2000DA076101 | M8 x 160 | M8 x 120 | | | | 101 | 85.9 | |
| XSK3000DA076038 | M8 x 100 | M8 x 65 | 89 | 50 | 27kN to 34kN | 38 | 26.2 | WC53 |
| XSK3000DA076076 | M8 x 130 | M8 x 100 | | | | 76 | 56.1 | |
| XSK3000DA076101 | M8 x 160 | M8 x 125 | | | | 101 | 86.1 | |
| XSK3400DA076038 | M8 x 100 | M8 x 65 | 89 | 50 | 25kN to 31kN | 38 | 24.6 | WC54 |
| XSK3400DA076076 | M8 x 140 | M8 x 105 | | | | 76 | 64.5 | |
| XSK3400DA076101 | M8 x 160 | M8 x 130 | | | | 101 | 89.7 | |
| XSK3800DA116M076 | M10 x 150 | M12 x 100 | 132 | 66 | 32kN to 38kN | 76 | 59.7 | WC55 |
| XSK3800DA116M101 | M10 x 180 | M12 x 125 | | | | 101 | 84.6 | |
| XSK4400DA116M076 | M10 x 150 | M12 x 105 | 132 | 68 | 36kN to 44kN | 76 | 63.0 | WC56 |
| XSK4400DA116M101 | M10 x 180 | M12 x 130 | | | | 101 | 87.9 | |
| XSK6000DA116M076 | M10 x 150 | M12 x 105 | 132 | 75 | 50kN to 60kN | 76 | 59.9 | WC57 |
| XSK6000DA116M101 | M10 x 180 | M12 x 130 | | | | 101 | 84.8 | |

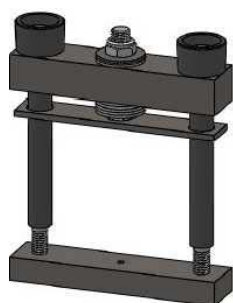
Note: 1 Kgf = 9.8 Newtons

T_{JMAX} = 190°C

Outline drawings are available from pages O-01...O-29



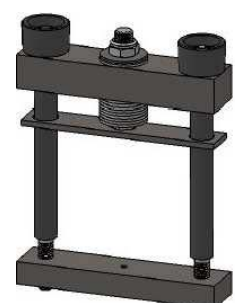
WC51



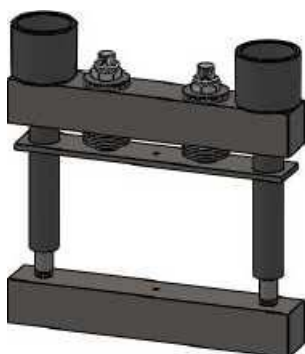
WC52



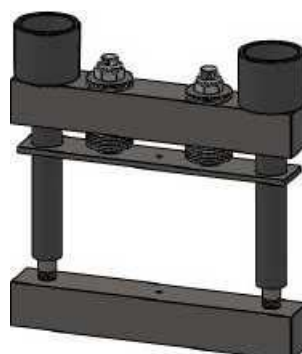
WC53



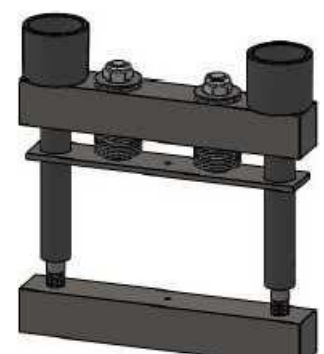
WC54



WC55



WC56



WC57

Box Clamps

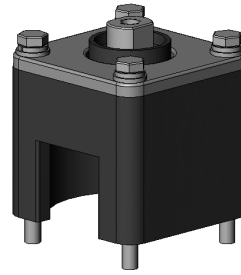
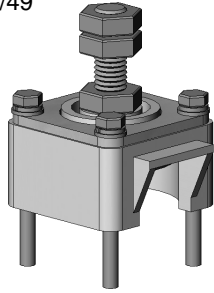
| Part Number | Moulded Box Style | Fixing Centres mm | Rod Size | Capsule Device | | | Outline Ref. |
|------------------------------|--------------------------|----------------------|-------------|-------------------|--------------------------|-------------------------|--------------|
| | | | | Outline | Mounting Surface Ø mm | Nominal Thickness mm | |
| XK0450BA019M XK0450BB019M | Injection Compression | 50 PCD | M5x50 Bolts | DO-200AA/TO-200AB | 19.0 | 13.8 | WC48 |
| XK0450BA025M XK0450BB025M | Injection Compression | 50 PCD | M5x50 Bolts | DO-200AA/TO-200AB | 25.1 | 14.6 | WC49 |
| XK1500BA034M | Injection | 70 PCD | M6x50 Bolts | DO-200AB/TO-200AC | 34.0 | 26.2 | WC50 |

Note: 1 Kgf = 9.8 Newtons

WC 48/49

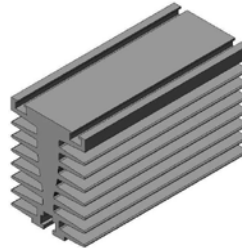
WC 50

Outline drawings are available from pages O-01...O-29

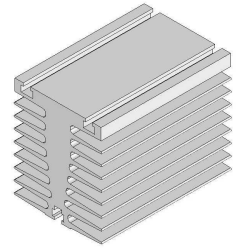


Heatsinks

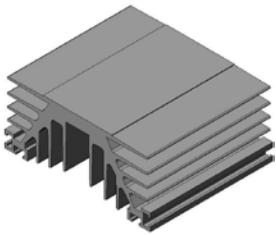
| Part No. | Weight Kg/m | Periphery mm | Area mm ² | Fig. No. |
|-------------|------------------------------------|--------------|----------------------|----------|
| XSFGxxxxAN | 8.1 | 1059 | 2979 | WH1 |
| XSFGAxxxxAN | 15.6 | 1682 | 5867 | WH2 |
| XSFHxxxxAN | 12.7 | 1684 | 4655 | WH3 |
| XSFTxxxxAN | 20 | 2065 | 7573 | WH4 |
| XSFTBxxxxAN | 29 | 2467 | 10905 | WH5 |
| XSFTCxxxxAN | 28 | 2544 | 10561 | WH6 |
| SXFLPxxxxAN | 30 | 6620 | 11172 | WH7 |
| SXF46xxxxAN | 20 | 2822 | 7411 | WH8 |
| SXF30xxxxAN | Dimensions 125mm x 125mm x 4 vanes | | | WH9 |



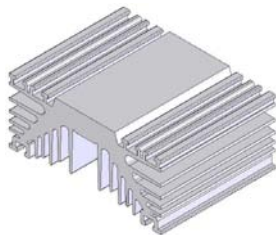
WH1



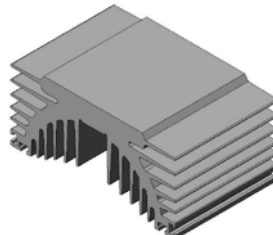
WH2



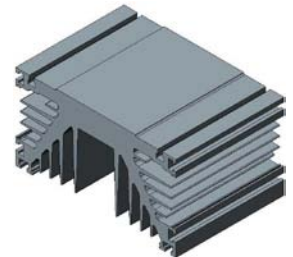
WH3



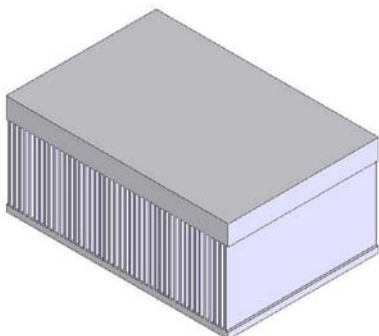
WH4



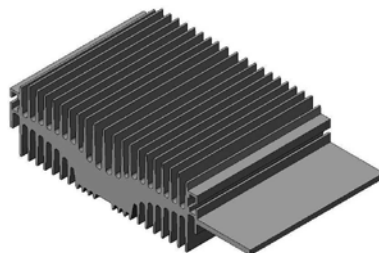
WH5



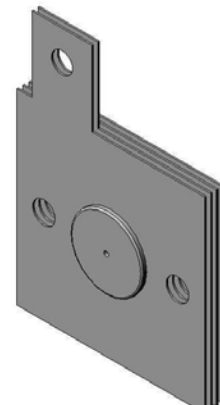
WH6



WH7



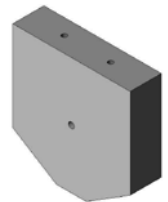
WH8



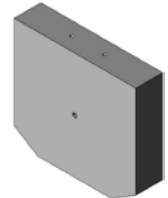
WH9

Coolers

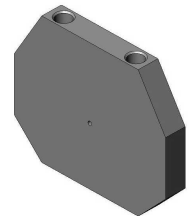
| Part Number | Weight | Cooler Thickness | Busbar Thickness | Description | Fig. No. |
|-------------|--------|------------------|------------------|---|----------|
| New | Kg | mm | mm | | |
| XW076NC16A | 0.418 | 16 | N/A | 47mm WC Cu | WCL2 |
| XW076NC16B | | | | 47mm WC Cu with Busbar (10mm Hose) | WCL1 |
| XW076NC16BS | | | | 47mm WC Cu with Busbar + spirol pins fitted (10mm Hose) | WCL1 |
| XW076NC16BT | 0.612 | 16 | 6.4 | 47mm WC Cu with Busbar + thermostat hole (10mm Hose) | WCL1 |
| XW076NC16C | | | | 47mm WC Cu with Busbar (1/2" Hose) | WCL1 |
| XW076NC16CT | | | | 47mm WC Cu with Busbar + thermostat hole (1/2" Hose) | WCL1 |
| XW076NC16R | 0.581 | 16 | 6.35 | 47mm WC Cu reversed with Busbar | WCL12 |
| XW076NC16W | 0.400 | 16 | N/A | 47mm WC Cu reversed | WCL13 |
| XW116ZC20A | 1.300 | 20 | N/A | 73mm WC Cu | WCL4 |
| XW116ZC20B | 1.750 | 20 | 10 | 73mm WC Cu with Busbar | WCL3 |
| XW116ZC20C | 2.120 | 20 | 10 | 73mm WC Cu with alt. Busbar | WCL5 |
| XW116ZC20R | 1.672 | 20 | 10 | 73mm WC Cu reversed with Busbar | WCL14 |
| XW116ZC20W | 1.119 | 20 | N/A | 73mm WC Cu reversed | WCL15 |
| XW127EN15A | | | | 85mm WC Al Nitride | WCL8 |
| XW127EN15B | 0.375 | 15 | N/A | 85mm WC Al Nitride without holes | WCL8 |
| XW127EC25A | 1.650 | 25 | N/A | 85mm WC Cu Helix | WCL16 |
| XW127EC25B | 2.200 | 25 | 8 | 85mm WC Cu with Busbar Helix | WCL17 |
| XW127EA25A | 0.500 | 25 | N/A | 85mm WC Al Helix | WCL16 |
| XW127EA25B | 0.650 | 25 | 8 | 85mm WC Al with Busbar Helix | WCL17 |
| XW160FC25A | 3.620 | 25 | N/A | 100mm WC Cu | WCL6 |
| XW160FC25B | 4.520 | 25 | 10 | 100mm WC Cu with Busbar | WCL7 |
| XW180GC34A | 4.920 | 34 | N/A | 125mm WC Cu Helix | WCL11 |
| XW180GC34B | 5.950 | 34 | 10 | 125mm WC Cu with Busbar Helix | WCL10 |
| XW180GA34A | 1.500 | 34 | N/A | 125mm WC Al Helix | WCL11 |
| XW180GA34B | 1.800 | 34 | 10 | 125mm WC Al with Busbar Helix | WCL10 |
| XW180GN25A | 0.920 | 25 | N/A | 125mm WC Al Nitride Helix | WCL18 |
| XW270QA25A | 2.941 | 25 | n/a | 270 x 190mm WC Al Cold Plate | WCL9 |



WCL2

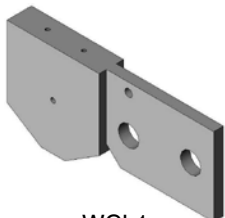


WCL4

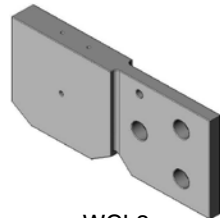


WCL8

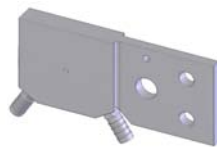
Outlines on pages O-01...O-29



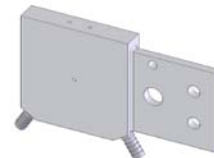
WCL1



WCL3



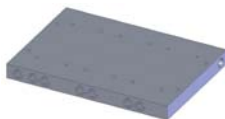
WCL5



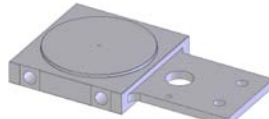
WCL6



WCL7



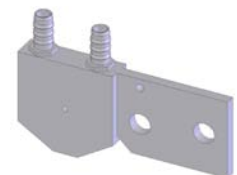
WCL9 -WS65



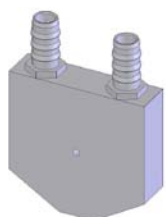
WCL10



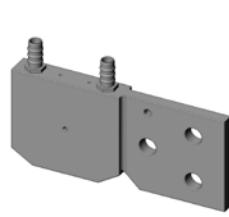
WCL11



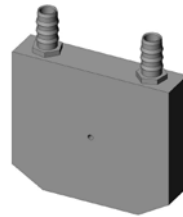
WCL12 -WS71-1



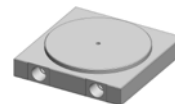
WCL13 -WS71-2



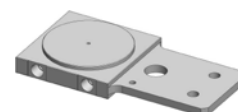
WCL14 -WS72-1



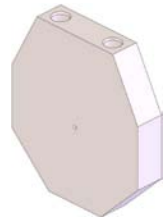
WCL15 -WS72-2



WCL16



WCL17



WCL18

| Part No. | Cooler Accessories |
|------------|---|
| XSNM12H10S | M12 Cooler Connection, 10mm Hose & Stainless Steel material |
| XSNM12H12S | M12 Cooler Connection, 12mm Hose & Stainless Steel material |
| XSNM10H15P | M10 Cooler Connection, 15mm Hose & Plastic Material |

Snubber Capacitors - New Range

A new addition for 2013, IXYS UK's new range of snubber capacitors. These capacitors have a low series resistance, high pulse strength and low self-inductance of 15nH; they also have very good self-healing characteristics without loss of capacitance. These capacitors consist of a flame retardent plastic can filled with solid resin to ensure reliable operation even under the most extreme environmental conditions.

| Part No. | Capacitance CN μF | Series Resistance ESR mΩ | RMS Current I_{RMS} A | Peak Current I_{PK} kA | Peak Surge Current I_s kA | DC Voltage V_{DC} V | AC Voltage V_{AC} V | Non-repetitive Surge voltage V_s V | Fig. | Dia- meter D1 mm | Length L1 mm |
|----------------|-----------------------------|------------------------------------|-----------------------------------|------------------------------------|---------------------------------------|---------------------------------|---------------------------------|--|------|-------------------------------|------------------------|
| E53.H59-471T1W | 0.47 | 2.90 | 20 | 0.70 | 2.10 | 3750 | 2100 | 5625 | T1 | 55 | 59 |
| E53.H59-102T1W | 1.00 | 1.60 | 40 | 0.35 | 1.75 | 3200 | 1050 | 4800 | T1 | 55 | 59 |
| E53.H59-152T1W | 1.50 | 2.40 | 32 | 0.27 | 1.35 | 2800 | 700 | 4200 | T1 | 55 | 59 |
| E53.H59-252T1W | 2.50 | 1.80 | 40 | 0.37 | 1.10 | 2250 | 700 | 3375 | T1 | 55 | 59 |
| E53.M59-252T2W | 2.50 | 0.65 | 75 | 0.90 | 4.50 | 3200 | 1050 | 4800 | T2 | 75 | 59 |
| E53.R11-302T2W | 3.00 | 1.20 | 125 | 2.10 | 6.30 | 5000 | 2100 | 7500 | T1 | 115 | 110 |
| E53.H59-332T1W | 3.30 | 1.60 | 40 | 0.42 | 1.20 | 2000 | 700 | 3000 | T1 | 55 | 59 |
| E53.M59-332T2W | 3.30 | 1.10 | 60 | 0.60 | 3.00 | 2800 | 700 | 4200 | T2 | 75 | 59 |
| E53.P59-402T2W | 4.00 | 0.50 | 80 | 1.50 | 7.50 | 3200 | 1050 | 4800 | T2 | 95 | 59 |
| E53.R11-402T2W | 4.00 | 1.00 | 125 | 2.50 | 7.50 | 5000 | 2100 | 7500 | T2 | 115 | 110 |
| E53.H59-472T1W | 4.70 | 1.10 | 45 | 0.50 | 1.60 | 1700 | 700 | 2550 | T1 | 55 | 59 |
| E53.Q59-502T2W | 5.00 | 0.32 | 100 | 1.80 | 9.00 | 3200 | 1050 | 4800 | T2 | 105 | 59 |
| E53.M59-602T2W | 6.00 | 0.75 | 70 | 0.88 | 2.60 | 2250 | 700 | 3375 | T2 | 75 | 59 |
| E53.Q59-602T2W | 6.00 | 0.28 | 100 | 2.20 | 11.00 | 3200 | 1050 | 4800 | T2 | 105 | 59 |
| E53.P59-682T2W | 6.80 | 0.55 | 80 | 1.20 | 6.00 | 2800 | 700 | 4200 | T2 | 95 | 59 |
| E53.R60-702T2W | 7.00 | 0.25 | 100 | 3.00 | 12.00 | 3200 | 1050 | 4800 | T2 | 115 | 60 |
| E53.P59-752T2W | 7.50 | 0.50 | 80 | 1.50 | 7.50 | 2800 | 700 | 4200 | T2 | 95 | 59 |
| E53.H59-802T1W | 8.00 | 1.70 | 38 | 0.33 | 1.00 | 1400 | 350 | 2100 | T1 | 55 | 59 |
| E53.M59-802T2W | 8.00 | 0.65 | 80 | 1.00 | 3.00 | 2000 | 700 | 3000 | T2 | 75 | 59 |
| E53.Q59-802T2W | 8.00 | 0.45 | 100 | 1.50 | 7.50 | 2800 | 700 | 4200 | T2 | 105 | 59 |
| E53.M59-103T2W | 10.00 | 0.52 | 80 | 1.10 | 3.50 | 1700 | 700 | 2550 | T2 | 75 | 59 |
| E53.P59-103T2W | 10.00 | 0.46 | 80 | 1.50 | 4.50 | 2250 | 700 | 3375 | T2 | 95 | 59 |
| E53.Q59-103T2W | 10.00 | 0.35 | 100 | 1.80 | 9.00 | 2800 | 700 | 4200 | T2 | 105 | 59 |
| E53.H59-123T1W | 12.00 | 1.70 | 40 | 0.40 | 1.20 | 1100 | 350 | 1650 | T1 | 55 | 59 |
| E53.R60-123T2W | 12.00 | 0.29 | 100 | 2.20 | 12.00 | 2800 | 700 | 4200 | T2 | 115 | 60 |
| E53.P59-143T2W | 14.00 | 0.35 | 80 | 1.80 | 5.50 | 2000 | 700 | 3000 | T2 | 95 | 59 |
| E53.Q59-143T2W | 14.00 | 0.33 | 100 | 2.00 | 6.00 | 2250 | 700 | 3375 | T2 | 105 | 59 |
| E53.H59-153T1W | 15.00 | 1.10 | 40 | 0.50 | 1.50 | 1100 | 350 | 1650 | T1 | 55 | 59 |
| E53.Q59-153T2W | 15.00 | 0.27 | 100 | 2.10 | 6.20 | 2250 | 700 | 3375 | T2 | 105 | 59 |
| E53.M59-163T2W | 16.00 | 0.85 | 60 | 0.65 | 1.35 | 1400 | 350 | 2100 | T2 | 75 | 59 |
| E53.P59-163T2W | 16.00 | 0.37 | 80 | 1.80 | 5.50 | 1700 | 700 | 2550 | T2 | 95 | 59 |
| E53.Q59-183T2W | 18.00 | 0.26 | 100 | 2.30 | 6.90 | 2000 | 700 | 3000 | T2 | 105 | 59 |
| E53.R60-183T2W | 18.00 | 0.25 | 100 | 2.60 | 10.00 | 2250 | 700 | 3375 | T2 | 115 | 60 |
| E53.Q59-223T2W | 22.00 | 0.27 | 100 | 2.50 | 7.50 | 1700 | 700 | 2550 | T2 | 105 | 59 |
| E53.R60-243T2W | 24.00 | 0.21 | 100 | 3.00 | 10.00 | 2000 | 700 | 3000 | T2 | 115 | 60 |
| E53.M59-253T2W | 25.00 | 0.71 | 70 | 0.83 | 2.50 | 1100 | 350 | 1650 | T2 | 75 | 59 |
| E53.H59-303T1W | 30.00 | 0.85 | 60 | 0.68 | 2.10 | 900 | 350 | 1350 | T1 | 55 | 59 |
| E53.N51-303H1W | 30.00 | 1.30 | 60 | 1.30 | 3.90 | 1600 | - | 2400 | H1 | 85 | 51 |
| E53.P59-303T2W | 30.00 | 0.46 | 80 | 1.20 | 3.70 | 1400 | 350 | 2100 | T2 | 95 | 59 |
| E53.H59-333T1W | 33.00 | 0.95 | 55 | 0.68 | 2.10 | 700 | 350 | 1050 | T1 | 55 | 59 |
| E53.R60-333T2W | 33.00 | 0.18 | 100 | 3.50 | 10.00 | 1700 | 700 | 2550 | T2 | 115 | 60 |
| E53.N51-383H1W | 37.50 | 1.20 | 60 | 1.40 | 4.00 | 1400 | - | 2100 | H1 | 85 | 51 |
| E53.N68-403H1W | 40.00 | 1.60 | 60 | 1.30 | 3.90 | 1600 | - | 2400 | H1 | 85 | 68 |
| E53.Q59-403T2W | 40.00 | 0.34 | 100 | 1.70 | 5.10 | 1400 | 350 | 2100 | T2 | 105 | 59 |
| E53.H59-503T1W | 50.00 | 0.80 | 60 | 0.83 | 2.50 | 550 | 280 | 825 | T1 | 55 | 59 |
| E53.N51-503H1W | 50.00 | 1.10 | 70 | 1.60 | 4.80 | 1200 | - | 1800 | H1 | 85 | 51 |
| E53.N68-503H1W | 50.00 | 1.50 | 60 | 1.40 | 4.20 | 1400 | - | 2100 | H1 | 85 | 68 |
| E53.P59-503T2W | 50.00 | 0.34 | 80 | 1.70 | 5.00 | 1100 | 350 | 1650 | T2 | 95 | 59 |
| E53.R60-503T2W | 50.00 | 0.27 | 100 | 2.20 | 10.00 | 1400 | 350 | 2100 | T2 | 115 | 60 |

H1



T1/T2



Standard base clamp kits for rectifier diodes and phase control thyristors

These Single side cooled square base mounting clamps are suitable for 34 mm to 50 mm pole face devices with clamping force in the range from 1130 Kgf to 2140 Kgf. Suitable for devices with blocking voltages from 400 volts up to 6 KV.

| Part No. | Poleface Ref. | Outline Ref. |
|-----------------------|---------------|--------------|
| XK1500CB034M † | 34-38 | WC64 |
| XK1130SB076M | 34-38 | WC65 |
| XK2140SB076M | 47-50 | WC66 |

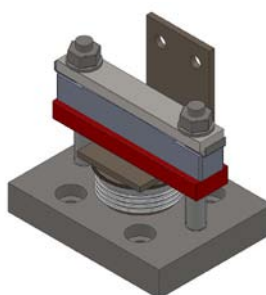
Standard part replacements to the obsolete flat-base power silicon diodes types KBN/R, KCN/R & KDN/R. For other voltages and thyristor options please consult factory.

| Part No. | Old square base part no. | Base polarity | V_{RRM} V | I_{Iav} $T_C = 100^\circ C$ A | I_{RSM} kA | I^2t A ² s | V_0 V | r_T mΩ | R_{th} K/W | Temp °C | Outline |
|-----------------|--------------------------|---------------|----------------|---------------------------------------|-----------------|----------------------------|------------|-------------|-----------------|------------|---------|
| W1185LC450KBR † | SW45KBR515 | Anode | 4500 | 435 | 10.2 | 520 x 10 ³ | 1.000 | 0.575 | 0.085 | 160 | WC64 |
| W1185LC450KBN † | SW45KBN515 | Cathode | 4500 | 380 | 10.2 | 520 x 10 ³ | 1.000 | 0.575 | 0.101 | 160 | WC64 |
| W1411LC360KBR † | SW36KBR595 | Anode | 3600 | 505 | 12.2 | 744 x 10 ³ | 0.900 | 0.388 | 0.085 | 160 | WC64 |
| W1411LC360KBN † | SW36KBN595 | Cathode | 3600 | 445 | 12.2 | 744 x 10 ³ | 0.900 | 0.388 | 0.101 | 160 | WC64 |
| W1524LC300KBR † | SW30KBR636 | Anode | 3000 | 540 | 13.4 | 898 x 10 ³ | 0.870 | 0.323 | 0.085 | 160 | WC64 |
| W1524LC300KBN † | SW30KBN636 | Cathode | 3000 | 470 | 13.4 | 898 x 10 ³ | 0.870 | 0.323 | 0.101 | 160 | WC64 |
| W1748LC220KBR † | SW22KBR805 | Anode | 2200 | 660 | 13.5 | 911 x 10 ³ | 0.870 | 0.280 | 0.085 | 175 | WC64 |
| W1748LC220KBN † | SW22KBN805 | Cathode | 2200 | 582 | 13.5 | 911 x 10 ³ | 0.870 | 0.280 | 0.101 | 175 | WC64 |
| W2058LC120KBR † | SW12KBR935 | Anode | 1200 | 760 | 16.1 | 1.30 x 10 ⁶ | 0.790 | 0.192 | 0.085 | 175 | WC64 |
| W2058LC120KBN † | SW12KBN935 | Cathode | 1200 | 665 | 16.1 | 1.30 x 10 ⁶ | 0.790 | 0.192 | 0.101 | 175 | WC64 |
| W1185LC450KCR | SW38KBR515 | Anode | 4500 | 455 | 10.2 | 520 x 10 ³ | 1.000 | 0.575 | 0.080 | 160 | WC65 |
| W1185LC450KCN | SW45KBN515 | Cathode | 4500 | 395 | 10.2 | 520 x 10 ³ | 1.000 | 0.575 | 0.097 | 160 | WC65 |
| W1411LC360KCR | SW36KBR595 | Anode | 3600 | 530 | 13.2 | 756 x 10 ³ | 0.900 | 0.388 | 0.080 | 160 | WC65 |
| W1411LC360KCN | SW36KBN595 | Cathode | 3600 | 460 | 12.3 | 759 x 10 ³ | 0.900 | 0.388 | 0.097 | 160 | WC65 |
| W1524LC300KCR | SW30KBR635 | Anode | 3000 | 565 | 13.4 | 898 x 10 ³ | 0.870 | 0.323 | 0.080 | 160 | WC65 |
| W1524LC300KCN | SW30KBN636 | Cathode | 3000 | 490 | 13.4 | 898 x 10 ³ | 0.870 | 0.323 | 0.097 | 160 | WC65 |
| W1748LC220KCR | SW22KBR805 | Anode | 2200 | 690 | 13.5 | 911 x 10 ³ | 0.870 | 0.280 | 0.080 | 175 | WC65 |
| W1748LC220KCN | SW22KBN805 | Cathode | 2200 | 600 | 13.5 | 911 x 10 ³ | 0.870 | 0.280 | 0.097 | 175 | WC65 |
| W2058LC120KCR | SW12KBR935 | Anode | 1200 | 800 | 16.1 | 1.30 x 10 ⁶ | 0.790 | 0.192 | 0.080 | 175 | WC65 |
| W2058LC120KCN | SW12KBN935 | Cathode | 1200 | 690 | 16.1 | 1.30 x 10 ⁶ | 0.790 | 0.192 | 0.097 | 175 | WC65 |
| W3082MC45KDR | SB45KDR680 | Anode | 4500 | 1115 | 26.6 | 3.54 x 10 ⁶ | 0.923 | 0.192 | 0.037 | 160 | WC66 |
| W3082MC45KDN | SB45KDN680 | Cathode | 4500 | 1030 | 26.6 | 3.54 x 10 ⁶ | 0.923 | 0.192 | 0.041 | 160 | WC66 |
| W3708MC35KDR | SB35KDR820 | Anode | 3500 | 1240 | 33.7 | 5.68 x 10 ⁶ | 0.958 | 0.112 | 0.037 | 160 | WC66 |
| W3708MC35KDN | SB35KDN820 | Cathode | 3500 | 1145 | 33.7 | 5.68 x 10 ⁶ | 0.958 | 0.112 | 0.041 | 160 | WC66 |
| W3842MC28KDR | SB25KDR950 | Anode | 2800 | 1325 | 33.5 | 5.61 x 10 ⁶ | 0.831 | 0.118 | 0.037 | 160 | WC66 |
| W3842MC28KDN | SB25KDN950 | Cathode | 2800 | 1225 | 33.5 | 5.61 x 10 ⁶ | 0.831 | 0.118 | 0.041 | 160 | WC66 |
| W5636MC15KDR | SB15KDR14C | Anode | 1500 | 2035 | 43.9 | 9.64 x 10 ⁶ | 0.698 | 0.059 | 0.037 | 175 | WC66 |
| W5636MC15KDN | SB15KDN14C | Cathode | 1500 | 1875 | 43.9 | 9.64 x 10 ⁶ | 0.698 | 0.059 | 0.041 | 175 | WC66 |

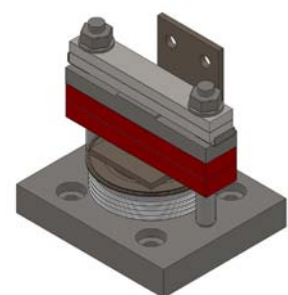
† - Assembly supplied either as kit of parts or sub-assembly with selected diode or thyristor



WC64



WC65

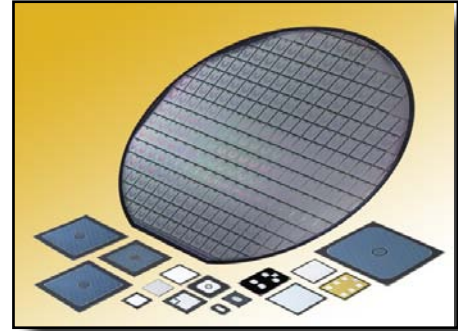


WC66

Power Semiconductor Chips

IXYS offers a wide range of dice for a multitude of applications.

| Bipolar Chips | V_{RRM} / V_{DRM} | $I_{F(AV)M} / I_{T(AV)M}$ | t_{rr} |
|----------------------------------|---------------------|---------------------------|-------------|
| Schottky Diodes | 8 - 200 V | 5 - 300 A | - |
| HiPerFRED™ (Low Leakage) | 200 - 1200 V | 10 - 150 A | 30 - 40 ns |
| Sonic™ Fast Recovery Diodes | 600 - 1800 V | 5 - 150 A | 30 - 60 ns |
| FRED™ (Low Forward Voltage Drop) | 200 - 1200 V | 10 - 150 A | 40 - 60 ns |
| Semi-Fast Diodes | 1200 - 1600 V | 15 - 60 A | 60 - 100 ns |
| Rectifier Diodes | 1200 - 2200 V | 10 - 400 A | - |
| Phase Control Thyristors | 800 - 2200 V | 5 - 300 A | - |



The most important features of planar technology are:

- no PN junction termination in the underside or to the edges; thus non-critical handling and simplified mounting
- fabricated using isolation diffusion with guard rings, channel stoppers and thick glass passivation to assure high electrical reliability and stability
- important electrical parameters 100% tested on the chips
- thyristor chips with center or corner gate construction
- chips with solderable or bondable metallization
- standard 125 mm (5 inch) and 150 mm (6 inch) diameter wafers

IXYS can ship chips as follows:

- Chips in wafer form, unsawed, electrically tested, rejects are inked
- Chips in sawed wafer on foil, electrically tested, rejects are inked
- Chips in tray (Waffle Pack), electrically tested

Direct Copper Bonded Ceramic Substrates

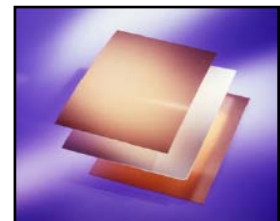
DCB Ceramic Substrates (Al₂O₃)

IXYS manufactures Direct Copper Bonded substrates on aluminum oxide (Al₂O₃) base.

DCB ceramic substrates form the basis for new product ideas and electronic developments with a high degree of integration.

Standard bonded DCB panel dimensions are:

| Unclad aluminum oxide ceramic | | | |
|--|---------|---|---------|
| Al ₂ O ₃ content | | > 96 | % |
| dimensions | | 138x210, 138x190.5, 115x165* | mm |
| usable area | max. | 130x200, 130x180, 107x156* | mm |
| thickness | | 1.00, 0.63, 0.38, 0.25 | mm |
| arc through voltage | | 10 | kV |
| thermal conductivity | | > 24 | W/m · K |
| Conduction layers - both sides | | | |
| copper thickness | | 0.3 (< 0.3 on request) | mm |
| conductor width | min. | 0.3 +/- 0.2 | mm |
| conductor spacing | min. | 0.4 +/- 0.2 | mm |
| spacing conductor/edge of ceramic | min. | 0.35 +/- 0.2 | mm |
| surface finishes available | | bare copper; nickel plated; nickel + gold plated | |
| peel-off resistance (90° peel test) | | >6 | N/mm |
| DCB ceramic substrate | | | |
| application temperature range | | -55...+850 | °C |
| resistant to hydrogen | max. up | 400 | °C |
| thermal expansion coefficient | to typ. | 7.4 x 10-6 | K-1 |
| customer specific dimensions | | | |



Patterned DCB substrates can be manufactured to customers' drawings.

DCB ceramic substrates fulfill several functions:

- carriers for semiconductor chips and connection clips
- circuits similar to that on a PC board
- electrical isolator for separating „current paths“ from „heat paths“
- transfer medium for heat dissipation from active parts into heat sink

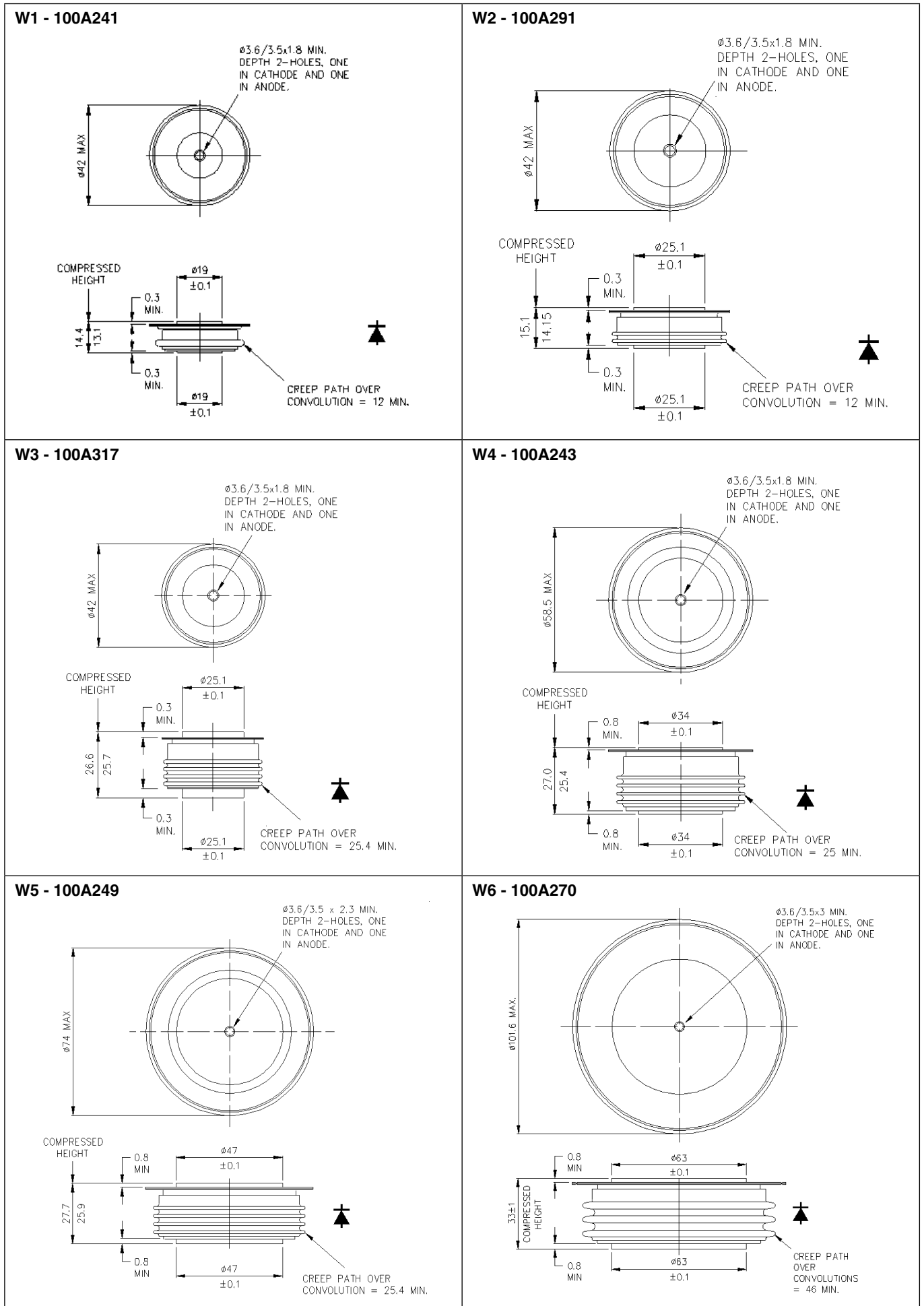
DCB parts are available as:

- bonded plate
- bonded and patterned plate
- prelasered, unbroken plate
- individuale substrates

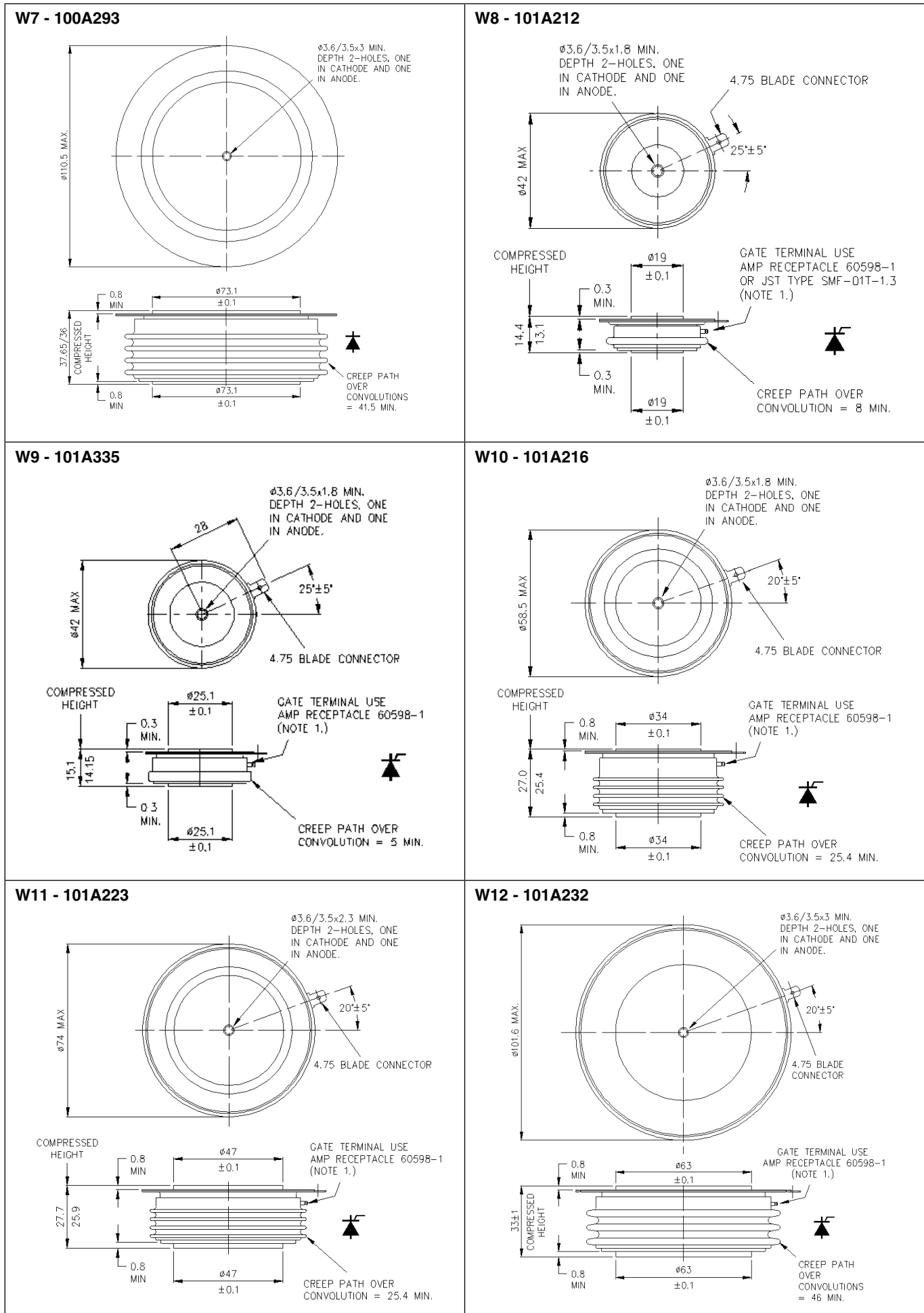


* = (for 0.25 mm thk.)

Dimensions in mm and inches (1 mm = 0.0394")

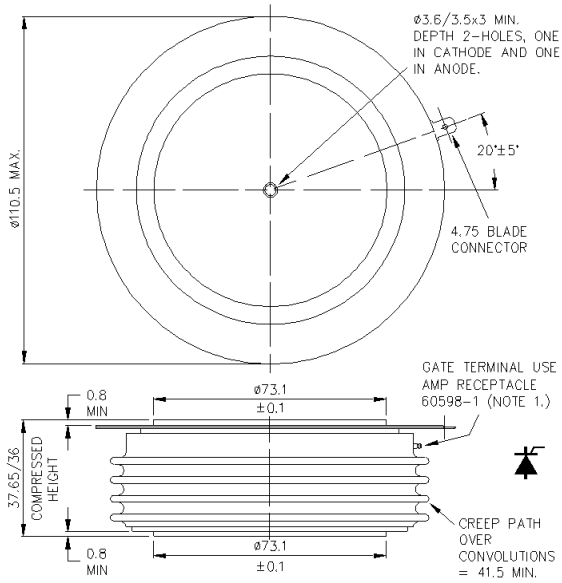


Dimensions in mm and inches (1 mm = 0.0394")

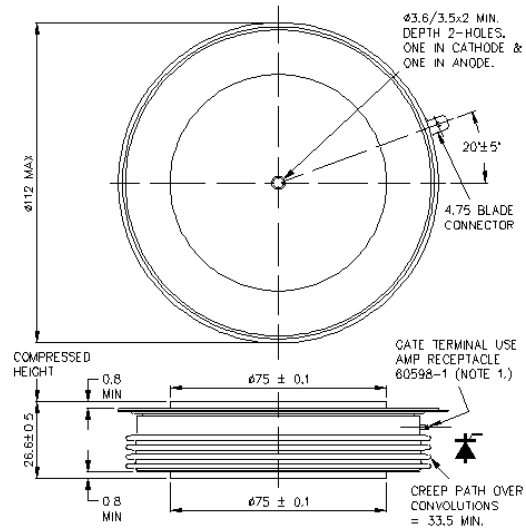


Dimensions in mm and inches (1 mm = 0.0394")

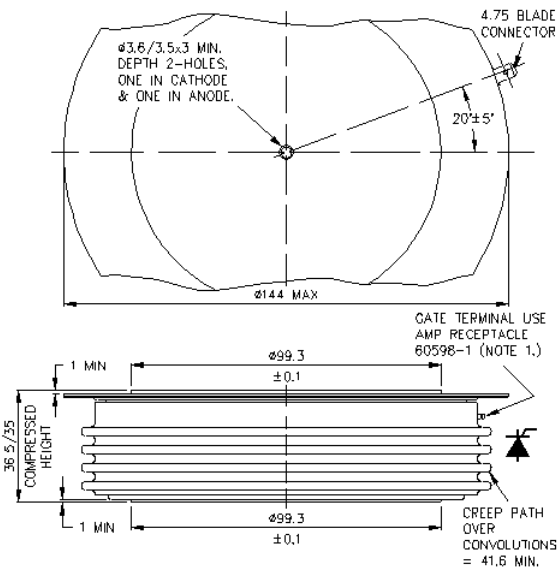
W13 - 101A281



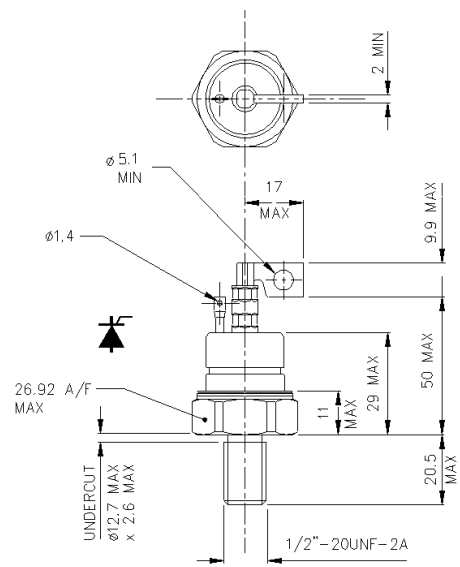
W14 - 101A325



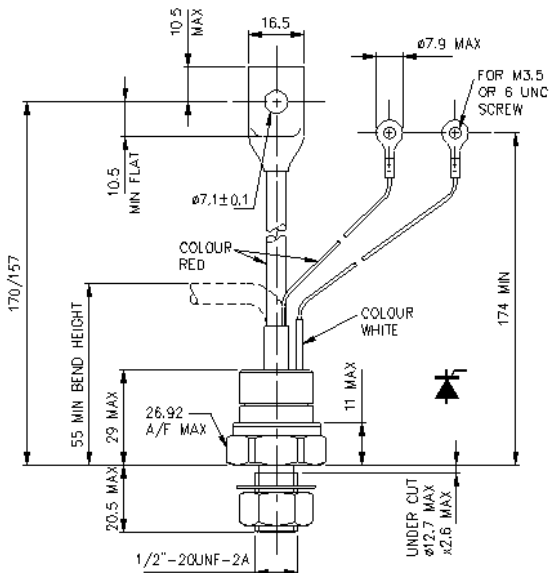
W15 - 101A322



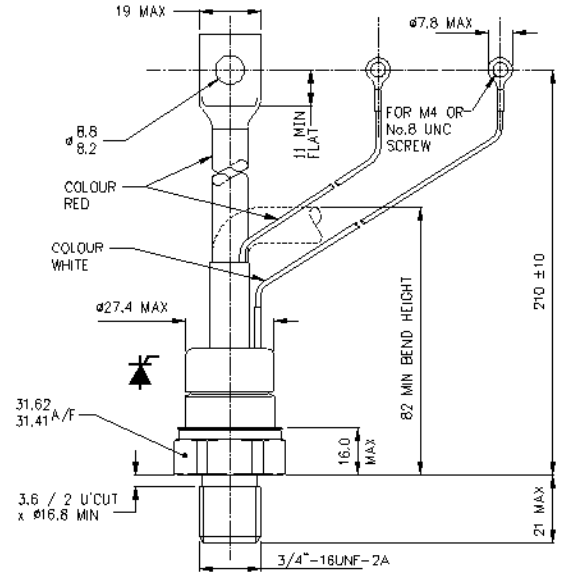
W16 - 101A235



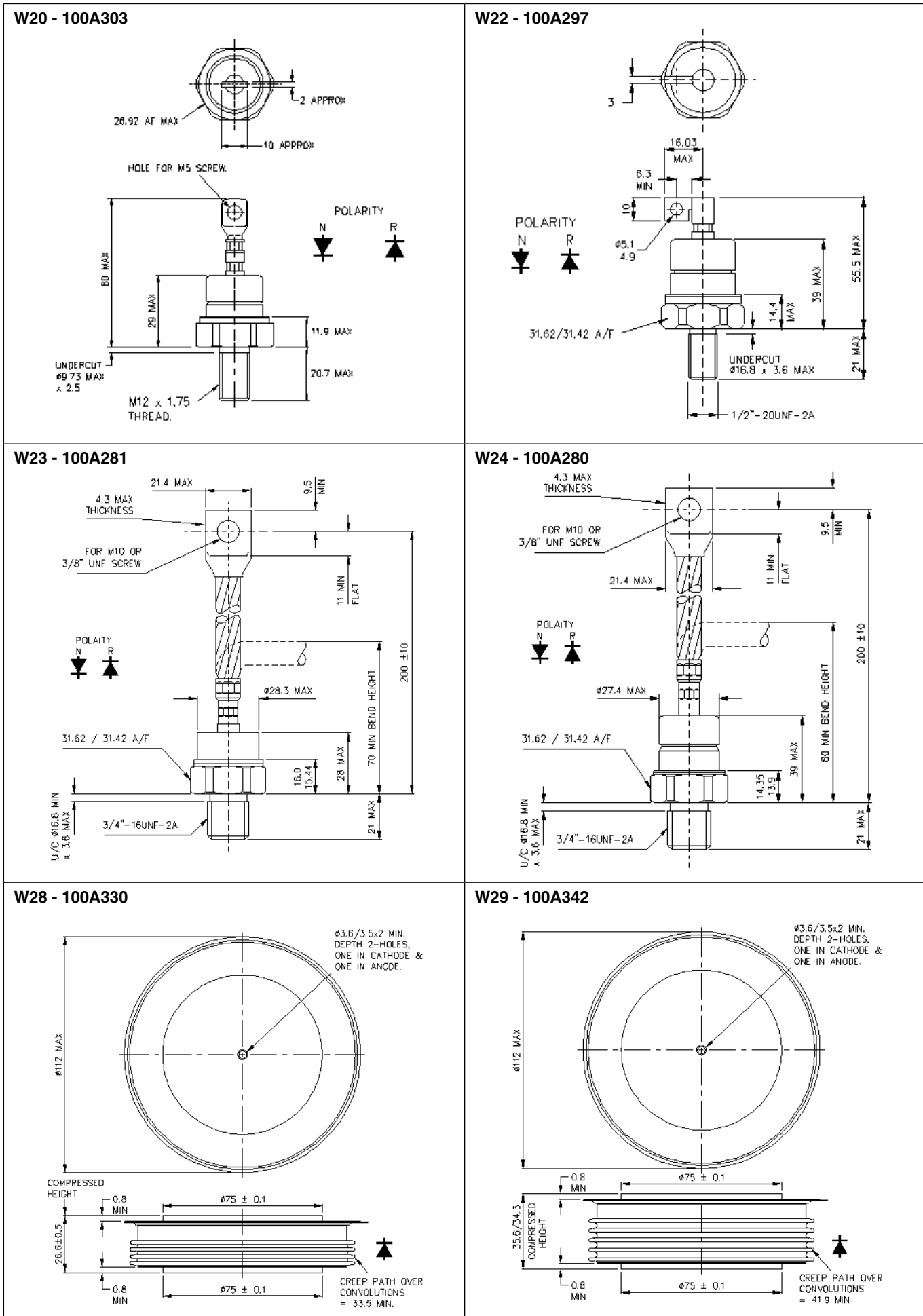
W17 - 101A231



W18 - 101A225

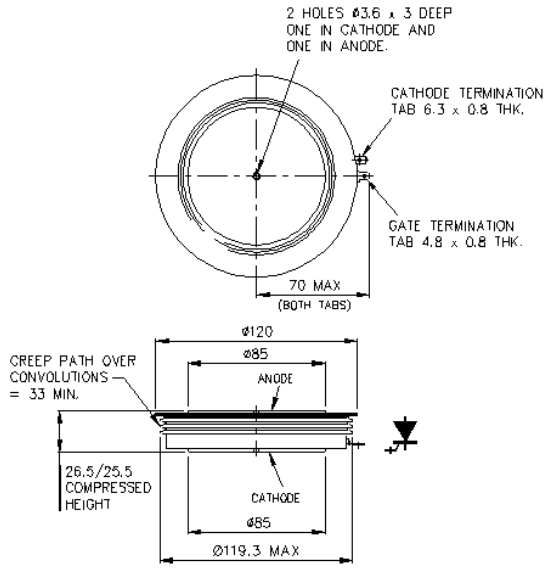


Dimensions in mm and inches (1 mm = 0.0394")

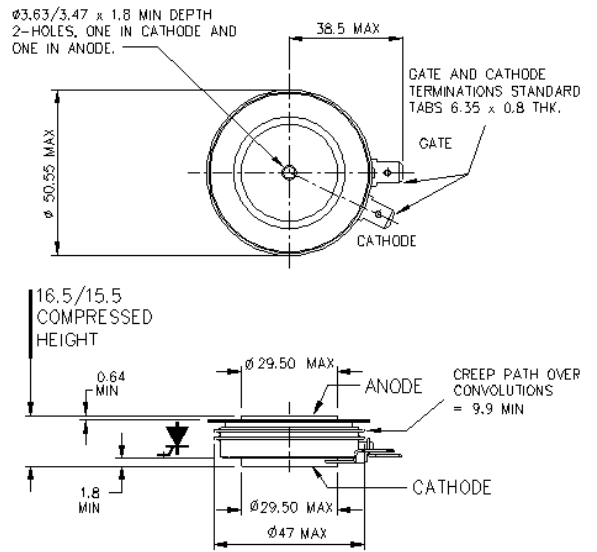


Dimensions in mm and inches (1 mm = 0.0394")

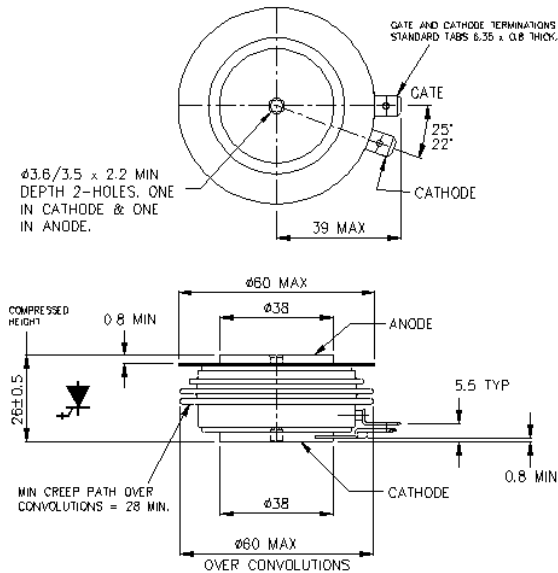
W33 - 101A346



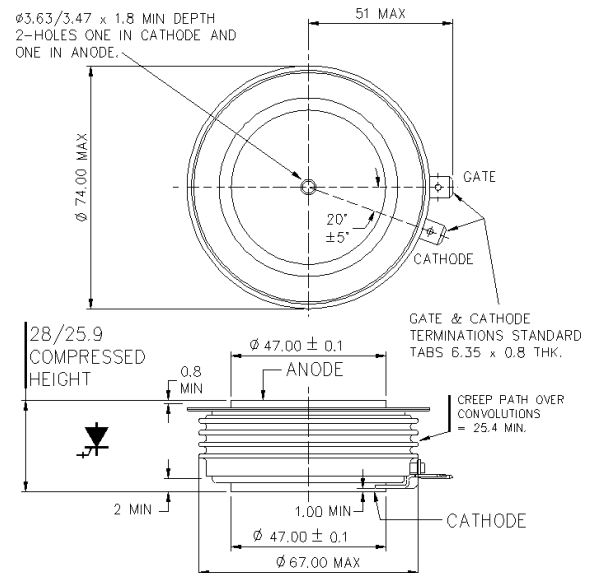
W34 - 101A287



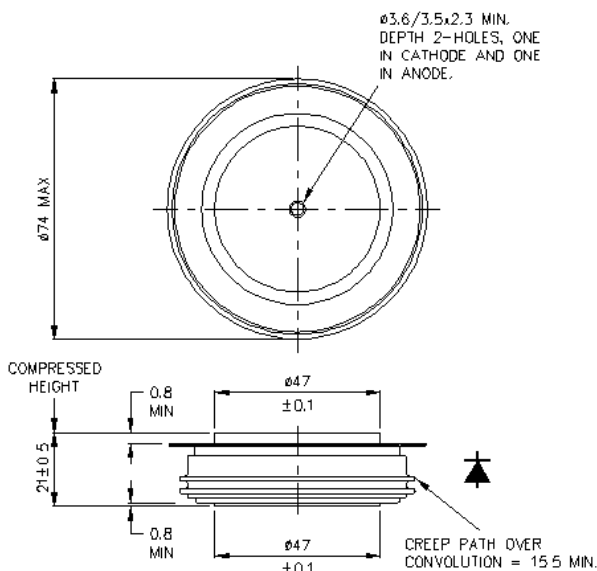
W35 - 101A358



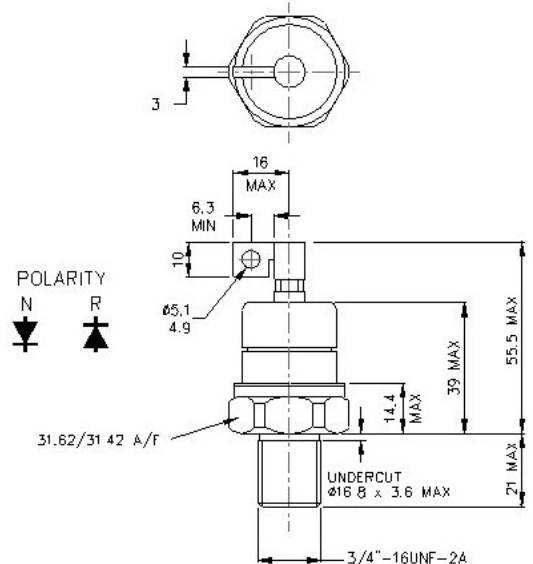
W36 - 101A288



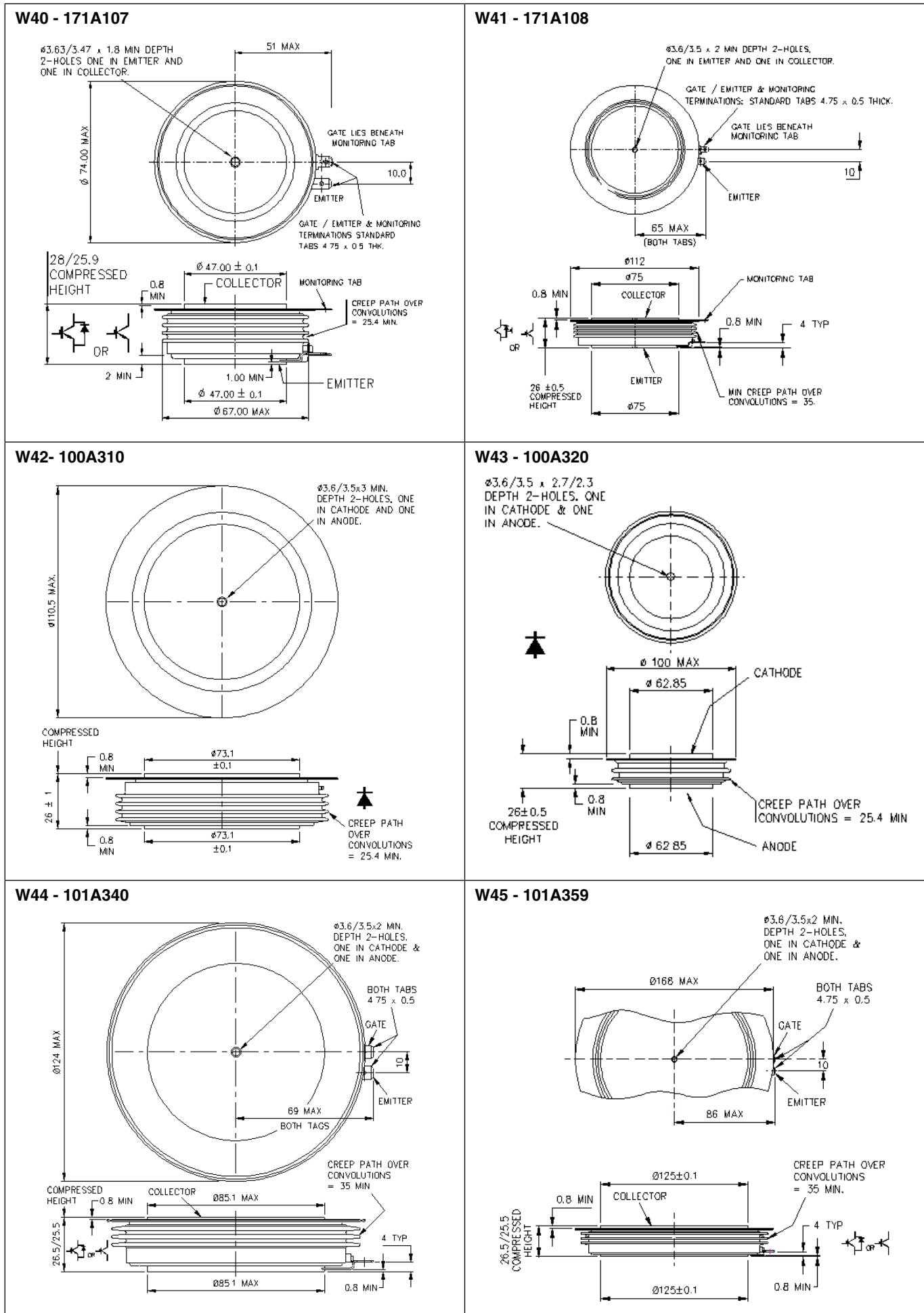
W37 - 100A325



W39 - 100A338

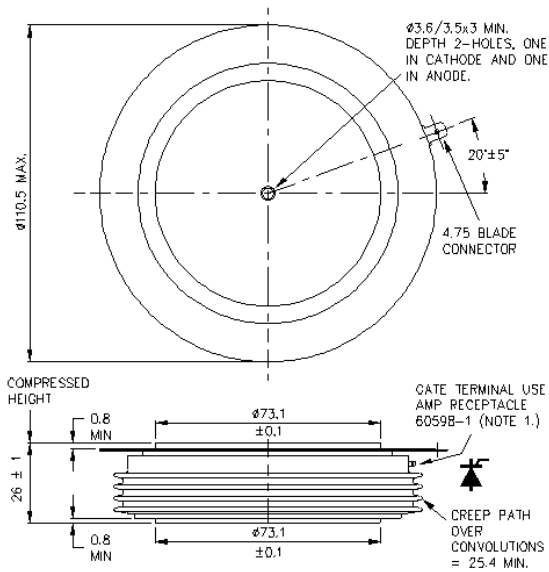


Dimensions in mm and inches (1 mm = 0.0394")



Dimensions in mm and inches (1 mm = 0.0394")

W46 - 101A305



W46x

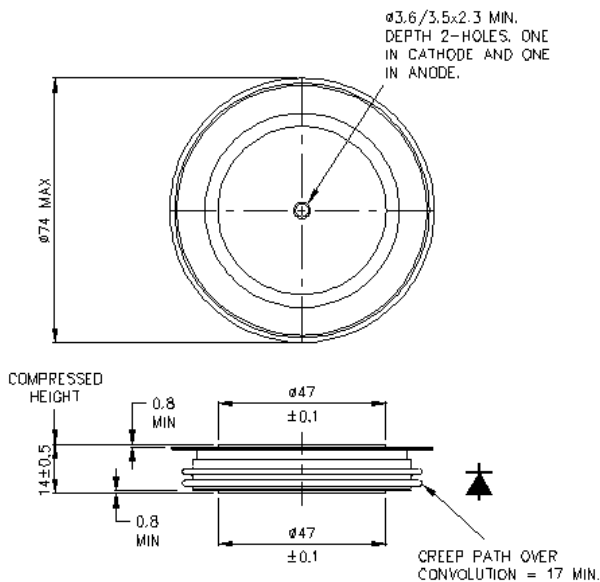
WC46*

Device outline W46 is available with a slightly reduced height of 25 mm.

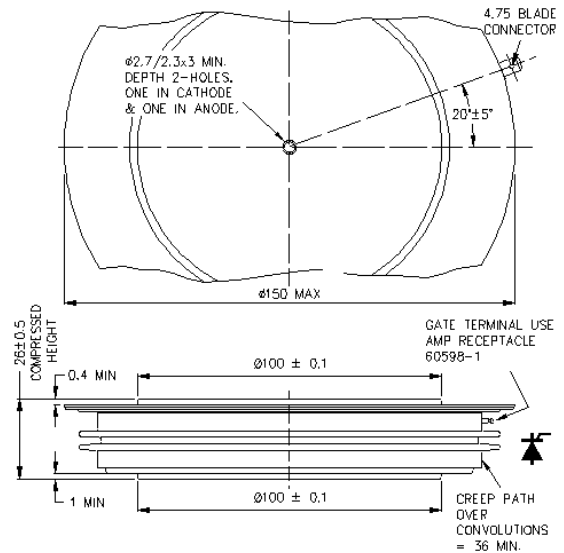
At the time of going to press, this option only applies to two Phase Control Thyristors:
N3880ZD160-180 and N6012ZD020-060.

Please refer to Chippenham Factory.

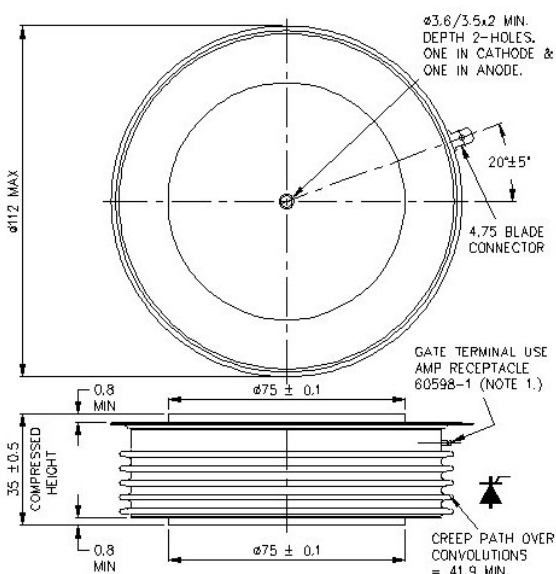
W47 - 100A322



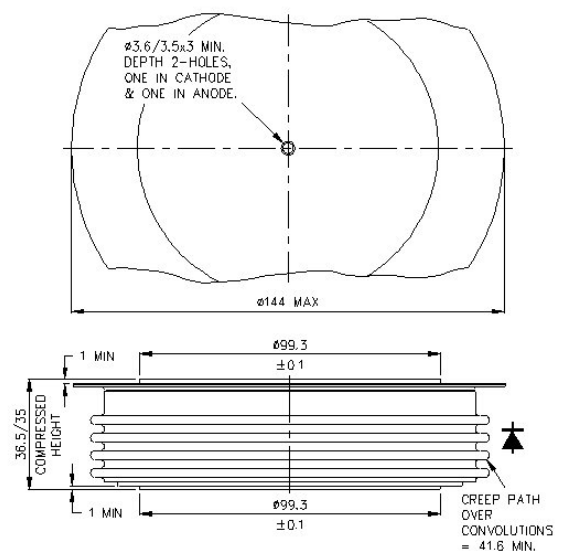
W48 - 101A347



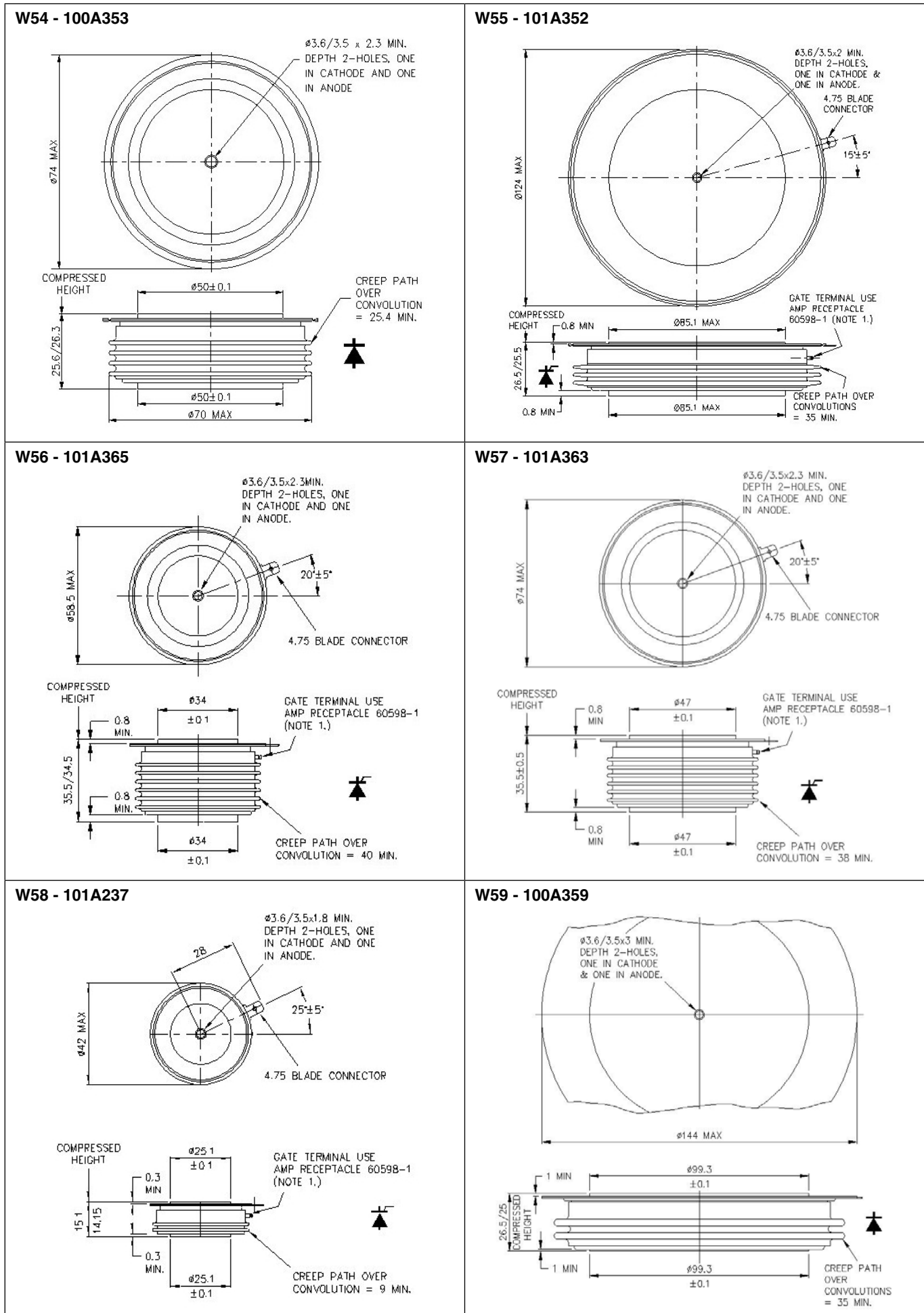
W51 - 101A334



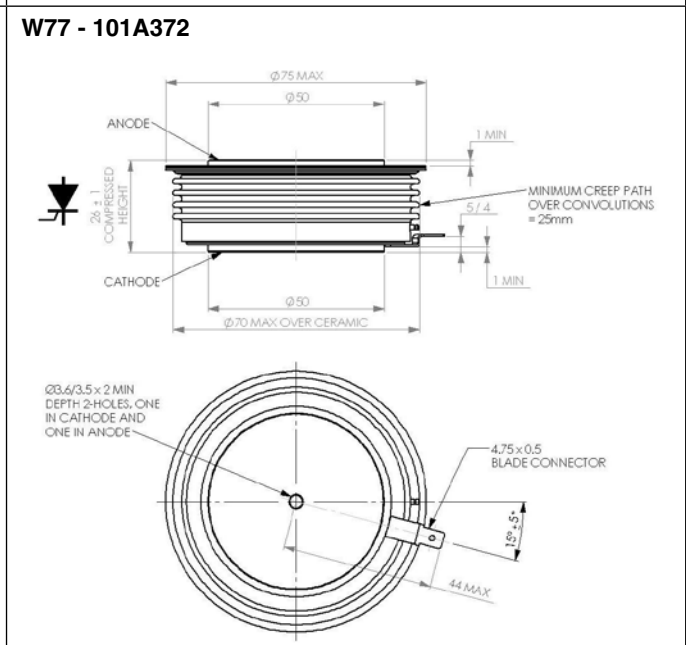
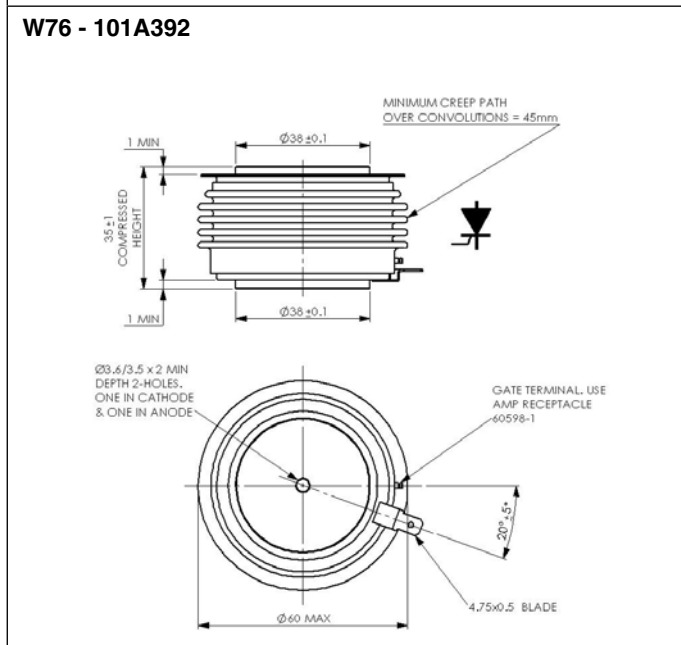
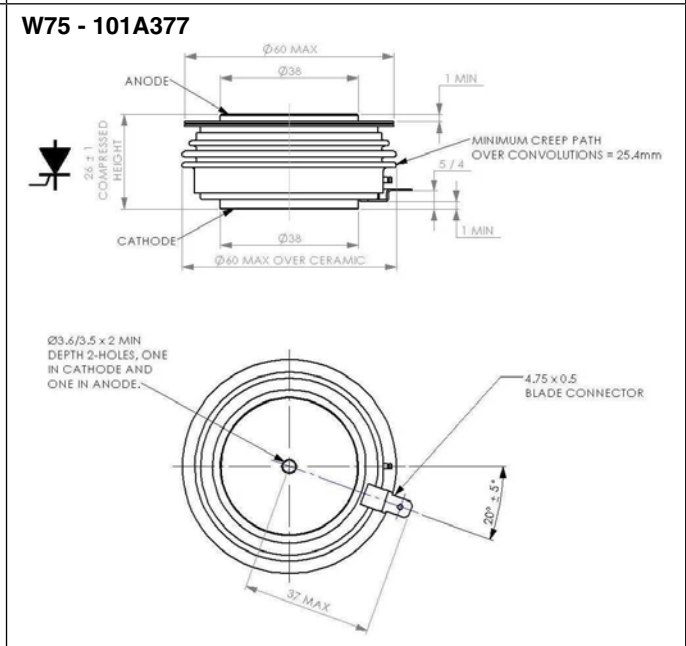
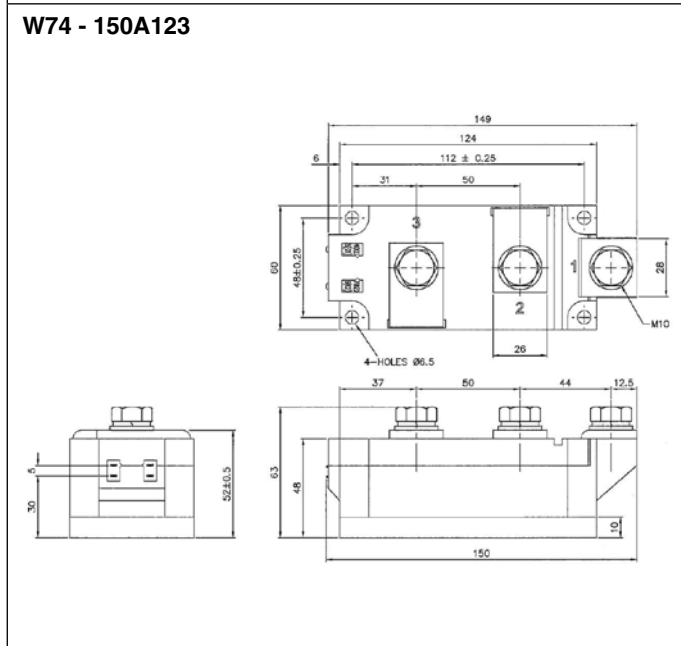
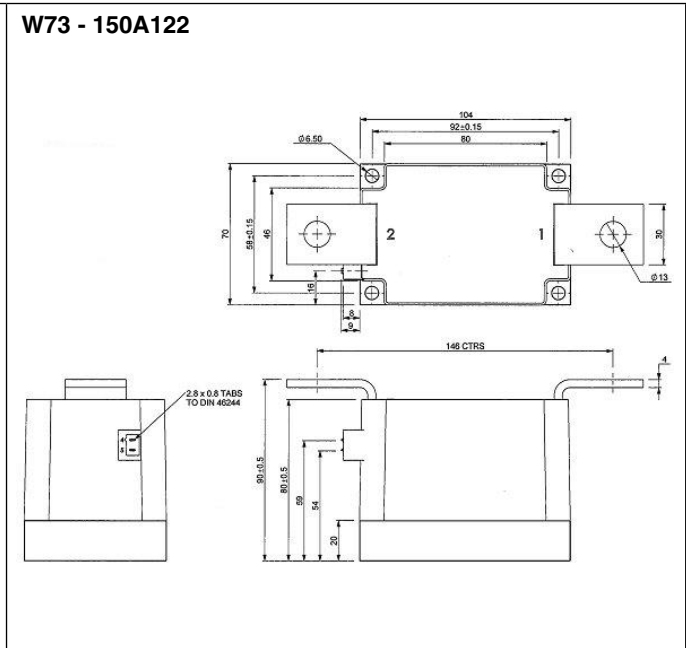
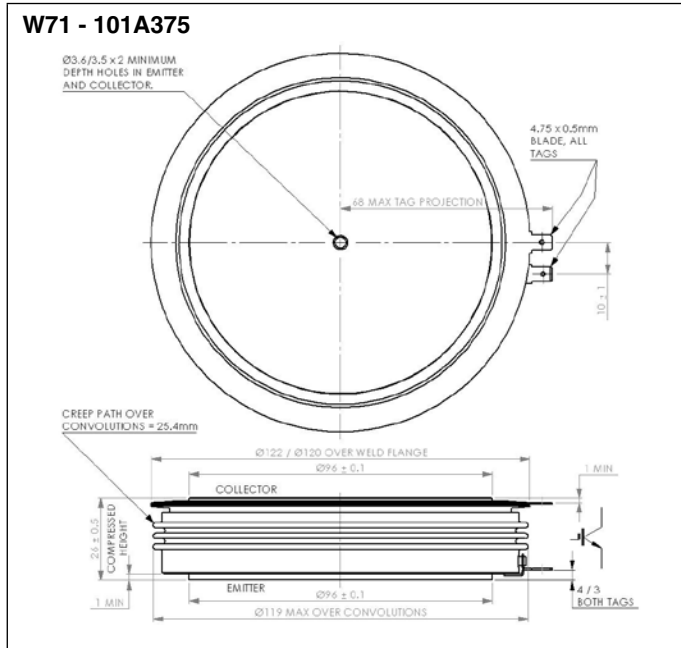
W52 - 100A328



Dimensions in mm and inches (1 mm = 0.0394")



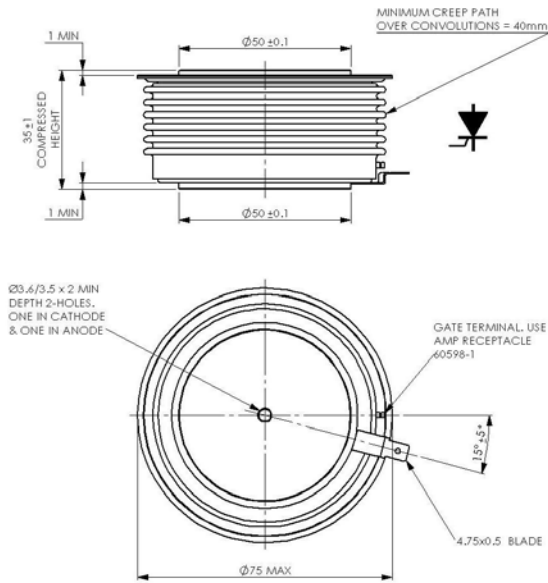
Dimensions in mm and inches (1 mm = 0.0394")



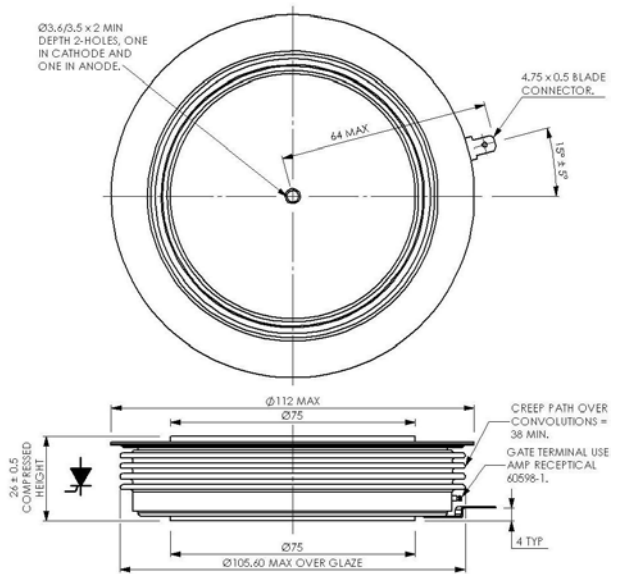
Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

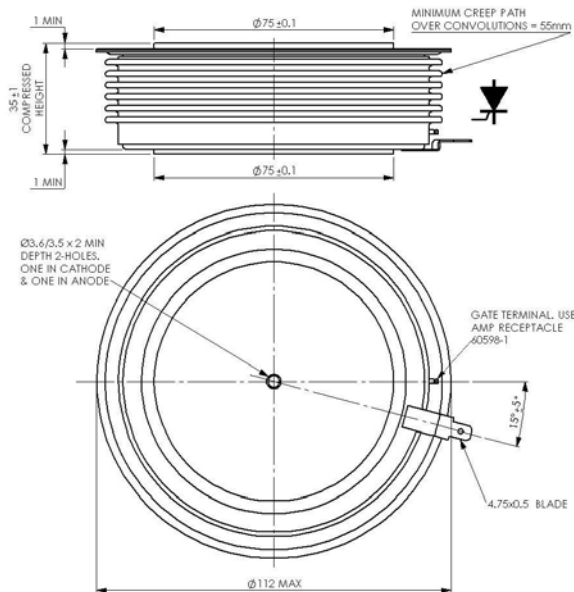
W78 - 101A393



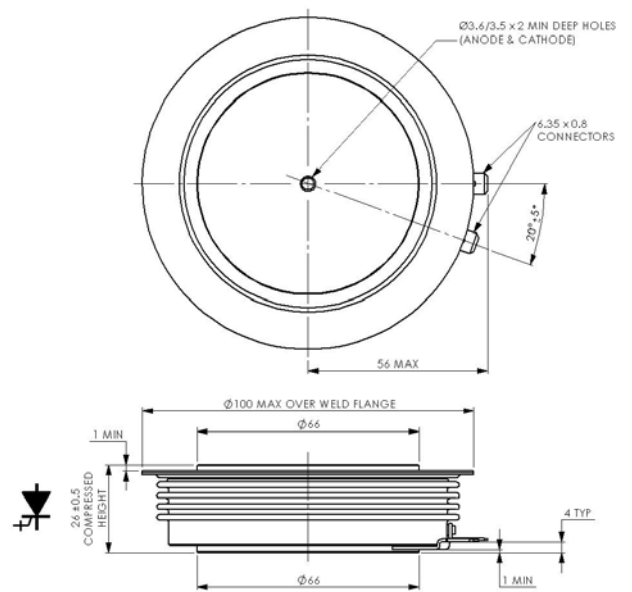
W81 - 101A373



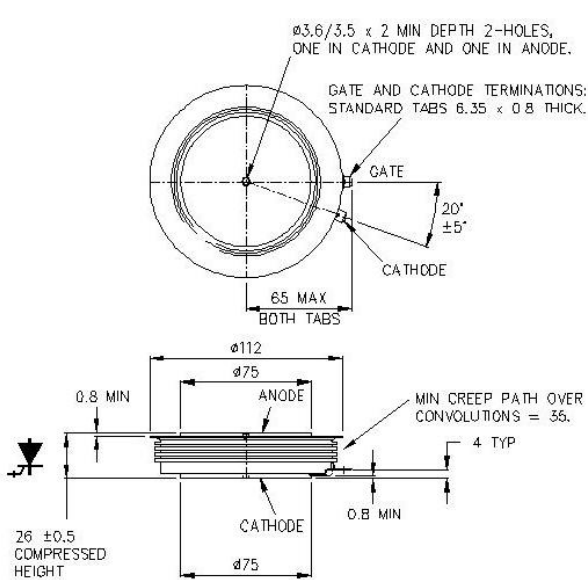
W82 - 101A395



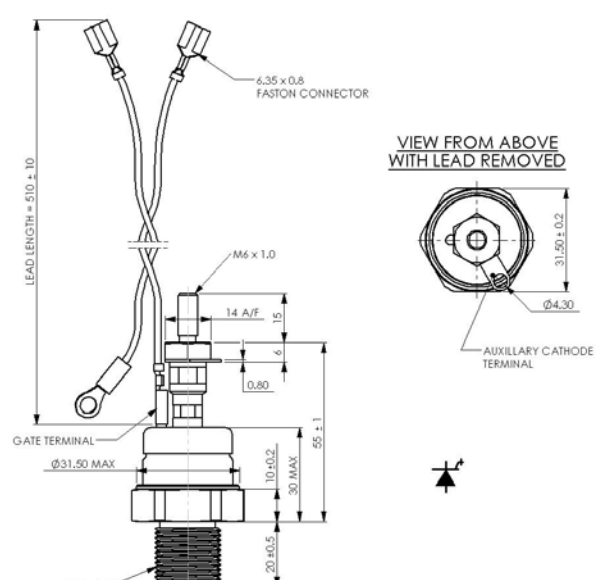
W85 - 101A388



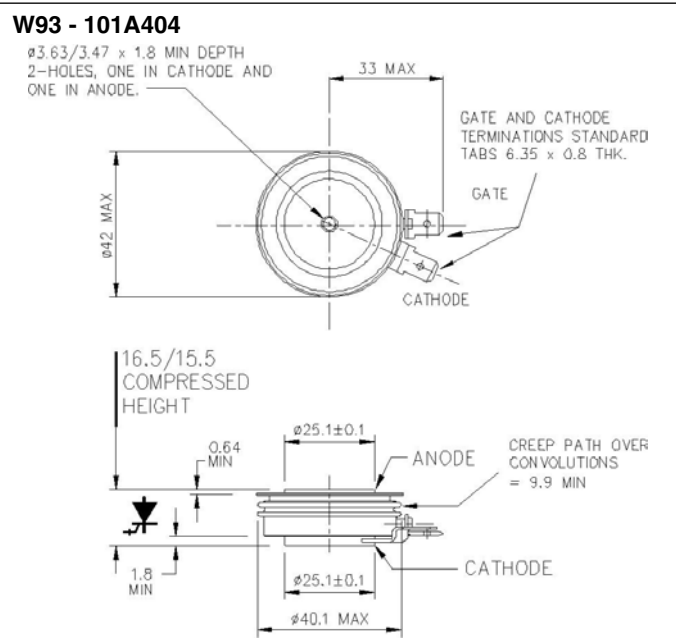
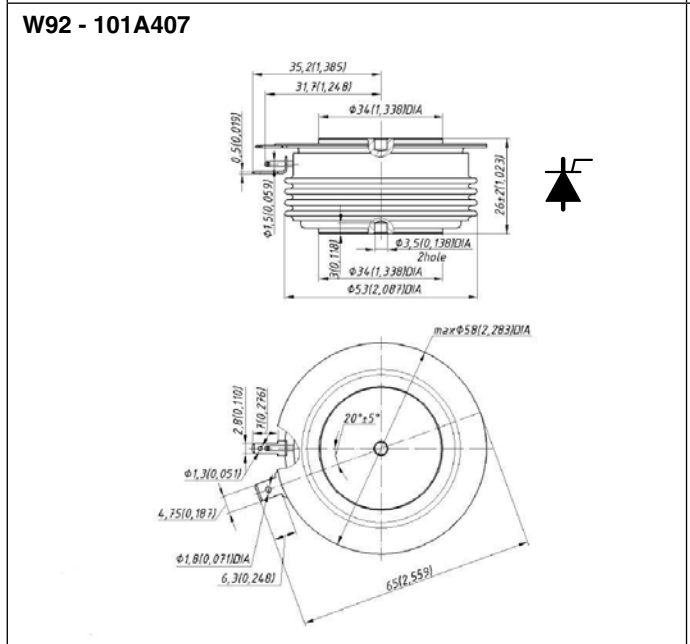
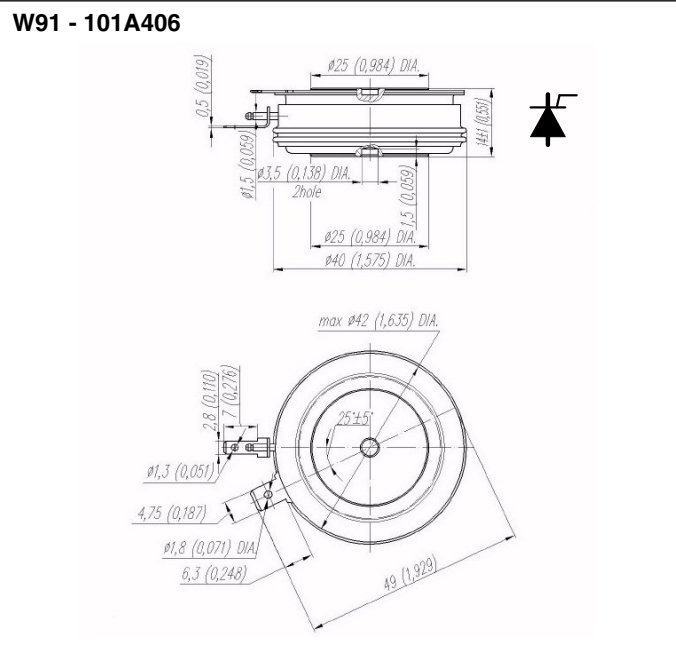
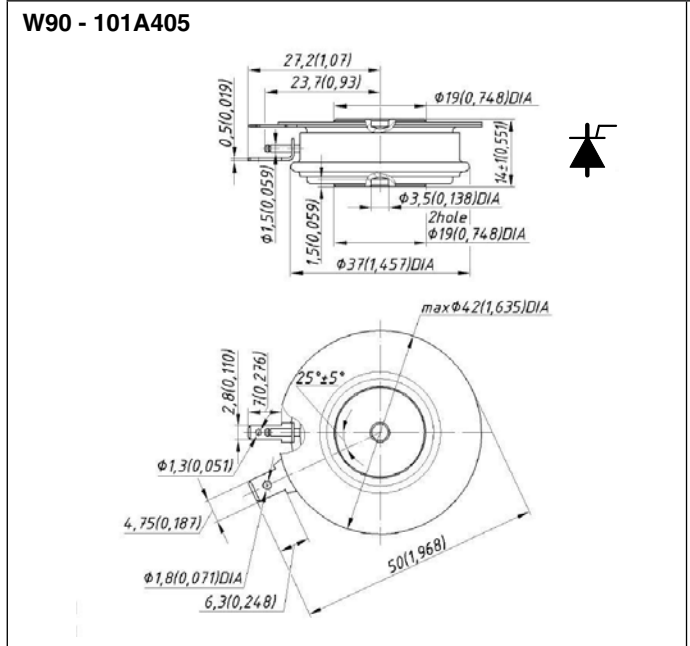
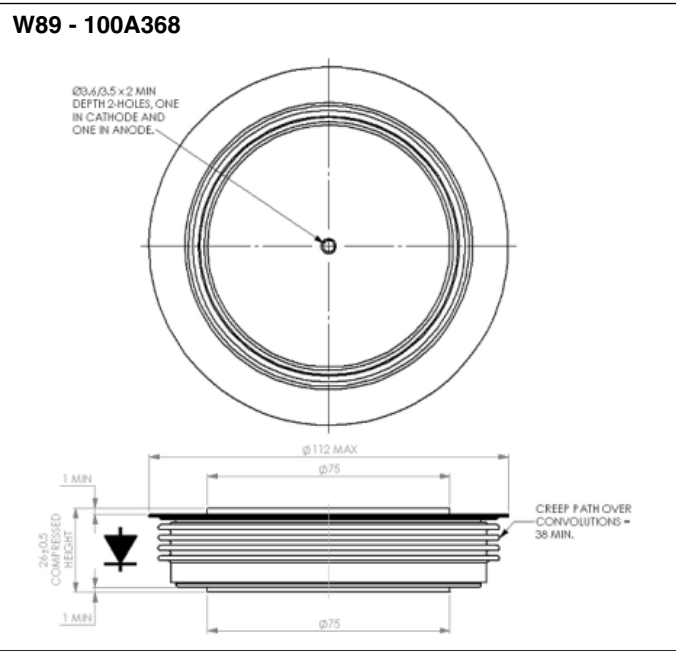
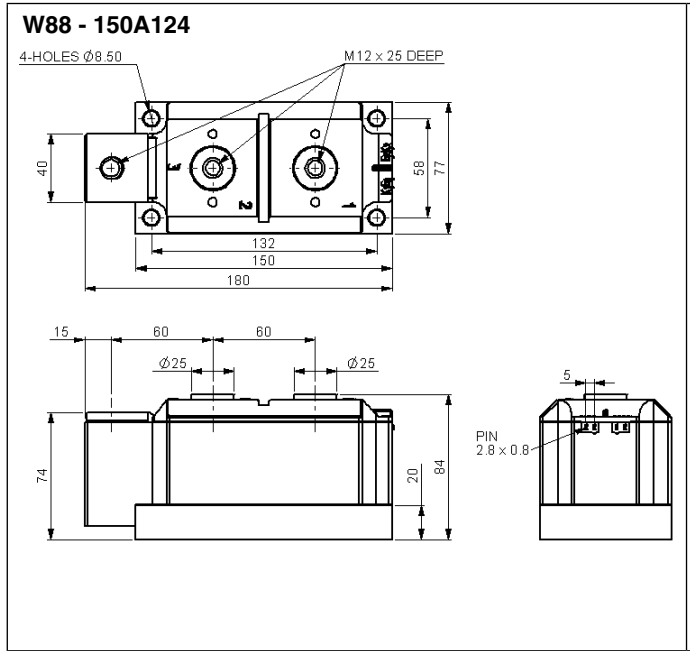
W86 - 101A316



W87 101A376



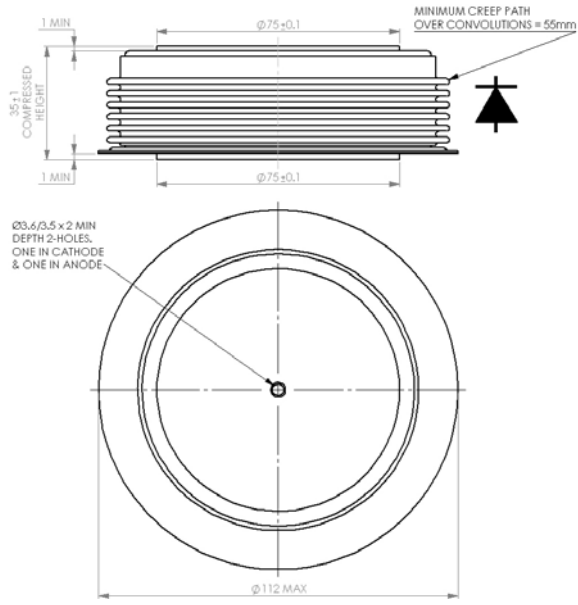
Dimensions in mm and inches (1 mm = 0.0394")



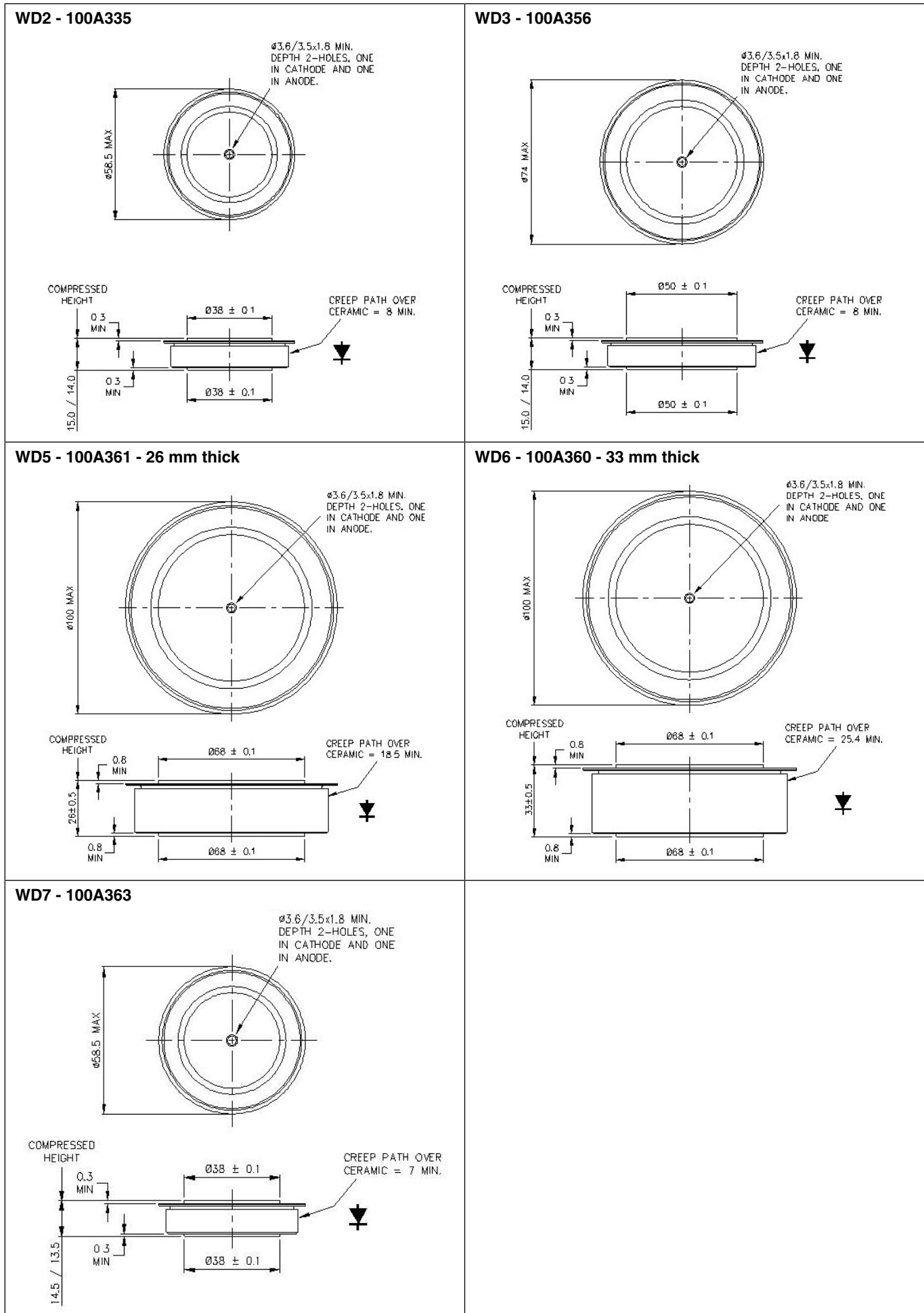
Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

W94 - 100A372

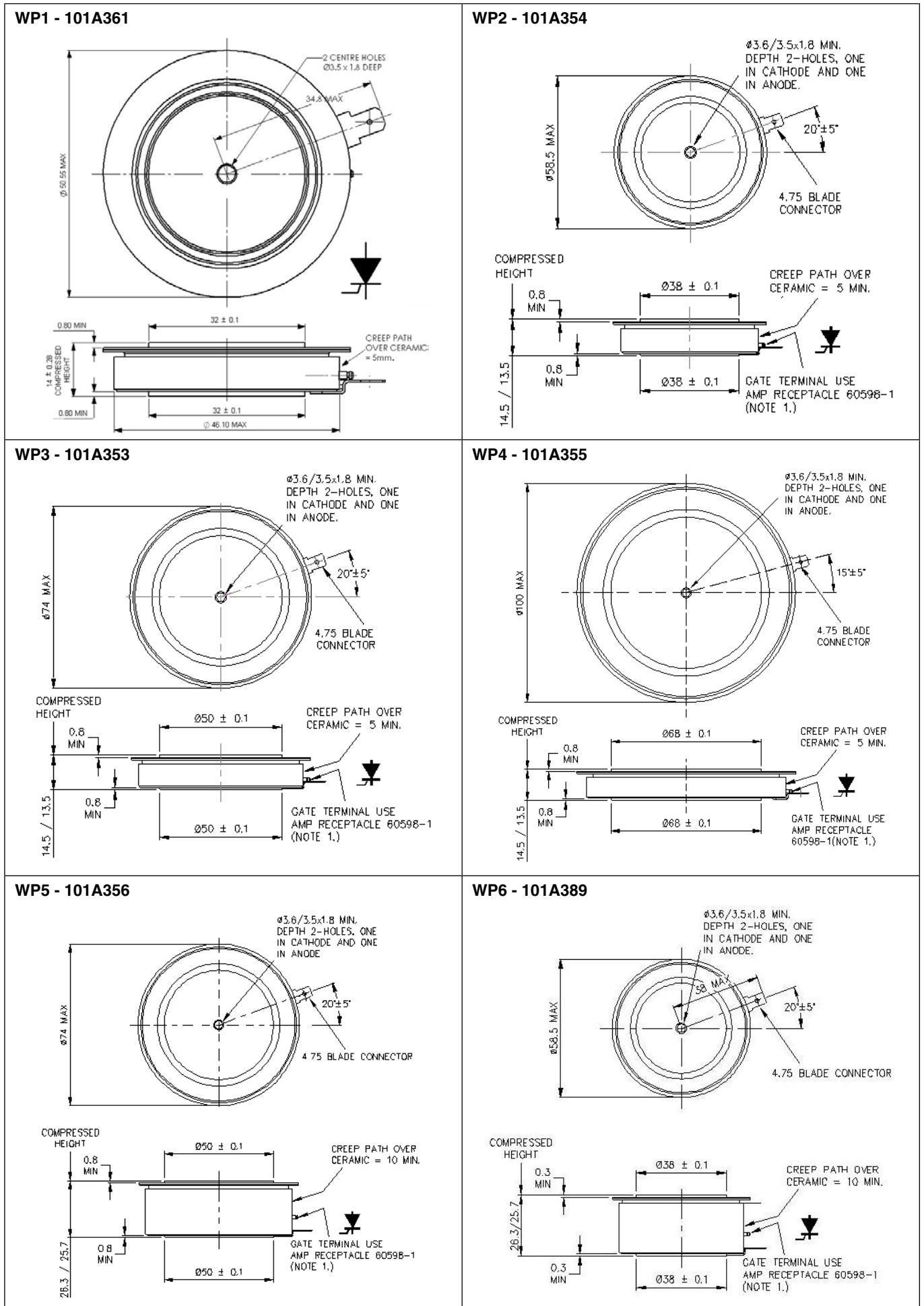


Dimensions in mm and inches (1 mm = 0.0394")

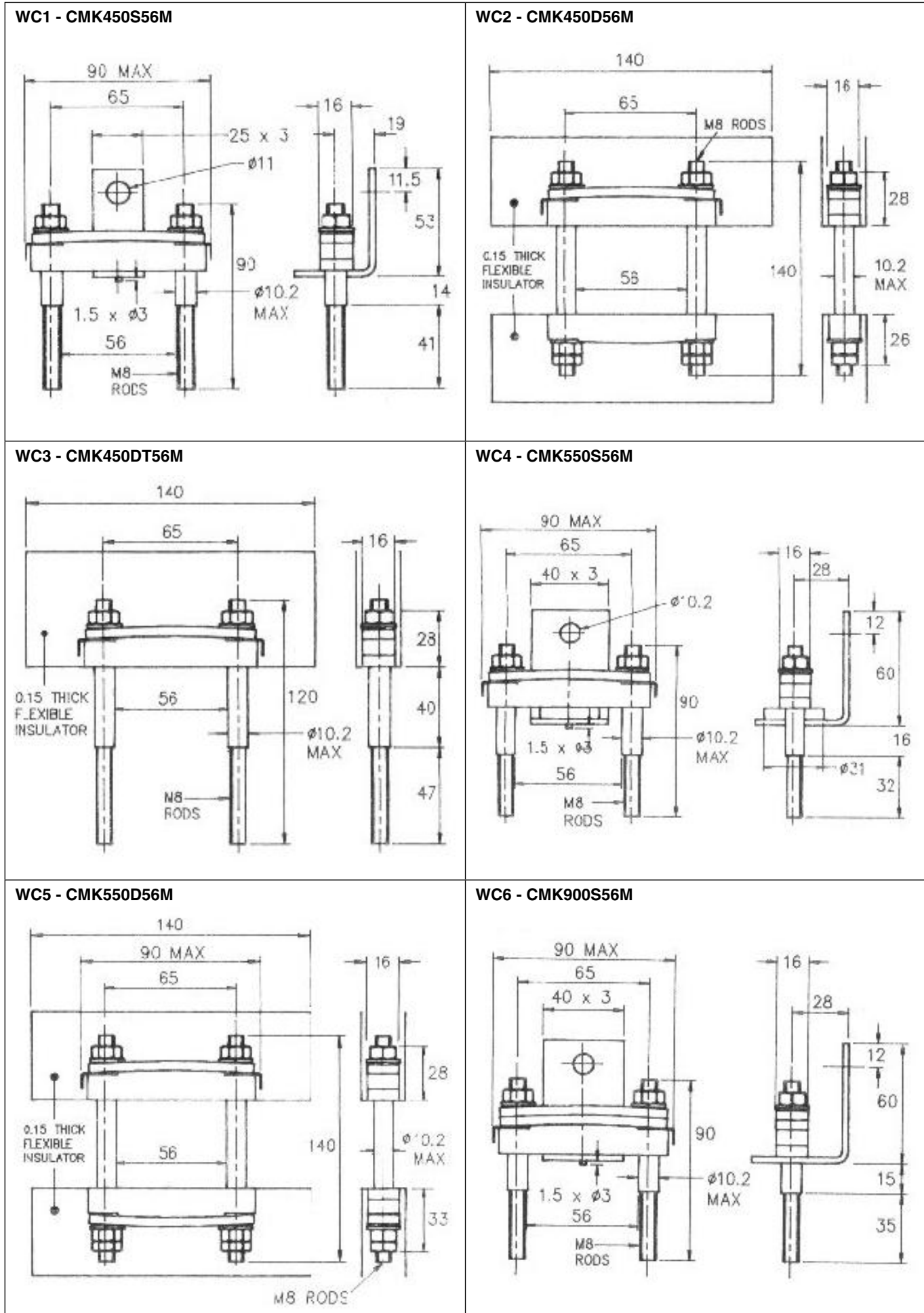


Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")



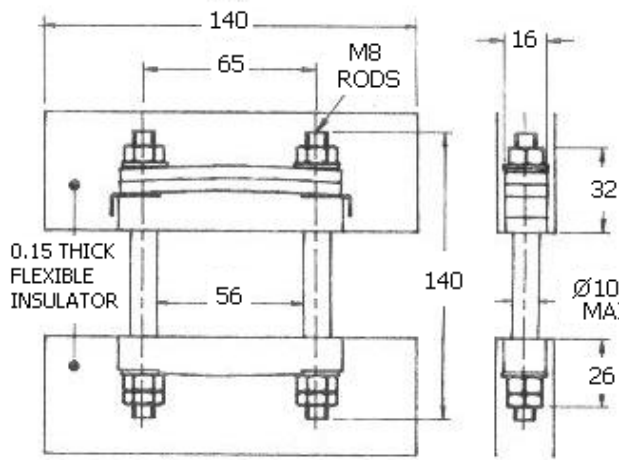
Dimensions in mm and inches (1 mm = 0.0394")



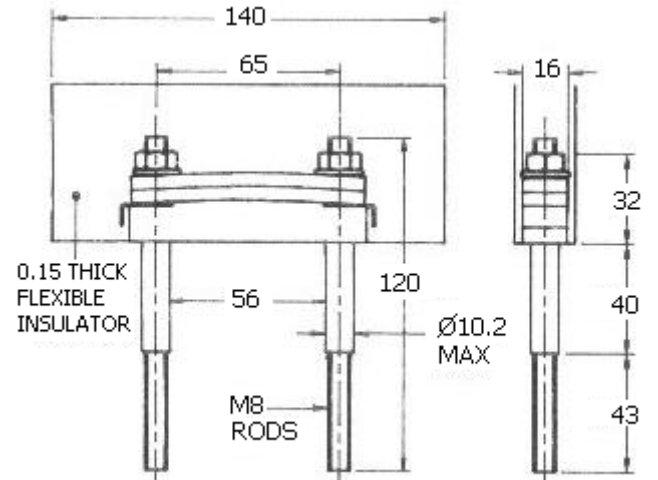
Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

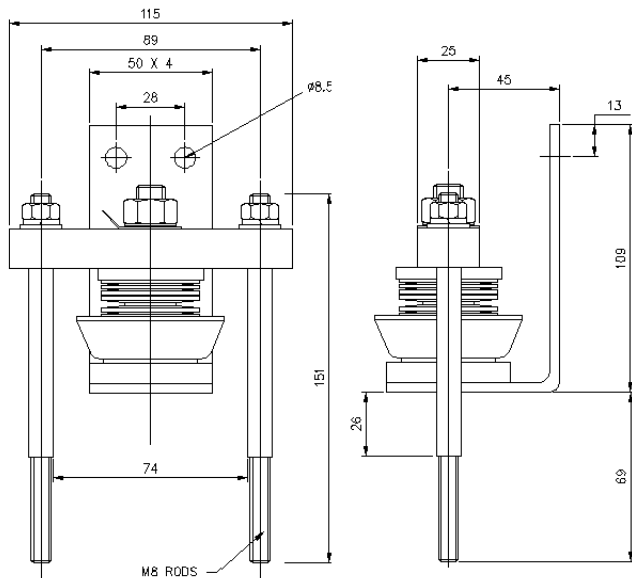
WC7 - CMK900D56M



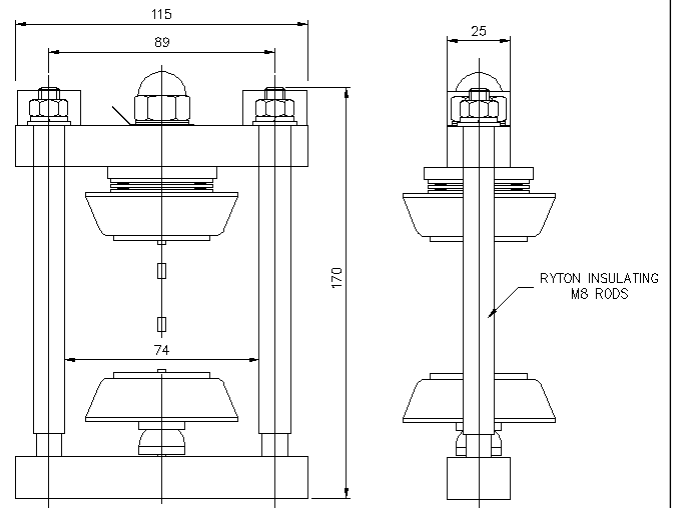
WC8 - CMK900DT56M



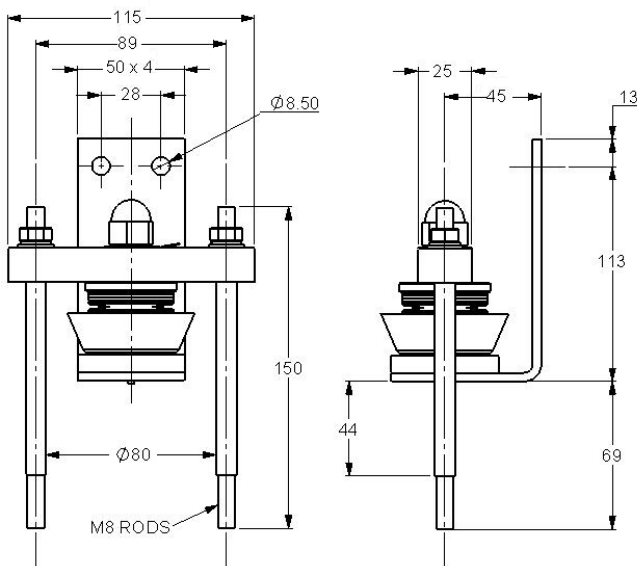
WC9 - CMK0600S74M



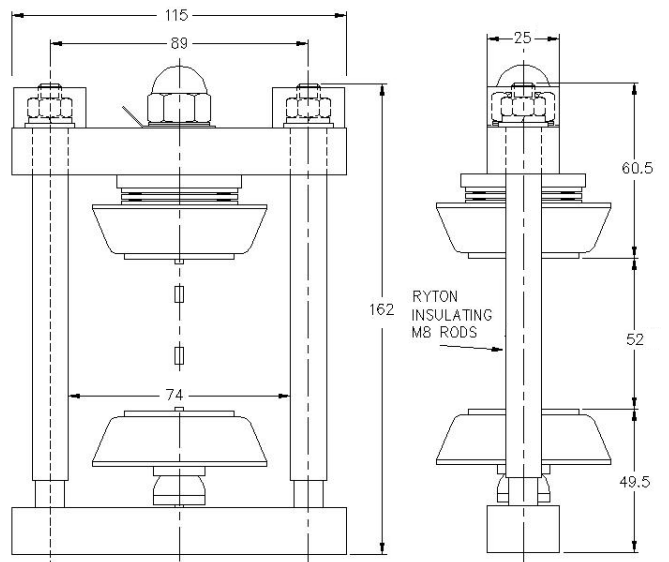
WC10 - CMK0600D74M



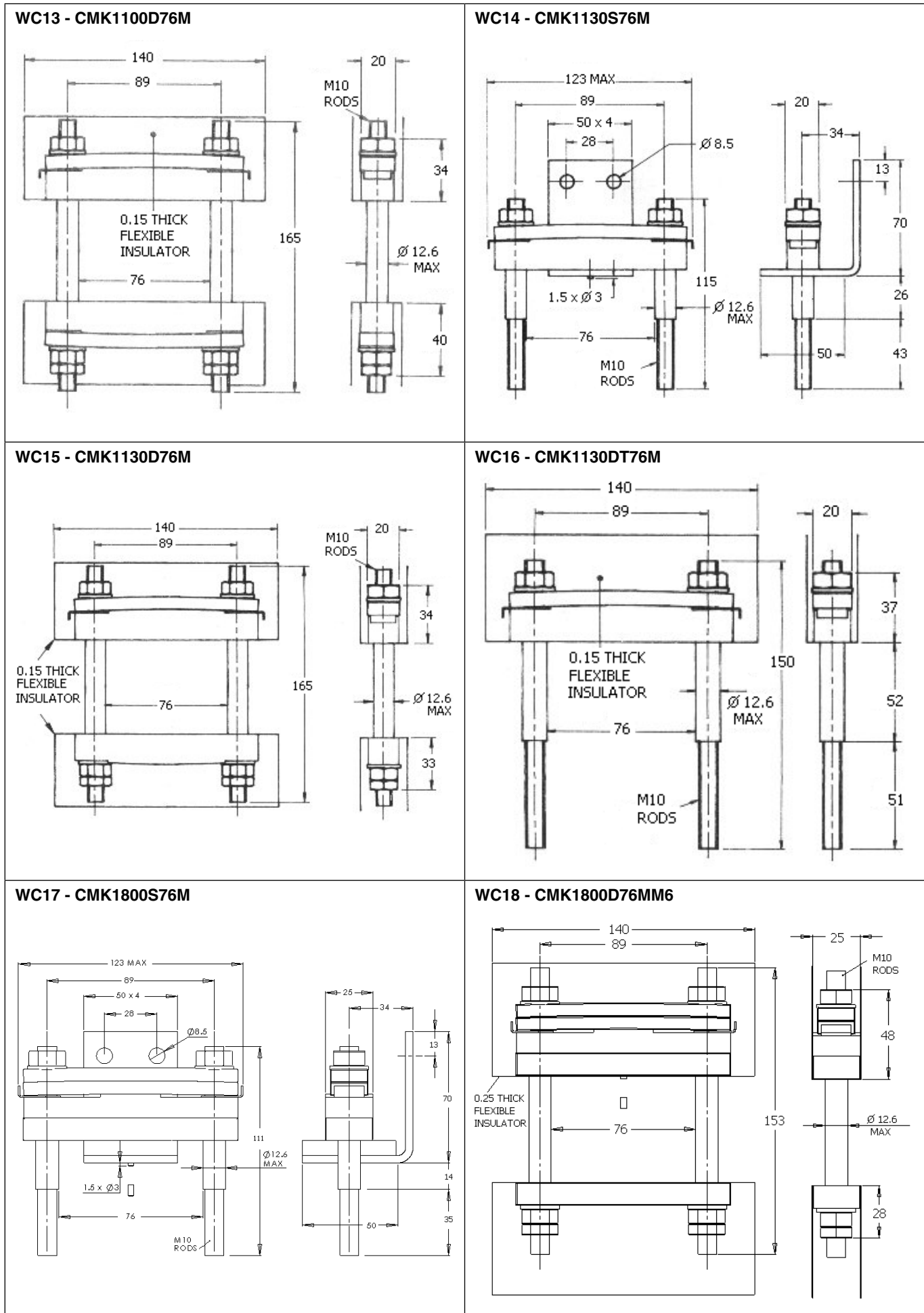
WC11 - CMK1000S74M



WC12 - CMK1000D74M

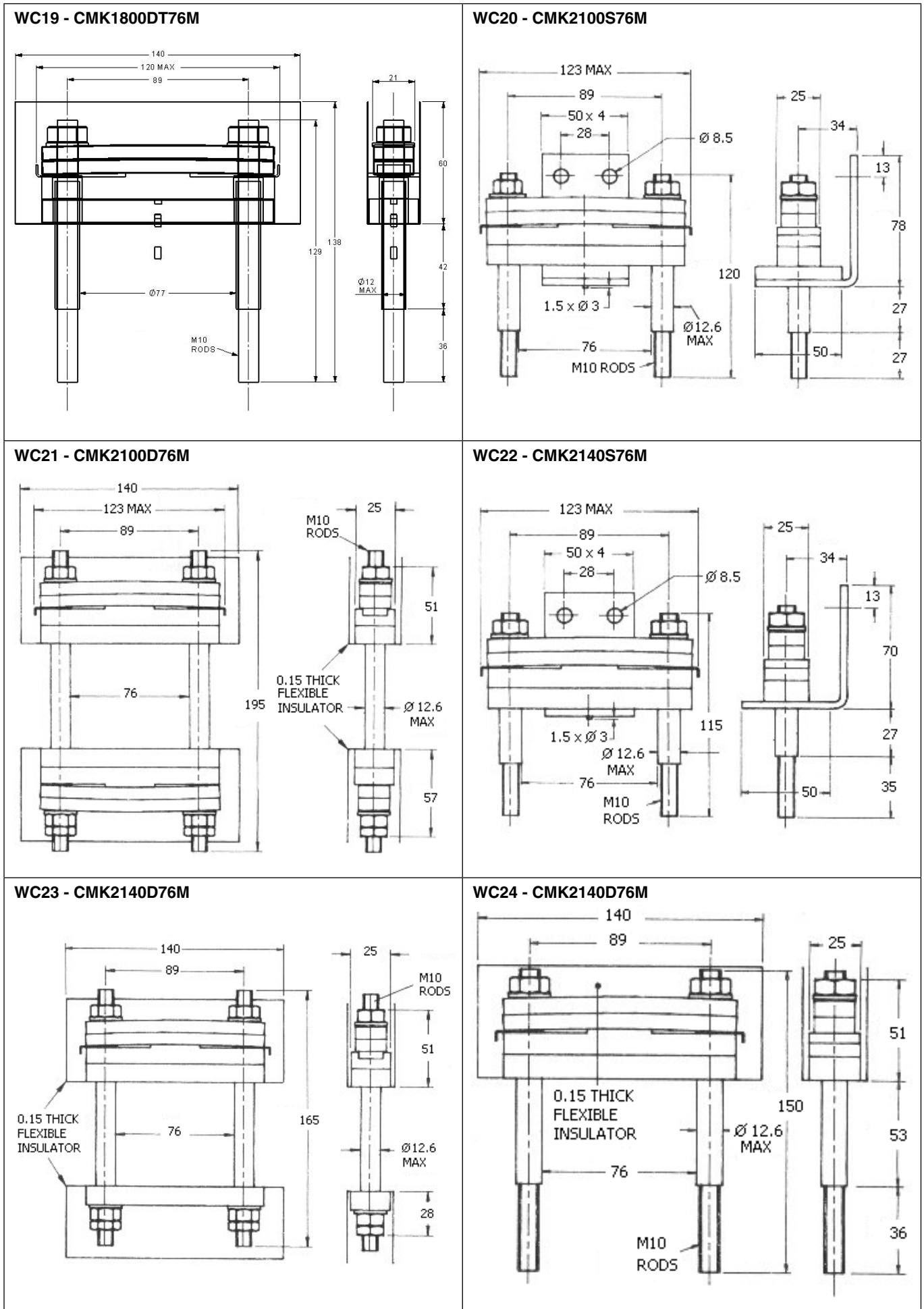


Dimensions in mm and inches (1 mm = 0.0394")

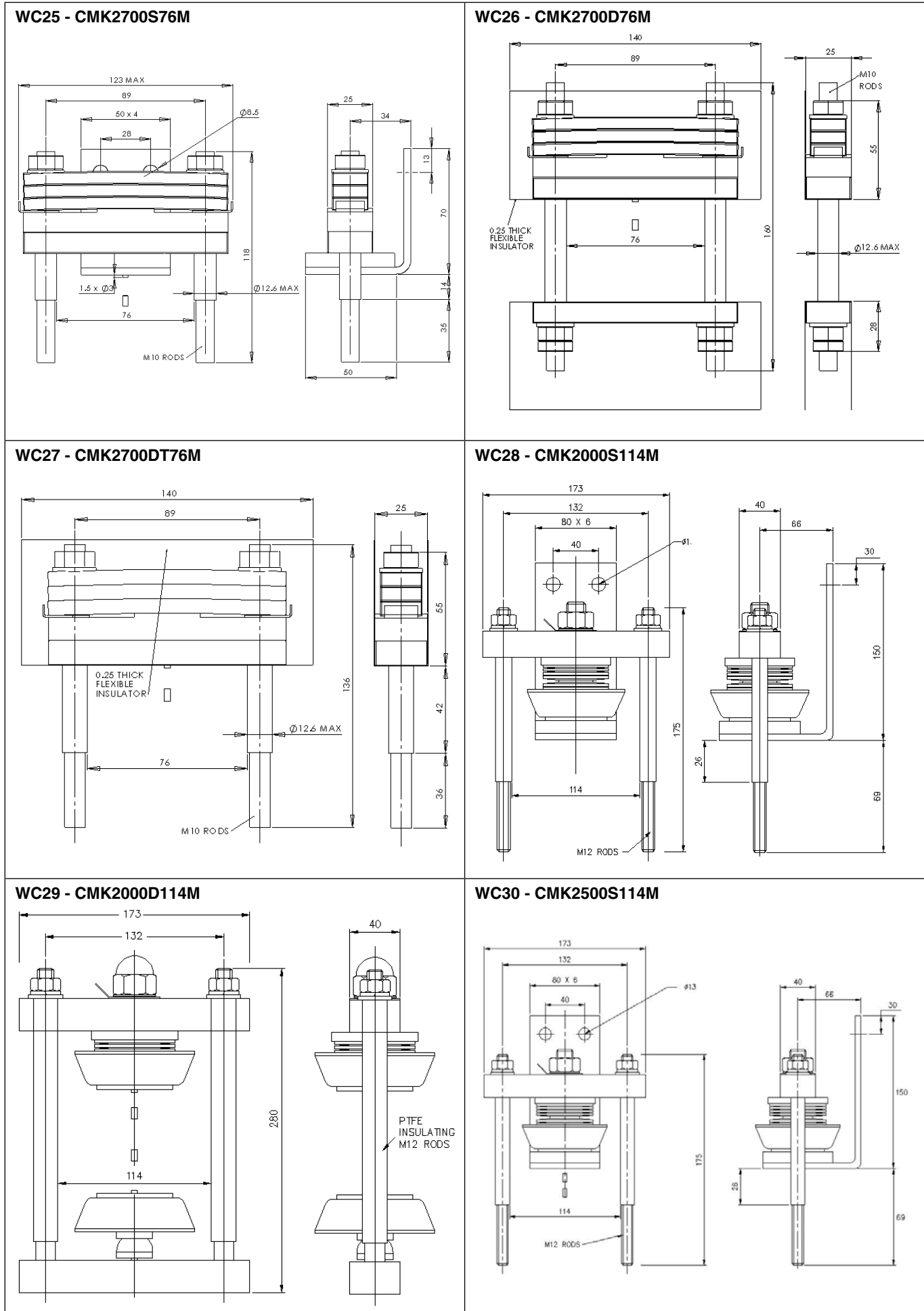


Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

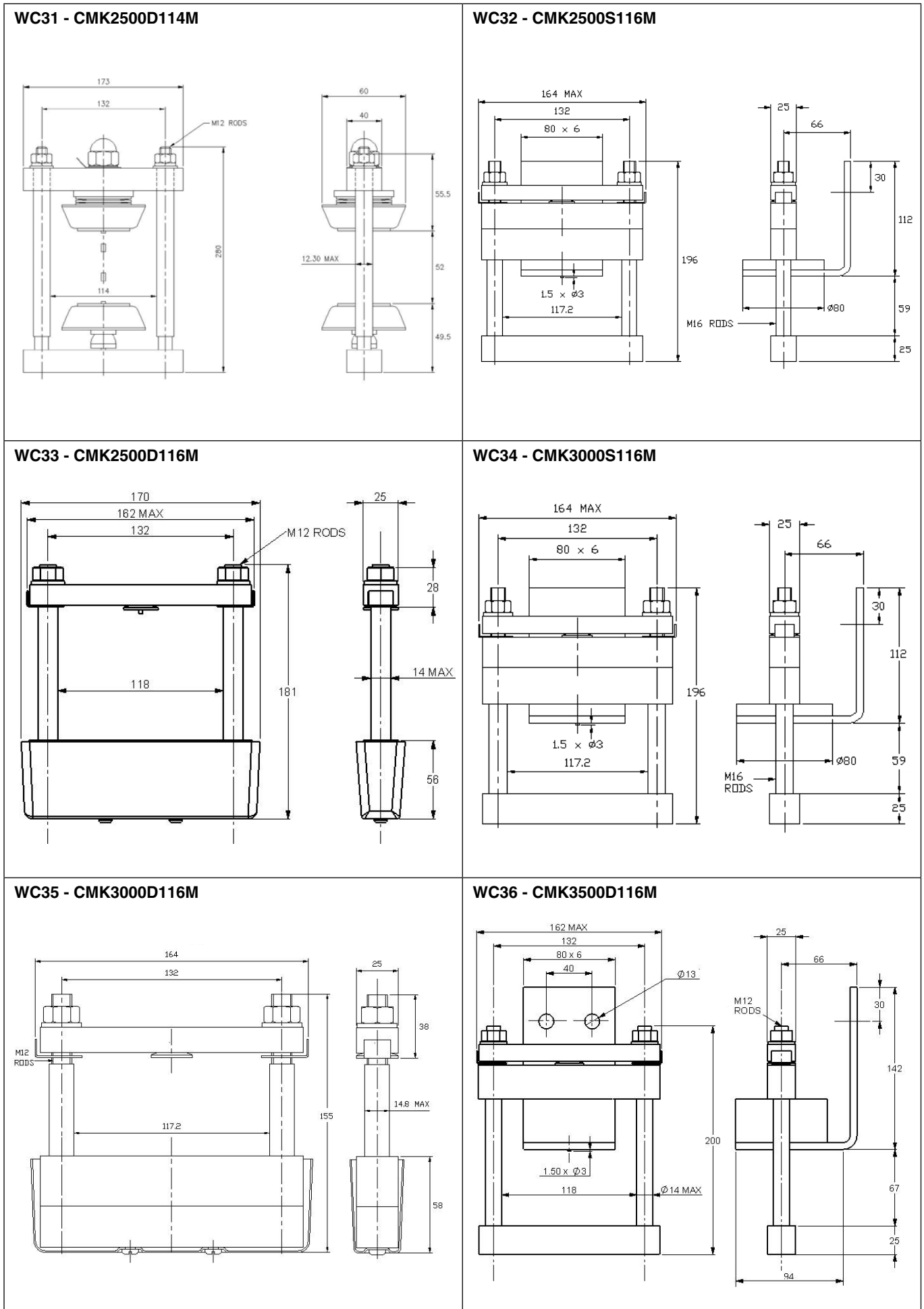


Dimensions in mm and inches (1 mm = 0.0394")

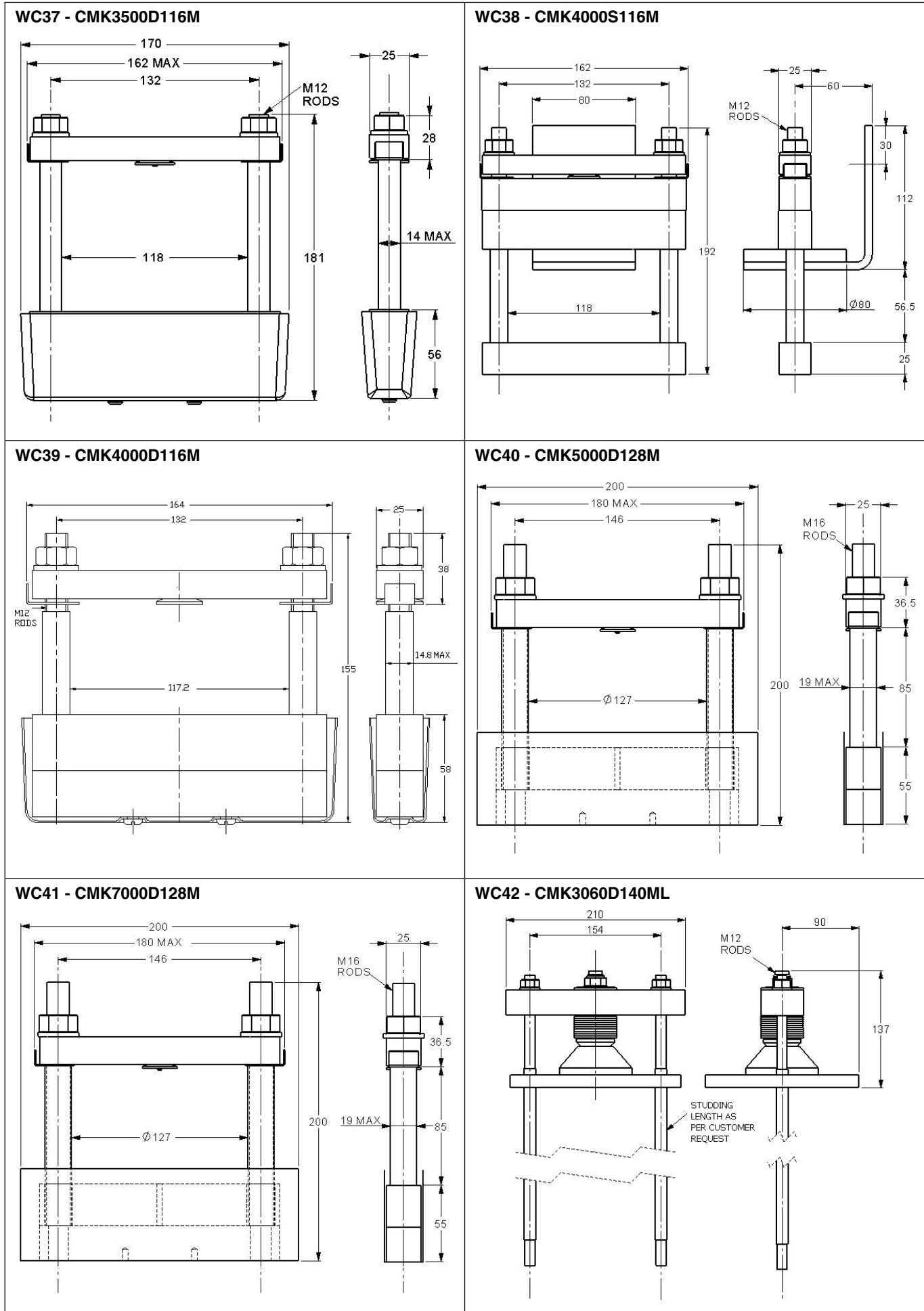


Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

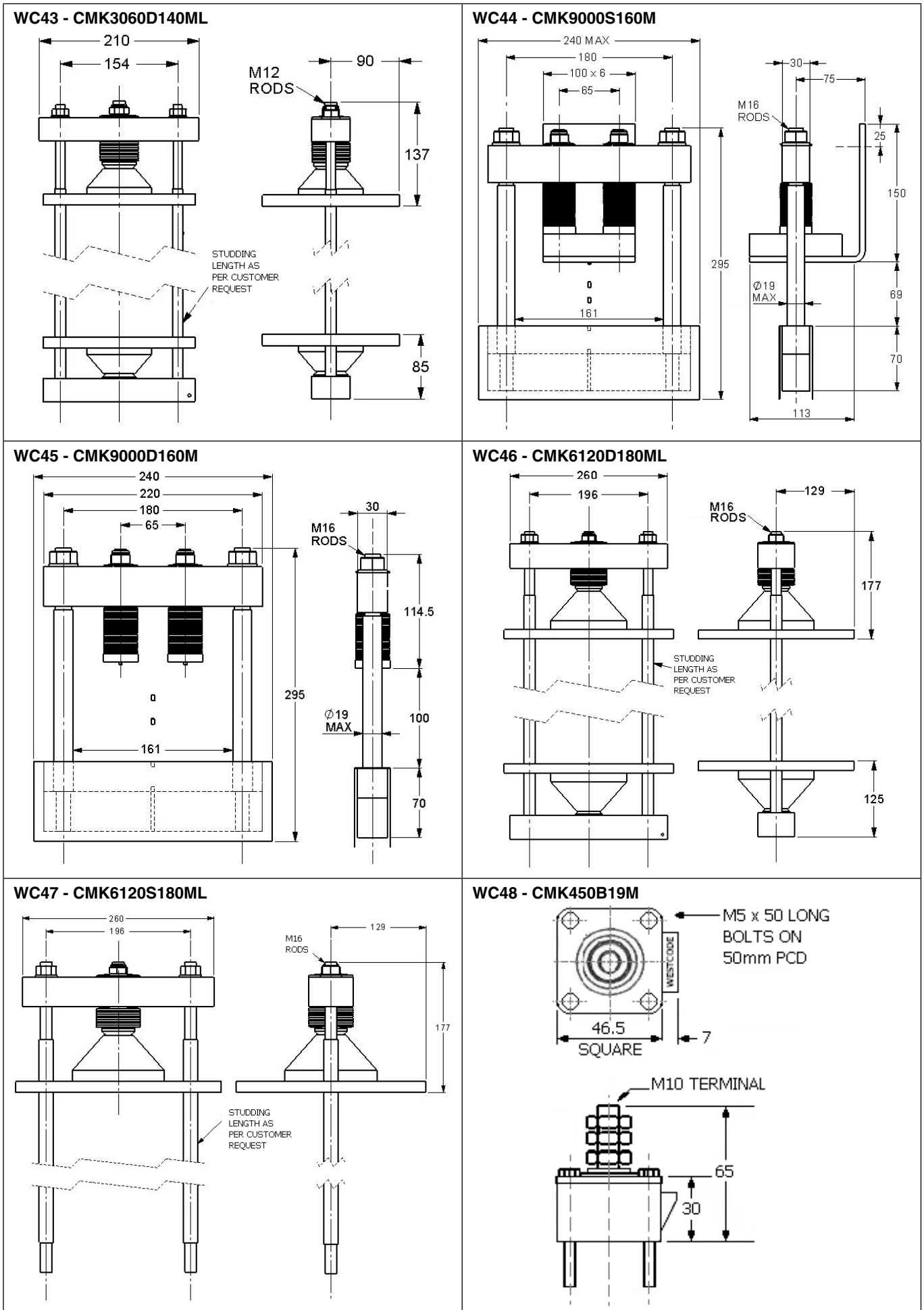


Dimensions in mm and inches (1 mm = 0.0394")



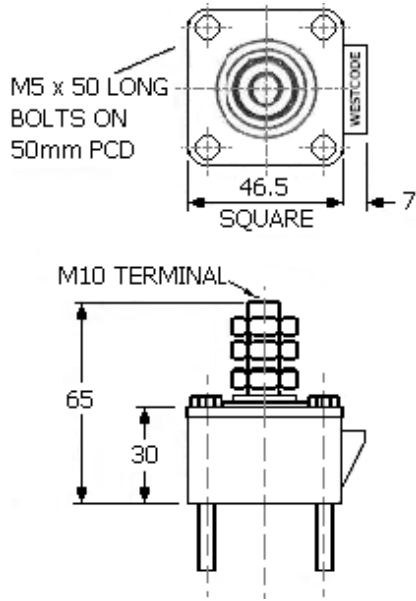
Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

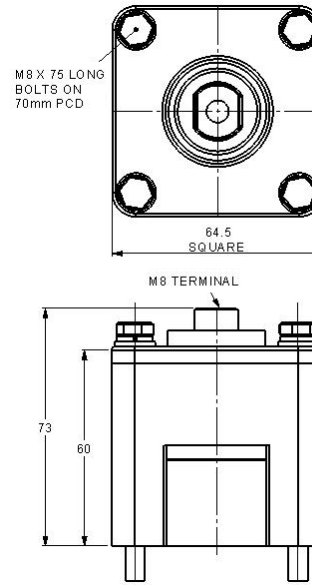


Dimensions in mm and inches (1 mm = 0.0394")

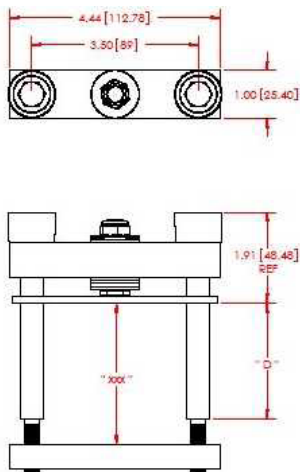
WC49 - CMK450B25M



WC50 - CMK150B34M



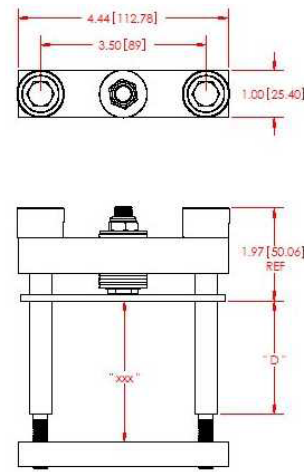
WC51 XSK1500DA076xxx



Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

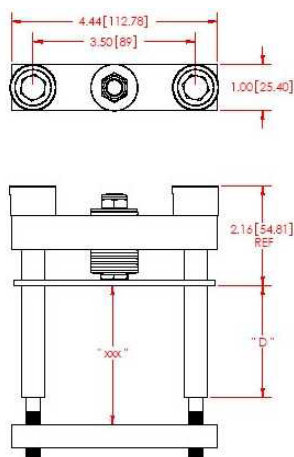
WC52 XSK2000DA076xxx



Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

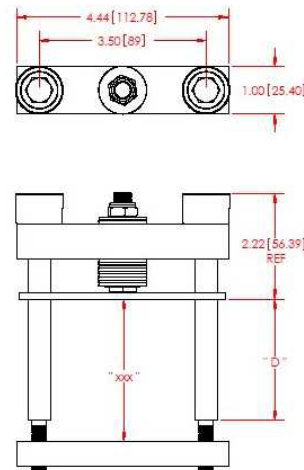
WC53 XSK3000DA076xxx



Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

WC54 XSK3400DA076xxx

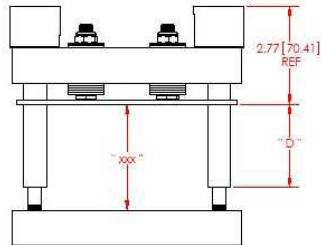
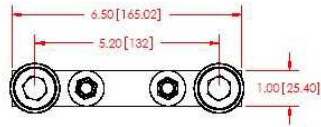


Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

Dimensions in mm and inches (1 mm = 0.0394")

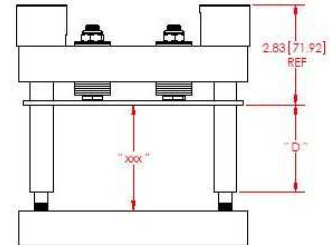
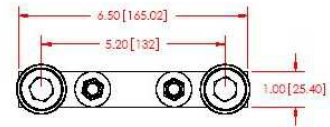
WC55 XSK3800DA116xxx



Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

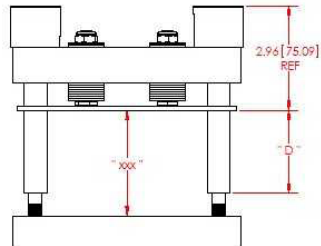
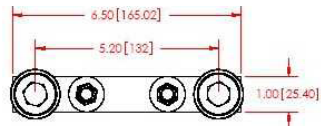
WC56 XSK4400DA116xxx



Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

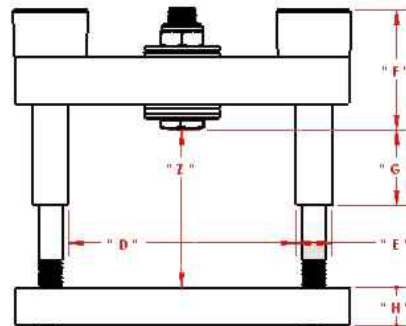
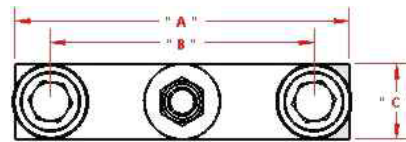
WC57 XSK6000DA116xxx



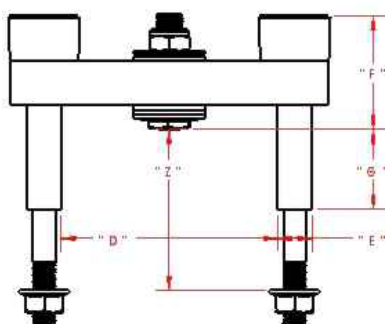
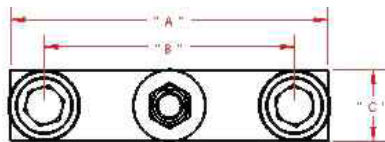
Notes:

1. DIMENSIONS IN INCHES [MILLIMETERS].
2. " Z " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.
3. " D " DIMENSION CAN BE CHANGED AS PER REQUIREMENT.

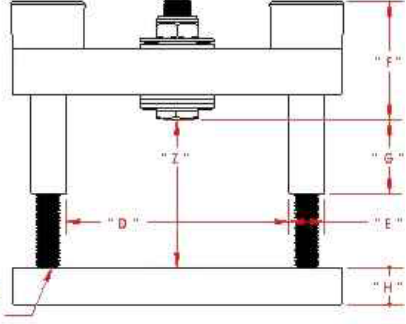
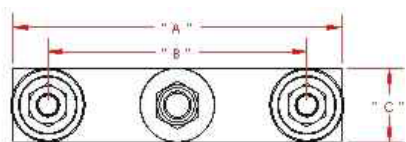
WC58 DA



WC59 DT

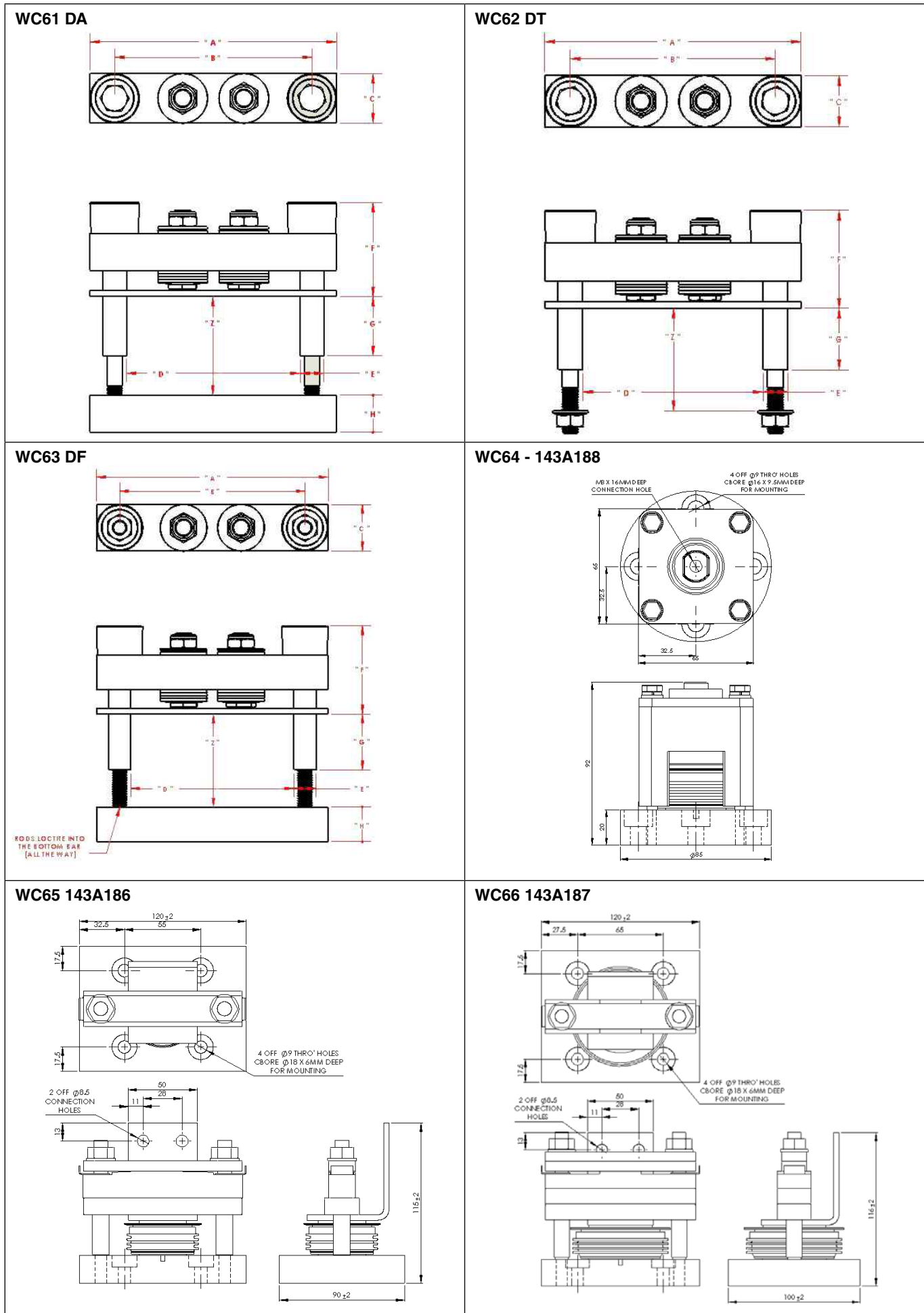


WC60 DF



NOB'S LOCITE INTO THE BOTTOM BAR [ALL THE WAY]

Dimensions in mm and inches (1 mm = 0.0394")



Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

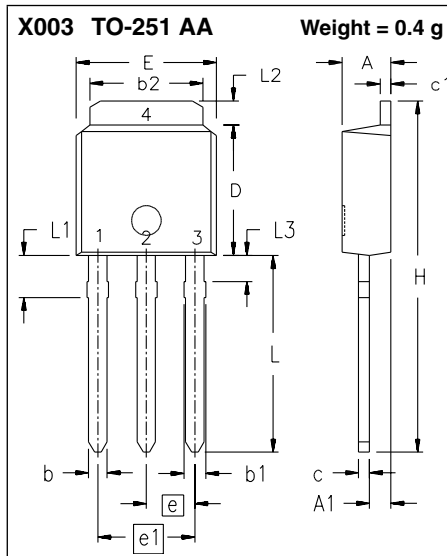
| | | |
|---|--|--|
| <p>WH1 - G FIN</p> <p>68 50 44 90</p> | <p>WH2 - GA FIN</p> <p>100 72 64 120</p> | <p>WH3 - H FIN</p> <p>84 79 10 27 142 178</p> |
| <p>WH4 - T FIN</p> <p>290 172 123 79 84 26 160</p> | <p>WH5 - TB FIN</p> <p>142 112 30 240</p> | <p>WH6 - TC FIN</p> <p>110 10 120 23 47 200 222</p> |
| <p>WH7 - LP100</p> <p>222 20 100 3</p> | <p>WH8 - WS46</p> <p>270 60.5 210 49.5 38</p> | <p>WH9 - WS30 - COPPER</p> <p>93 175 125 89 125 19</p> |

Outline drawings

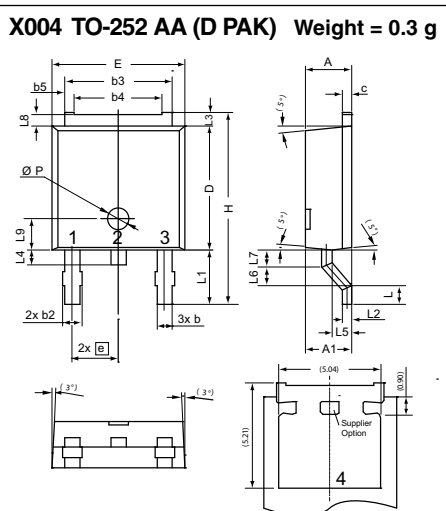
Dimensions in mm and inches (1 mm = 0.0394")

| | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| <p>WCL10 - WS69 COOLER</p> | <p>WCL11 - WS70 COOLER</p> | <p>WCL12 - WS71-1 COOLER</p> |
| <p>WCL13 - WS71-2 COOLER</p> | <p>WCL14 - WS72-1 COOLER</p> | <p>WCL15 - WS72-2 COOLER</p> |
| <p>WCL16 XW127ExxxA</p> | <p>WCL17 XW127ExxxB</p> | <p>WCL18 XW180GN25A</p> |

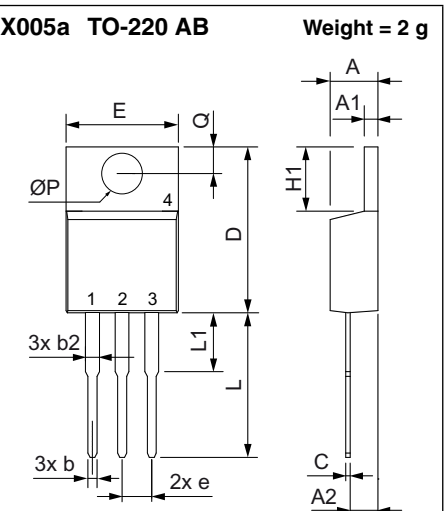
Dimensions in mm and inches (1 mm = 0.0394")



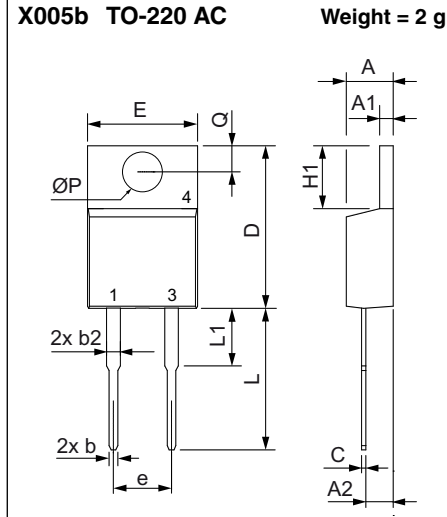
| Dim. | Millimeters | | Inches | |
|------|-------------|-------|-----------|-------|
| | min | max | min | max |
| A | 2.19 | 2.38 | 0.086 | 0.094 |
| A1 | 0.89 | 1.14 | 0.035 | 0.045 |
| b | 0.64 | 0.89 | 0.025 | 0.035 |
| b1 | 0.76 | 1.14 | 0.030 | 0.045 |
| b2 | 5.21 | 5.46 | 0.205 | 0.215 |
| c | 0.46 | 0.58 | 0.018 | 0.023 |
| c1 | 0.46 | 0.58 | 0.018 | 0.023 |
| D | 5.97 | 6.22 | 0.235 | 0.245 |
| E | 6.35 | 6.73 | 0.250 | 0.265 |
| e | 2.28 BSC | | 0.090 BSC | |
| e1 | 4.57 BSC | | 0.180 BSC | |
| H | 17.02 | 17.78 | 0.670 | 0.700 |
| L | 8.89 | 9.65 | 0.350 | 0.380 |
| L1 | 1.91 | 2.28 | 0.075 | 0.090 |
| L2 | 0.89 | 1.27 | 0.035 | 0.050 |
| L3 | 1.15 | 1.52 | 0.045 | 0.060 |



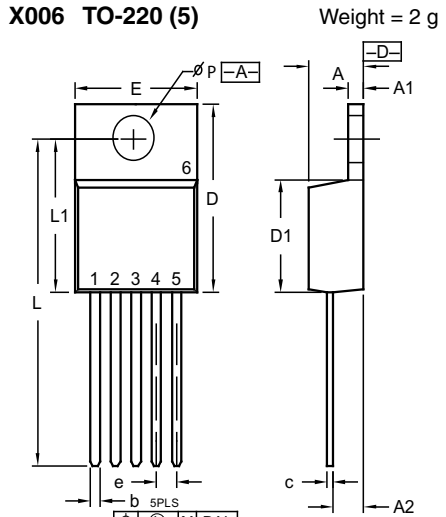
| Dim. | Millimeters | | Inches | |
|------|-------------|------|-----------|-------|
| | min | max | min | max |
| A | 2.20 | 2.40 | 0.087 | 0.094 |
| A1 | 2.10 | 2.50 | 0.083 | 0.098 |
| b | 0.66 | 0.86 | 0.026 | 0.034 |
| b2 | - | 0.96 | - | 0.038 |
| b3 | 5.04 | 5.64 | 0.198 | 0.222 |
| b4 | 4.34 BSC | | 0.171 BSC | |
| b5 | 0.50 BSC | | 0.020 BSC | |
| c | 0.40 | 0.60 | 0.016 | 0.024 |
| D | 5.90 | 6.30 | 0.232 | 0.248 |
| E | 6.40 | 6.80 | 0.252 | 0.268 |
| e | 2.10 | 2.50 | 0.083 | 0.098 |
| H | 9.20 | 9.80 | 0.362 | 0.386 |
| L | 0.55 | 1.02 | 0.022 | 0.040 |
| L1 | 2.50 | 2.90 | 0.098 | 0.114 |
| L2 | 0.40 | 0.60 | 0.016 | 0.024 |
| L3 | 0.50 | 0.90 | 0.020 | 0.035 |
| L4 | 0.60 | 1.00 | 0.024 | 0.039 |
| L5 | 0.82 | 1.22 | 0.032 | 0.048 |
| L6 | 0.79 | 0.99 | 0.031 | 0.039 |
| L7 | 0.81 | 1.01 | 0.032 | 0.040 |
| L8 | 0.40 | 0.80 | 0.016 | 0.031 |
| L9 | 1.50 BSC | | 0.059 BSC | |
| Ø P | 1.00 BSC | | 0.039 BSC | |



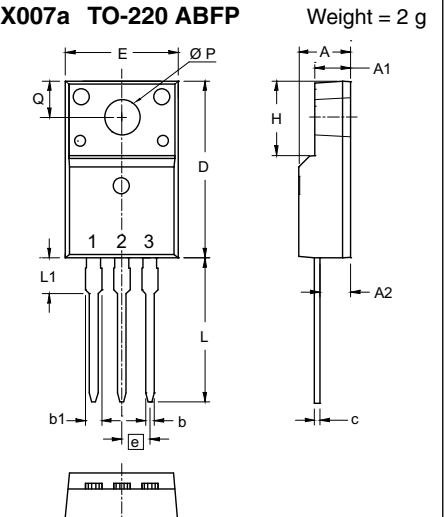
| Dim. | Millimeters | | Inches | |
|------|-------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.32 | 4.82 | 0.170 | 0.190 |
| A1 | 1.14 | 1.39 | 0.045 | 0.055 |
| A2 | 2.29 | 2.79 | 0.090 | 0.110 |
| b | 0.64 | 1.01 | 0.025 | 0.040 |
| b2 | 1.15 | 1.65 | 0.045 | 0.065 |
| C | 0.35 | 0.56 | 0.014 | 0.022 |
| D | 14.73 | 16.00 | 0.580 | 0.630 |
| E | 9.91 | 10.66 | 0.390 | 0.420 |
| e | 2.54 BSC | | 0.100 BSC | |
| H1 | 5.85 | 6.85 | 0.230 | 0.270 |
| L | 12.70 | 13.97 | 0.500 | 0.550 |
| L1 | 2.79 | 5.84 | 0.110 | 0.230 |
| Ø P | 3.54 | 4.08 | 0.139 | 0.161 |
| Q | 2.54 | 3.18 | 0.100 | 0.125 |



| Dim. | Millimeters | | Inches | |
|------|-------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.32 | 4.82 | 0.170 | 0.190 |
| A1 | 1.14 | 1.39 | 0.045 | 0.055 |
| A2 | 2.29 | 2.79 | 0.090 | 0.110 |
| b | 0.64 | 1.01 | 0.025 | 0.040 |
| b2 | 1.15 | 1.65 | 0.045 | 0.065 |
| C | 0.35 | 0.56 | 0.014 | 0.022 |
| D | 14.73 | 16.00 | 0.580 | 0.630 |
| E | 9.91 | 10.66 | 0.390 | 0.420 |
| e | 5.08 BSC | | 0.200 BSC | |
| H1 | 5.85 | 6.85 | 0.230 | 0.270 |
| L | 12.70 | 13.97 | 0.500 | 0.550 |
| L1 | 2.79 | 5.84 | 0.110 | 0.230 |
| Ø P | 3.54 | 4.08 | 0.139 | 0.161 |
| Q | 2.54 | 3.18 | 0.100 | 0.125 |



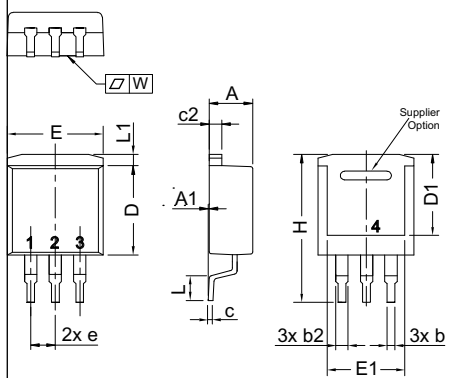
| Dim. | Millimeters | | Inches | |
|------|-------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.32 | 4.82 | 0.170 | 0.190 |
| A1 | 1.14 | 1.39 | 0.045 | 0.055 |
| A2 | 2.29 | 2.79 | 0.090 | 0.110 |
| b | 0.64 | 1.01 | 0.025 | 0.040 |
| c | 0.38 | 0.64 | 0.015 | 0.025 |
| D | 14.73 | 15.75 | 0.580 | 0.620 |
| D1 | 8.64 | 9.40 | 0.340 | 0.370 |
| E | 9.91 | 10.54 | 0.390 | 0.415 |
| e | 1.70 BSC | | 0.067 BSC | |
| k | 0.00 | 0.36 | 0.000 | 0.014 |
| L | 25.27 | 26.54 | 0.995 | 1.045 |
| L1 | 11.94 | 12.95 | 0.470 | 0.510 |
| Ø P | 3.53 | 3.96 | 0.139 | 0.156 |



| Dim. | Millimeters | | Inches | |
|------|-------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.50 | 4.90 | 0.177 | 0.193 |
| A1 | 2.34 | 2.74 | 0.092 | 0.108 |
| A2 | 2.56 | 2.96 | 0.101 | 0.117 |
| b | 0.70 | 0.90 | 0.028 | 0.035 |
| b1 | 1.27 | 1.47 | 0.050 | 0.058 |
| c | 0.45 | 0.60 | 0.018 | 0.024 |
| D | 15.67 | 16.07 | 0.617 | 0.633 |
| E | 9.96 | 10.36 | 0.392 | 0.408 |
| e | 2.54 BSC | | 0.100 BSC | |
| H | 6.48 | 6.88 | 0.255 | 0.271 |
| L | 12.68 | 13.28 | 0.499 | 0.523 |
| L1 | 3.03 | 3.43 | 0.119 | 0.135 |
| Ø P | 3.08 | 3.28 | 0.121 | 0.129 |
| Q | 3.20 | 3.40 | 0.126 | 0.134 |

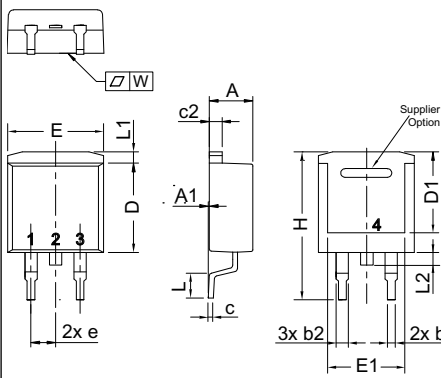
Dimensions in mm and inches (1 mm = 0.0394")

X011a TO-263 AA (D²PAK) Weight = 1.5 g



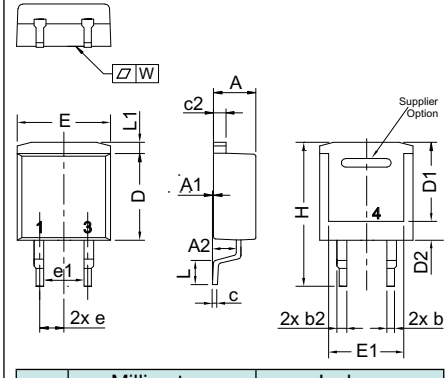
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-------------|-------|
| | min | max | min | max |
| A | 4.06 | 4.83 | 0.160 | 0.190 |
| A1 | typ. 0.10 | | typ. 0.004 | |
| b | 0.51 | 0.99 | 0.020 | 0.039 |
| b2 | 1.14 | 1.40 | 0.045 | 0.055 |
| c | 0.40 | 0.74 | 0.016 | 0.029 |
| c2 | 1.14 | 1.40 | 0.045 | 0.055 |
| D | 8.38 | 9.40 | 0.330 | 0.370 |
| D1 | 8.00 | 8.89 | 0.315 | 0.350 |
| E | 9.65 | 10.41 | 0.380 | 0.410 |
| E1 | 6.22 | 8.13 | 0.245 | 0.320 |
| e | 2,54 BSC | | 0,100 BSC | |
| H | 14.61 | 15.88 | 0.575 | 0.625 |
| L | 1.78 | 2.79 | 0.070 | 0.110 |
| L1 | 1.02 | 1.68 | 0.040 | 0.066 |
| W | typ. 0.02 | 0.040 | typ. 0.0008 | 0.002 |

X011b TO-263 AB (D²PAK) Weight = 1.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-------------|-------|
| | min | max | min | max |
| A | 4.06 | 4.83 | 0.160 | 0.190 |
| A1 | typ. 0.10 | | typ. 0.004 | |
| b | 0.51 | 0.99 | 0.020 | 0.039 |
| b2 | 1.14 | 1.40 | 0.045 | 0.055 |
| c | 0.40 | 0.74 | 0.016 | 0.029 |
| c2 | 1.14 | 1.40 | 0.045 | 0.055 |
| D | 8.38 | 9.40 | 0.330 | 0.370 |
| D1 | 8.00 | 8.89 | 0.315 | 0.350 |
| E | 9.65 | 10.41 | 0.380 | 0.410 |
| E1 | 6.22 | 8.13 | 0.245 | 0.320 |
| e | 2,54 BSC | | 0,100 BSC | |
| H | 14.61 | 15.88 | 0.575 | 0.625 |
| L | 1.78 | 2.79 | 0.070 | 0.110 |
| L1 | 1.02 | 1.68 | 0.040 | 0.066 |
| W | typ. 0.02 | 0.040 | typ. 0.0008 | 0.002 |

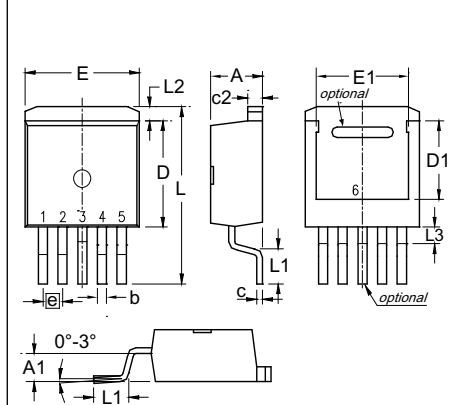
X011c TO-263 AB (D²PAK) Weight = ?? g



| Dim. | Millimeters | | Inches | |
|------|-------------|-------|------------|-------|
| | min | max | min | max |
| A | 4.06 | 4.83 | 0.160 | 0.190 |
| A1 | typ 0.10 | | typ 0.004 | |
| A2 | 2.41 | | 0.095 | |
| b | 0.51 | 0.99 | 0.020 | 0.039 |
| b2 | 1.14 | 1.40 | 0.045 | 0.055 |
| c | 0.40 | 0.74 | 0.016 | 0.029 |
| c2 | 1.14 | 1.40 | 0.045 | 0.055 |
| D | 8.38 | 9.40 | 0.330 | 0.370 |
| D1 | 8.00 | 8.89 | 0.315 | 0.350 |
| D2 | 2.5 | | 0.098 | |
| E | 9.65 | 10.41 | 0.380 | 0.410 |
| E1 | 6.22 | 8.50 | 0.245 | 0.335 |
| e | 2.54 BSC | | 0.100 BSC | |
| e1 | 4.28 | | 0.169 | |
| H | 14.61 | 15.88 | 0.575 | 0.625 |
| L | 1.78 | 2.79 | 0.070 | 0.110 |
| L2 | 1.02 | 1.68 | 0.040 | 0.066 |
| W | typ 0.02 | 0.040 | typ 0.0008 | 0.002 |

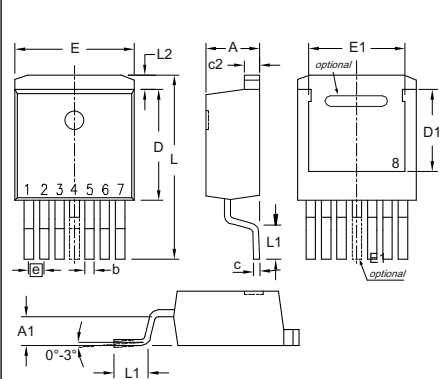
All dimensions conform with and/or within JEDEC standard

X012a TO-263 (5) Weight = 1.5 g



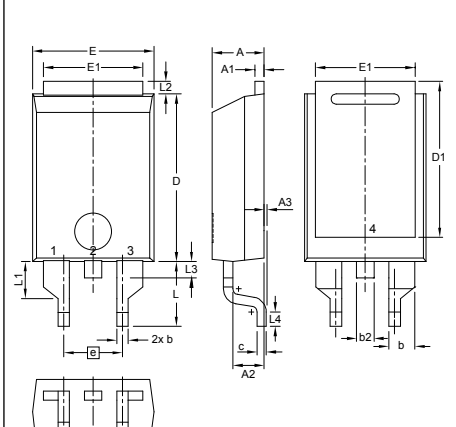
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.20 | 4.80 | 0.160 | 0.190 |
| A1 | 2.10 | 2.70 | 0.083 | 0.106 |
| b | 0.60 | 0.99 | 0.024 | 0.039 |
| c | 0.40 | 0.70 | 0.016 | 0.028 |
| c2 | 1.20 | 1.40 | 0.047 | 0.055 |
| D | 8.80 | 9.50 | 0.346 | 0.374 |
| D1 | 6.60 | 7.20 | 0.260 | 0.283 |
| E | 9.65 | 10.30 | 0.380 | 0.406 |
| E1 | 7.50 | 8.20 | 0.295 | 0.323 |
| e | 1.70 BSC | | 0.067 BSC | |
| L | 14.80 | 15.80 | 0.583 | 0.622 |
| L1 | 2.24 | 2.84 | 0.088 | 0.112 |
| L2 | 1.00 | 1.40 | 0.039 | 0.067 |
| L3 | 1.20 | 1.70 | 0.047 | 0.067 |

**X012b TO-263 (7)
c) middle leg cut** Weight = 2.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.20 | 4.60 | 0.165 | 0.181 |
| A1 | 2.45 | 2.75 | 0.096 | 0.108 |
| b | 0.65 | 0.90 | 0.026 | 0.035 |
| c | 0.40 | 0.60 | 0.016 | 0.024 |
| c2 | 1.14 | 1.40 | 0.045 | 0.055 |
| D | 8.38 | 8.64 | 0.330 | 0.340 |
| D1 | 6.10 | 6.35 | 0.240 | 0.250 |
| E | 10.00 | 10.30 | 0.394 | 0.406 |
| E1 | 7.34 | 8.00 | 0.290 | 0.315 |
| e | 1.27 BSC | | 0.050 BSC | |
| L | 14.73 | 15.75 | 0.580 | 0.620 |
| L1 | 2.24 | 2.84 | 0.088 | 0.112 |
| L2 | 1.35 | 1.55 | 0.053 | 0.061 |

X013 PLUS220™ (SMD) Weight = 2 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| A1 | 0.70 | 0.90 | 0.028 | 0.035 |
| A2 | 2.50 | 3.00 | 0.098 | 0.118 |
| A3 | 0.00 | 0.25 | 0.000 | 0.010 |
| b | 0.90 | 1.20 | 0.035 | 0.047 |
| b1 | 2.03 | 2.41 | 0.080 | 0.095 |
| b2 | 1.37 | 1.63 | 0.054 | 0.064 |
| c | 0.70 | 0.90 | 0.028 | 0.035 |
| D | 14.00 | 15.00 | 0.551 | 0.591 |
| D1 | 13.00 | 13.70 | 0.512 | 0.539 |
| E | 10.00 | 11.00 | 0.394 | 0.433 |
| E1 | 8.40 | 8.80 | 0.331 | 0.346 |
| e | 5.08 BSC | | 0.200 BSC | |
| L | 5.30 | 5.80 | 0.209 | 0.228 |
| L1 | 3.00 | 3.50 | 0.118 | 0.138 |
| L2 | 0.90 | 1.30 | 0.035 | 0.051 |
| L3 | 1.20 | 1.50 | 0.047 | 0.059 |
| L4 | 1.00 | 1.50 | 0.039 | 0.059 |

Dimensions in mm and inches (1 mm = 0.0394")

| X014a TO-247 AD | | Weight = 6 g | | X014b TO-247 AD | | Weight = 6 g | | X015a PLUS247™ | | Weight = 7 g | | | | |
|-----------------|------------|--------------|-----------|-----------------|------|--------------|-------|----------------|-------|--------------|------------|-------|-----------|-------|
| | | | | | | | | | | | | | | |
| Dim. | Millimeter | | Inches | | Dim. | Millimeter | | Inches | | Dim. | Millimeter | | Inches | |
| A | min | max | min | max | A | min | max | min | max | A | min | max | min | max |
| A1 | 2.21 | 2.59 | 0.087 | 0.102 | A1 | 2.21 | 2.59 | 0.087 | 0.102 | A1 | 2.29 | 2.54 | 0.090 | 0.100 |
| A2 | 1.50 | 2.49 | 0.059 | 0.098 | A2 | 1.50 | 2.49 | 0.059 | 0.098 | A2 | 1.91 | 2.16 | 0.075 | 0.085 |
| b | 0.99 | 1.40 | 0.039 | 0.055 | b | 0.99 | 1.40 | 0.039 | 0.055 | b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.65 | 2.39 | 0.065 | 0.094 | b2 | 1.65 | 2.39 | 0.065 | 0.094 | b1 | 1.90 | 2.10 | 0.075 | 0.084 |
| b4 | 2.59 | 3.43 | 0.102 | 0.135 | b4 | 2.59 | 3.43 | 0.102 | 0.135 | b2 | 2.92 | 3.12 | 0.115 | 0.123 |
| c | 0.38 | 0.89 | 0.015 | 0.035 | c | 0.38 | 0.89 | 0.015 | 0.035 | C | 0.60 | 0.80 | 0.024 | 0.031 |
| D | 20.79 | 21.45 | 0.819 | 0.845 | D | 20.79 | 21.45 | 0.819 | 0.845 | D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 13.07 | - | 0.515 | - | D1 | 13.07 | - | 0.515 | - | E | 15.75 | 16.13 | 0.620 | 0.635 |
| D2 | 0.51 | 1.35 | 0.020 | 0.053 | D2 | 0.51 | 1.35 | 0.020 | 0.053 | e | 5.45 BSC | | 0.215 BSC | |
| E | 15.48 | 16.24 | 0.610 | 0.640 | E | 15.48 | 16.24 | 0.610 | 0.640 | L | 19.80 | 20.30 | 0.078 | 0.800 |
| E1 | 13.45 | - | 0.530 | - | E1 | 13.45 | - | 0.530 | - | L1 | - | 4.49 | - | 0.177 |
| E2 | 4.31 | 5.48 | 0.170 | 0.216 | E2 | 4.31 | 5.48 | 0.170 | 0.216 | Ø P | 3.55 | 3.65 | 0.140 | 0.144 |
| e | 5.45 BSC | | 0.215 BSC | | e | 10.90 BSC | | 0.430 BSC | | Ø P1 | - | 7.39 | - | 0.290 |
| L | 19.80 | 20.30 | 0.078 | 0.800 | L | 19.80 | 20.30 | 0.078 | 0.800 | Q | 5.38 | 6.19 | 0.212 | 0.244 |
| L1 | - | 4.49 | - | 0.177 | L1 | - | 4.49 | - | 0.177 | S | 6.14 BSC | | 0.242 BSC | |
| Ø P | 3.55 | 3.65 | 0.140 | 0.144 | Ø P | 3.55 | 3.65 | 0.140 | 0.144 | | | | | |
| Ø P1 | - | 7.39 | - | 0.290 | Ø P1 | - | 7.39 | - | 0.290 | | | | | |
| Q | 5.38 | 6.19 | 0.212 | 0.244 | Q | 5.38 | 6.19 | 0.212 | 0.244 | | | | | |
| S | 6.14 BSC | | 0.242 BSC | | S | 6.14 BSC | | 0.242 BSC | | | | | | |

| X016a ISOPLUS247™ | | Weight = 4.5 g | | X016b ISOPLUS247™ | | Weight = 4.5 g | | X016c ISO247™ | | Weight = 4.5 g | | | | |
|-------------------|------------|----------------|-----------|-------------------|------|----------------|-------|---------------|-------|----------------|------------|-------|-----------|-------|
| | | | | | | | | | | | | | | |
| Dim. | Millimeter | | Inches | | Dim. | Millimeter | | Inches | | Dim. | Millimeter | | Inches | |
| A | min | max | min | max | A | min | max | min | max | A | min | max | min | max |
| A1 | 2.29 | 2.54 | 0.090 | 0.100 | A1 | 2.29 | 2.54 | 0.090 | 0.100 | A1 | 2.21 | 2.59 | 0.087 | 0.102 |
| A2 | 1.91 | 2.16 | 0.075 | 0.085 | A2 | 1.91 | 2.16 | 0.075 | 0.085 | A2 | 1.50 | 2.49 | 0.059 | 0.098 |
| b | 1.14 | 1.40 | 0.045 | 0.055 | b | 1.14 | 1.40 | 0.045 | 0.055 | b | 0.99 | 1.40 | 0.039 | 0.055 |
| b2 | 1.91 | 2.20 | 0.075 | 0.087 | b2 | 1.91 | 2.20 | 0.075 | 0.087 | b2 | 1.65 | 2.39 | 0.065 | 0.094 |
| b4 | 2.92 | 3.24 | 0.115 | 0.128 | b4 | 2.92 | 3.24 | 0.115 | 0.128 | b4 | 2.59 | 3.43 | 0.102 | 0.135 |
| c | 0.61 | 0.83 | 0.024 | 0.033 | c | 0.61 | 0.83 | 0.024 | 0.033 | c | 0.38 | 0.89 | 0.015 | 0.035 |
| D | 20.80 | 21.34 | 0.819 | 0.840 | D | 20.80 | 21.34 | 0.819 | 0.840 | D | 20.79 | 21.45 | 0.819 | 0.844 |
| D1 | 15.75 | 16.26 | 0.620 | 0.640 | D1 | 15.75 | 16.26 | 0.620 | 0.640 | E | 15.49 | 16.24 | 0.610 | 0.639 |
| D2 | 1.65 | 2.15 | 0.065 | 0.085 | D2 | 1.65 | 2.15 | 0.065 | 0.085 | E2 | 4.31 | 5.48 | 0.170 | 0.216 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 | D3 | 20.30 | 20.70 | 0.799 | 0.815 | e | 5.46 BSC | | 0.215 BSC | |
| E | 15.75 | 16.13 | 0.620 | 0.635 | E | 15.75 | 16.13 | 0.620 | 0.635 | L | 19.80 | 20.30 | 0.780 | 0.799 |
| E1 | 13.21 | 13.72 | 0.520 | 0.540 | E1 | 13.21 | 13.72 | 0.520 | 0.540 | L1 | - | 4.49 | - | 0.177 |
| e | 5.45 BSC | | 0.215 BSC | | e | 10.90 BSC | | 0.430 BSC | | Ø P | 3.55 | 3.65 | 0.140 | 0.144 |
| L | 19.81 | 20.60 | 0.780 | 0.811 | L | 19.81 | 20.60 | 0.780 | 0.811 | Ø P1 | - | 7.39 | - | 0.290 |
| L1 | 3.81 | 4.38 | 0.150 | 0.172 | L1 | 3.81 | 4.38 | 0.150 | 0.172 | Q | 5.38 | 6.19 | 0.212 | 0.244 |
| Q | 5.59 | 6.20 | 0.220 | 0.244 | Q | 5.59 | 6.20 | 0.220 | 0.244 | | | | | |
| R | 4.25 | 5.50 | 0.167 | 0.217 | R | 4.25 | 5.50 | 0.167 | 0.217 | | | | | |
| W | - | 0.10 | - | 0.004 | W | - | 0.10 | - | 0.004 | | | | | |

Dimensions in mm and inches (1 mm = 0.0394")

X016d ISO247™ Weight = 4 g

| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | min | max | min | max |
| A | 19.81 | 20.32 | 0.780 | 0.800 |
| B | 20.80 | 21.46 | 0.819 | 0.845 |
| C | 15.75 | 16.26 | 0.610 | 0.640 |
| D | 3.55 | 3.65 | 0.140 | 0.144 |
| E | 4.32 | 5.49 | 0.170 | 0.216 |
| F | 5.40 | 6.20 | 0.212 | 0.244 |
| G | 1.65 | 2.13 | 0.065 | 0.084 |
| H | - | 4.50 | - | 0.177 |
| J | 1.00 | 1.40 | 0.040 | 0.055 |
| K | 10.80 | 11.00 | 0.426 | 0.433 |
| L | 4.70 | 5.30 | 0.185 | 0.209 |
| M | 0.40 | 0.80 | 0.016 | 0.031 |
| N | 1.50 | 2.49 | 0.087 | 0.102 |

X017a TO-3P Weight = 5.5 g

| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.70 | 4.90 | 0.185 | 0.193 |
| A1 | 1.30 | 1.50 | 0.051 | 0.059 |
| A2 | 1.45 | 1.65 | 0.057 | 0.065 |
| b | 0.90 | 1.15 | 0.035 | 0.045 |
| b2 | 1.90 | 2.20 | 0.075 | 0.087 |
| b4 | 2.90 | 3.20 | 0.114 | 0.126 |
| c | 0.55 | 0.80 | 0.022 | 0.031 |
| D | 19.80 | 20.10 | 0.780 | 0.791 |
| D1 | 16.90 | 17.20 | 0.665 | 0.677 |
| E | 15.50 | 15.80 | 0.610 | 0.622 |
| E1 | 13.50 | 13.70 | 0.531 | 0.539 |
| e | 5.45 BSC | | 0.215 BSC | |
| L | 19.80 | 20.20 | 0.780 | 0.795 |
| L1 | 3.40 | 3.60 | 0.134 | 0.142 |
| Ø P | 3.20 | 3.40 | 0.126 | 0.134 |
| Ø P1 | 6.90 | 7.10 | 0.272 | 0.280 |
| S | 4.90 | 5.10 | 0.193 | 0.201 |

X017b TO-3P Weight = 5.5 g

| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.70 | 4.90 | 0.185 | 0.193 |
| A1 | 1.30 | 1.50 | 0.051 | 0.059 |
| A2 | 1.45 | 1.65 | 0.057 | 0.065 |
| b | 0.90 | 1.15 | 0.035 | 0.045 |
| b2 | 1.90 | 2.20 | 0.075 | 0.087 |
| b4 | 2.90 | 3.20 | 0.114 | 0.126 |
| c | 0.55 | 0.80 | 0.022 | 0.031 |
| D | 19.80 | 20.10 | 0.780 | 0.791 |
| D1 | 16.90 | 17.20 | 0.665 | 0.677 |
| E | 15.50 | 15.80 | 0.610 | 0.622 |
| E1 | 13.50 | 13.70 | 0.531 | 0.539 |
| e | 5.45 BSC | | 0.215 BSC | |
| L | 19.80 | 20.20 | 0.780 | 0.795 |
| L1 | 3.40 | 3.60 | 0.134 | 0.142 |
| L2 | 0.00 | 1.40 | 0.000 | 0.055 |
| Ø P | 3.20 | 3.40 | 0.126 | 0.134 |
| Ø P1 | 6.90 | 7.10 | 0.272 | 0.280 |
| S | 4.90 | 5.10 | 0.193 | 0.201 |

X017c TO-3PFP Weight = 5.5 g

1 - GATE
2 - DRAIN (COLLECTOR)
3 - SOURCE (EMITTER)

| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 5.40 | 5.80 | 0.213 | 0.228 |
| A1 | 3.10 | 3.50 | 0.122 | 0.138 |
| A2 | 2.90 | 3.30 | 0.114 | 0.130 |
| A3 | 1.90 | 2.30 | 0.075 | 0.091 |
| b | 0.65 | 0.95 | 0.026 | 0.037 |
| b2 | 1.90 | 2.30 | 0.075 | 0.091 |
| c | 0.80 | 1.10 | 0.031 | 0.043 |
| D | 24.30 | 24.70 | 0.957 | 0.972 |
| D1 | 1.30 | 1.70 | 0.051 | 0.067 |
| D2 | 1.80 | 2.2 | 0.071 | 0.087 |
| E | 15.40 | 15.80 | 0.606 | 0.622 |
| E1 | 3.90 | 4.30 | 0.154 | 0.169 |
| e | 5.45 BSC | | 0.215 BSC | |
| L | 19.00 | 19.50 | 0.748 | 0.768 |
| L1 | 4.30 | 4.70 | 0.169 | 0.185 |
| Ø P | 3.40 | 3.80 | 0.134 | 0.150 |
| R | 5.30 | 5.70 | 0.209 | 0.224 |
| S | 4.30 | 4.70 | 0.169 | 0.185 |

X018 TO-268 I³PAK Weight = 4.5 g

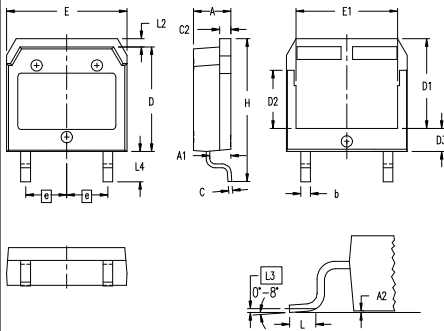
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.90 | 5.10 | 0.193 | 0.201 |
| A1 | 2.70 | 2.90 | 0.106 | 0.114 |
| b | 1.15 | 1.45 | 0.045 | 0.057 |
| b2 | 1.90 | 2.10 | 0.075 | 0.083 |
| C | 0.40 | 0.65 | 0.016 | 0.026 |
| C 2 | 1.45 | 1.60 | 0.057 | 0.063 |
| D | 13.80 | 14.00 | 0.543 | 0.551 |
| D1 | 12.40 | 12.70 | 0.488 | 0.500 |
| E | 15.85 | 16.05 | 0.624 | 0.632 |
| E1 | 13.30 | 13.60 | 0.524 | 0.535 |
| e | 5.45 BSC | | 0.215 BSC | |
| H | 34.67 | 35.43 | 1.365 | 1.395 |
| L | 19.81 | 20.32 | 0.780 | 0.800 |
| L1 | 2.00 | 2.30 | 0.079 | 0.091 |
| L2 | 1.00 | 1.15 | 0.039 | 0.045 |

X019 TO-268 AA (D³PAK) Weight = 4 g

| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.90 | 5.10 | 0.193 | 0.201 |
| A1 | 2.70 | 2.90 | 0.106 | 0.114 |
| A2 | 0.02 | 0.25 | 0.001 | 0.100 |
| b | 1.15 | 1.45 | 0.045 | 0.057 |
| b2 | 1.90 | 2.10 | 0.075 | 0.083 |
| C | 0.40 | 0.65 | 0.016 | 0.026 |
| C 2 | 1.45 | 1.60 | 0.057 | 0.063 |
| D | 13.80 | 14.00 | 0.543 | 0.551 |
| D1 | 12.40 | 12.70 | 0.488 | 0.500 |
| E | 15.85 | 16.05 | 0.624 | 0.632 |
| E1 | 13.30 | 13.60 | 0.524 | 0.535 |
| e | 5.45 BSC | | 0.215 BSC | |
| H | 18.70 | 19.10 | 0.736 | 0.752 |
| L | 2.40 | 2.70 | 0.094 | 0.106 |
| L1 | 1.20 | 1.40 | 0.047 | 0.055 |
| L2 | 1.00 | 1.15 | 0.039 | 0.045 |
| L3 | 2.54 BSC | | 0.100 BSC | |
| L4 | 3.80 | 4.10 | 0.150 | 0.161 |

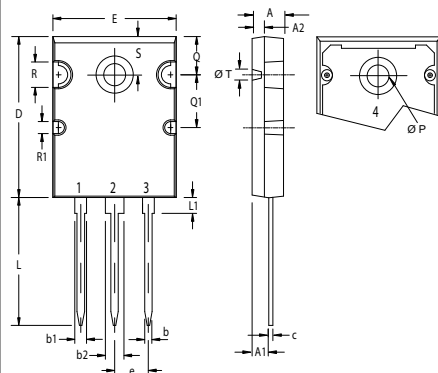
Dimensions in mm and inches (1 mm = 0.0394")

XO19a TO-268 AA (D³PAK) Weight = 4 g



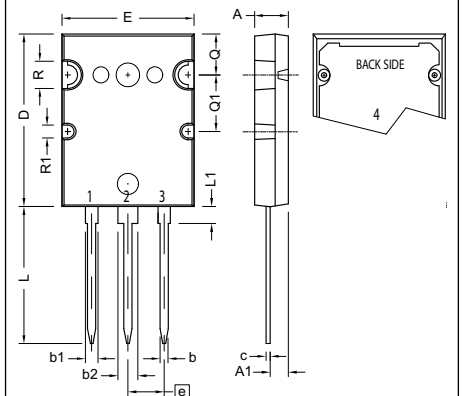
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.90 | 5.10 | 0.193 | 0.201 |
| A1 | 2.70 | 2.90 | 0.106 | 0.114 |
| A2 | 0.02 | 0.25 | 0.001 | 0.100 |
| b | 1.15 | 1.45 | 0.045 | 0.057 |
| C | 0.40 | 0.65 | 0.016 | 0.026 |
| C 2 | 1.45 | 1.60 | 0.057 | 0.063 |
| D | 13.80 | 14.00 | 0.543 | 0.551 |
| D1 | 11.80 | 12.10 | 0.465 | 0.476 |
| D2 | 7.50 | 7.80 | 0.295 | 0.307 |
| D3 | 2.90 | 3.20 | 0.114 | 0.126 |
| E | 15.85 | 16.05 | 0.624 | 0.632 |
| E1 | 13.30 | 13.60 | 0.524 | 0.535 |
| e | 5.45 BSC | | 0.215 BSC | |
| H | 18.70 | 19.10 | 0.736 | 0.752 |
| L | 1.70 | 2.00 | 0.067 | 0.079 |
| L2 | 1.00 | 1.15 | 0.039 | 0.045 |
| L3 | 0.25 BSC | | 0.010 BSC | |
| L4 | 3.80 | 4.10 | 0.150 | 0.161 |

XO20a TO-264 AA Weight = 10 g



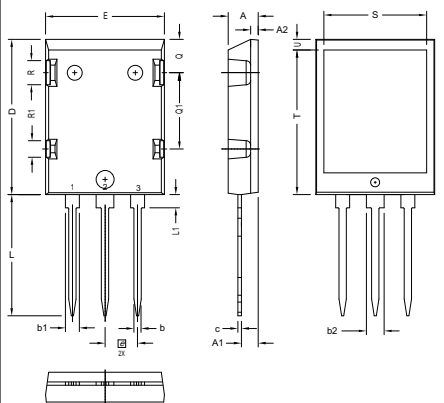
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.82 | 5.13 | 0.190 | 0.202 |
| A1 | 2.54 | 2.89 | 0.100 | 0.114 |
| A2 | 2.00 | 2.10 | 0.079 | 0.083 |
| b | 1.12 | 1.42 | 0.044 | 0.056 |
| b2 | 2.90 | 3.09 | 0.114 | 0.122 |
| c | 0.53 | 0.83 | 0.021 | 0.033 |
| D | 25.91 | 26.16 | 1.020 | 1.030 |
| E | 19.81 | 19.96 | 0.780 | 0.786 |
| e | 5.45 BSC | | 0.215 BSC | |
| J | 0.00 | 0.25 | 0.000 | 0.010 |
| K | 0.00 | 0.25 | 0.000 | 0.010 |
| L | 20.32 | 20.83 | 0.800 | 0.820 |
| L1 | 2.29 | 2.59 | 0.090 | 0.102 |
| P | 3.17 | 2.66 | 0.125 | 0.144 |
| Q | 6.07 | 6.27 | 0.239 | 0.247 |
| Q1 | 8.38 | 8.69 | 0.330 | 0.342 |
| R | 3.81 | 4.32 | 0.150 | 0.170 |
| R1 | 1.78 | 2.29 | 0.070 | 0.090 |
| S | 6.04 | 6.30 | 0.238 | 0.248 |
| T | 1.57 | 1.83 | 0.062 | 0.072 |

XO21a PLUS264™ Weight = 10 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.70 | 5.31 | 0.185 | 0.209 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| b | 0.94 | 1.40 | 0.037 | 0.055 |
| b1 | 2.21 | 2.59 | 0.087 | 0.102 |
| b2 | 2.79 | 3.20 | 0.110 | 0.126 |
| c | 0.43 | 0.74 | 0.017 | 0.029 |
| D | 25.58 | 26.59 | 1.007 | 1.047 |
| E | 19.30 | 20.29 | 0.760 | 0.799 |
| e | 5.45 BSC | | 0.215 BSC | |
| L | 19.79 | 21.39 | 0.779 | 0.842 |
| L1 | 2.21 | 2.59 | 0.087 | 0.102 |
| Q | 6.10 | 6.50 | 0.240 | 0.256 |
| Q1 | 8.38 | 8.79 | 0.330 | 0.346 |
| Ø R | 3.94 | 4.75 | 0.155 | 0.187 |
| ØR1 | 2.16 | 2.36 | 0.085 | 0.093 |

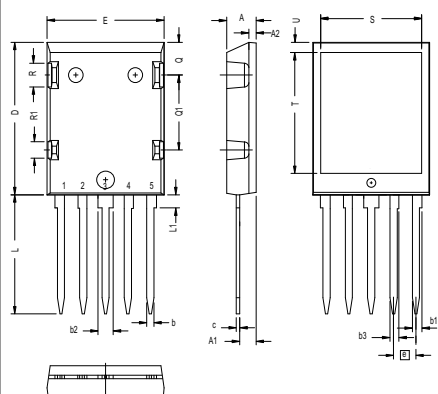
XO22a ISOPLUS264™ Weight = 7.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 1.40 | 0.046 | 0.055 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b1 | 1.60 | 1.83 | 0.063 | 0.072 |
| b2 | 2.54 | 2.79 | 0.100 | 0.110 |
| b3 | 1.47 | 1.73 | 0.058 | 0.068 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 25.91 | 26.42 | 1.020 | 1.040 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| e | 3.81 BSC | | 0.150 BSC | |
| L | 19.81 | 21.83 | 0.780 | 0.820 |
| L1 | 2.03 | 2.59 | 0.080 | 0.102 |
| Q | 5.33 | 5.97 | 0.210 | 0.235 |
| Q1 | 12.45 | 13.03 | 0.490 | 0.513 |
| R | 3.81 | 4.57 | 0.150 | 0.180 |
| R1 | 2.54 | 3.30 | 0.100 | 0.130 |
| S | 16.97 | 17.53 | 0.668 | 0.690 |
| T | 20.34 | 20.85 | 0.801 | 0.821 |
| U | 1.65 | 2.03 | 0.065 | 0.080 |

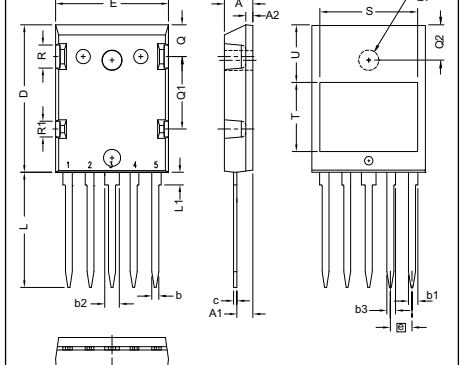
XO22 ISOPLUS264™ Weight = 7.5 g

- c) 5 pin
- d) 3 (sym) w/o pin 2 & 4
- e) 3 (HV) w/o pin 3 & 4



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 1.40 | 0.046 | 0.055 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b1 | 1.60 | 1.83 | 0.063 | 0.072 |
| b2 | 2.54 | 2.79 | 0.100 | 0.110 |
| b3 | 1.47 | 1.73 | 0.058 | 0.068 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 25.91 | 26.42 | 1.020 | 1.040 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| e | 3.81 BSC | | 0.150 BSC | |
| L | 19.81 | 21.83 | 0.780 | 0.820 |
| L1 | 2.03 | 2.59 | 0.080 | 0.102 |
| Q | 5.33 | 5.97 | 0.210 | 0.235 |
| Q1 | 12.45 | 13.03 | 0.490 | 0.513 |
| R | 3.81 | 4.57 | 0.150 | 0.180 |
| R1 | 2.54 | 3.30 | 0.100 | 0.130 |
| S | 16.97 | 17.53 | 0.668 | 0.690 |
| T | 20.34 | 20.85 | 0.801 | 0.821 |
| U | 1.65 | 2.03 | 0.065 | 0.080 |

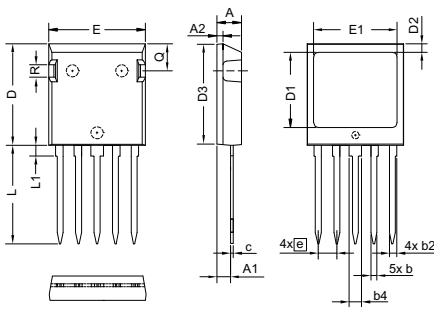
XO23 ISO264™ Weight = 6.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 1.40 | 0.046 | 0.055 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b1 | 1.60 | 1.83 | 0.063 | 0.072 |
| b2 | 2.54 | 2.79 | 0.100 | 0.110 |
| b3 | 1.47 | 1.73 | 0.058 | 0.068 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 25.91 | 26.42 | 1.020 | 1.040 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| e | 3.81 BSC | | 0.150 BSC | |
| L | 19.81 | 21.83 | 0.780 | 0.820 |
| L1 | 2.03 | 2.59 | 0.080 | 0.102 |
| P | 3.30 | 3.68 | 0.130 | 0.145 |
| Q | 5.33 | 5.97 | 0.210 | 0.235 |
| Q1 | 12.45 | 13.03 | 0.490 | 0.513 |
| Q2 | 5.96 | 6.48 | 0.235 | 0.255 |
| R | 3.81 | 4.57 | 0.150 | 0.180 |
| R1 | 2.54 | 3.30 | 0.100 | 0.130 |
| S | 16.97 | 17.53 | 0.668 | 0.690 |
| T | 11.94 | 12.45 | 0.470 | 0.490 |
| U | 9.91 | 10.41 | 0.390 | 0.410 |

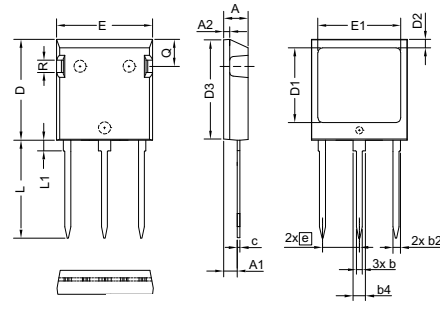
Dimensions in mm and inches (1 mm = 0.0394")

X024a ISOPLUS i4-PAC™ Weight = 6 g



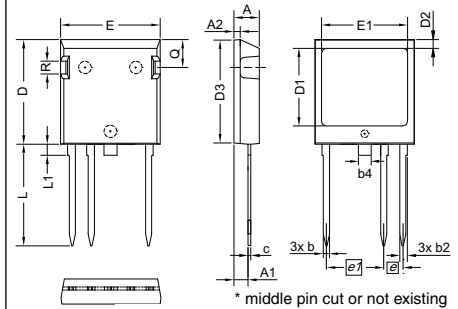
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 2.16 | 0.046 | 0.085 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.47 | 1.73 | 0.058 | 0.068 |
| b4 | 2.54 | 2.79 | 0.100 | 0.110 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 14.99 | 15.75 | 0.590 | 0.620 |
| D2 | 1.65 | 2.03 | 0.065 | 0.080 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| E1 | 16.76 | 17.53 | 0.660 | 0.690 |
| e | 3.81 BSC | | 0.150 BSC | |
| L | 19.81 | 21.34 | 0.780 | 0.840 |
| L1 | 2.11 | 2.59 | 0.083 | 0.102 |
| Q | 5.33 | 6.20 | 0.210 | 0.244 |
| R | 2.54 | 4.57 | 0.100 | 0.180 |
| W | - | 0.10 | - | 0.004 |

X024b ISOPLUS i4-PAC™ Weight = 5.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 2.16 | 0.046 | 0.085 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.47 | 1.73 | 0.058 | 0.068 |
| b4 | 2.54 | 2.79 | 0.100 | 0.110 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 14.99 | 15.75 | 0.590 | 0.620 |
| D2 | 1.65 | 2.03 | 0.065 | 0.080 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| E1 | 16.76 | 17.53 | 0.660 | 0.690 |
| e | 7.62 BSC | | 0.300 BSC | |
| L | 19.81 | 21.34 | 0.780 | 0.840 |
| L1 | 2.11 | 2.59 | 0.083 | 0.102 |
| Q | 5.33 | 6.20 | 0.210 | 0.244 |
| R | 2.54 | 4.57 | 0.100 | 0.180 |
| W | - | 0.10 | - | 0.004 |

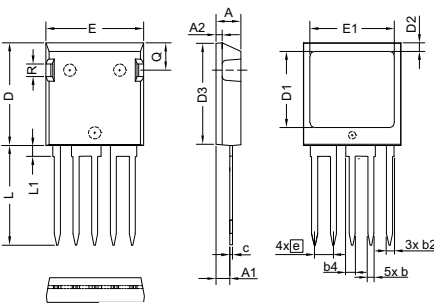
X024c ISOPLUS i4-PAC™ Weight = 5.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 2.16 | 0.046 | 0.085 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.47 | 1.73 | 0.058 | 0.068 |
| b4* | 2.54 | 2.79 | 0.100 | 0.110 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 14.99 | 15.75 | 0.590 | 0.620 |
| D2 | 1.65 | 2.03 | 0.065 | 0.080 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| E1 | 16.76 | 17.53 | 0.660 | 0.690 |
| e | 3.81 BSC | | 0.150 BSC | |
| e1 | 11.43 BSC | | 0.450 BSC | |
| L | 19.81 | 21.34 | 0.780 | 0.840 |
| L1 | 2.11 | 2.59 | 0.083 | 0.102 |
| Q | 5.33 | 6.20 | 0.210 | 0.244 |
| R | 2.54 | 4.57 | 0.100 | 0.180 |
| W | - | 0.10 | - | 0.004 |

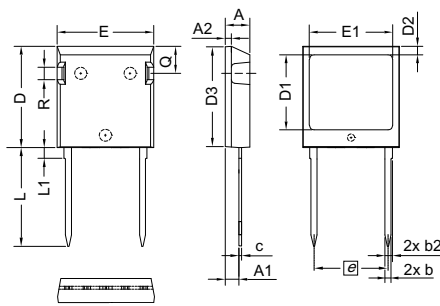
* middle pin cut or not existing depending on assembly line

X024d ISOPLUS i4-PAC™ Weight = 6 g



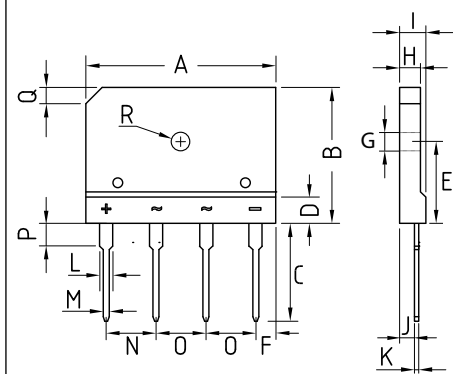
| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 2.16 | 0.046 | 0.085 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.47 | 1.73 | 0.058 | 0.068 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 14.99 | 15.75 | 0.590 | 0.620 |
| D2 | 1.65 | 2.03 | 0.065 | 0.080 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| E1 | 16.76 | 17.53 | 0.660 | 0.690 |
| e | 3.81 BSC | | 0.150 BSC | |
| L | 19.81 | 21.34 | 0.780 | 0.840 |
| L1 | 2.11 | 2.59 | 0.083 | 0.102 |
| Q | 5.33 | 6.20 | 0.210 | 0.244 |
| R | 2.54 | 4.57 | 0.100 | 0.180 |
| W | - | 0.10 | - | 0.004 |

X024e ISOPLUS i4-PAC™ Weight = 6 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 4.83 | 5.21 | 0.190 | 0.205 |
| A1 | 2.59 | 3.00 | 0.102 | 0.118 |
| A2 | 1.17 | 2.16 | 0.046 | 0.085 |
| b | 1.14 | 1.40 | 0.045 | 0.055 |
| b2 | 1.47 | 1.73 | 0.058 | 0.068 |
| c | 0.51 | 0.74 | 0.020 | 0.029 |
| D | 20.80 | 21.34 | 0.819 | 0.840 |
| D1 | 14.99 | 15.75 | 0.590 | 0.620 |
| D2 | 1.65 | 2.03 | 0.065 | 0.080 |
| D3 | 20.30 | 20.70 | 0.799 | 0.815 |
| E | 19.56 | 20.29 | 0.770 | 0.799 |
| E1 | 16.76 | 17.53 | 0.660 | 0.690 |
| e | 15.24 BSC | | 0.600 BSC | |
| L | 19.81 | 21.34 | 0.780 | 0.840 |
| L1 | 2.11 | 2.59 | 0.083 | 0.102 |
| Q | 5.33 | 6.20 | 0.210 | 0.244 |
| R | 2.54 | 4.57 | 0.100 | 0.180 |
| W | - | 0.10 | - | 0.004 |

X025a GBFP Weight = 7 g

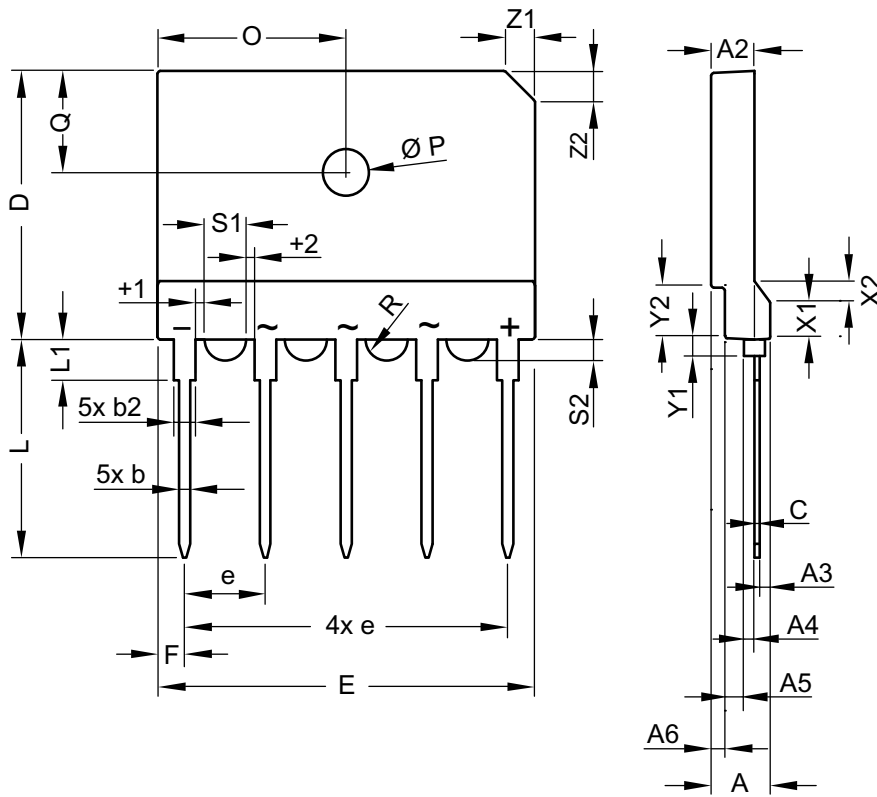


| Dim. | Millimeter | | Inches | |
|------|-------------|-------|---------------|-------|
| | min | max | min | max |
| A | 29.70 | 30.30 | 1.170 | 1.194 |
| B | 19.70 | 20.30 | 0.776 | 0.800 |
| C | 17.00 | 18.00 | 0.670 | 0.709 |
| D | 4.70 | 4.90 | 0.185 | 0.193 |
| E | 10.80 | 11.20 | 0.426 | 0.441 |
| F | 2.30 | 2.70 | 0.091 | 0.106 |
| G | 3.10 | 3.40 | 0.122 | 0.134 |
| H | 3.40 | 3.80 | 0.134 | 0.150 |
| I | 4.40 | 4.80 | 0.173 | 0.189 |
| J | 2.50 | 2.90 | 0.099 | 0.114 |
| K | 0.60 | 0.80 | 0.024 | 0.032 |
| L | 2.00 | 2.40 | 0.079 | 0.095 |
| M | 0.90 | 1.10 | 0.035 | 0.043 |
| N | 9.80 | 10.20 | 0.386 | 0.402 |
| O | 7.30 | 7.70 | 0.288 | 0.303 |
| P | 3.80 | 4.20 | 0.150 | 0.165 |
| Q | (3.0) x 45° | | (0.118) x 45° | |
| Ø R | 3.1 | 3.4 | 0.122 | 0.134 |

Dimensions in mm and inches (1 mm = 0.0394")

X025b GUPF

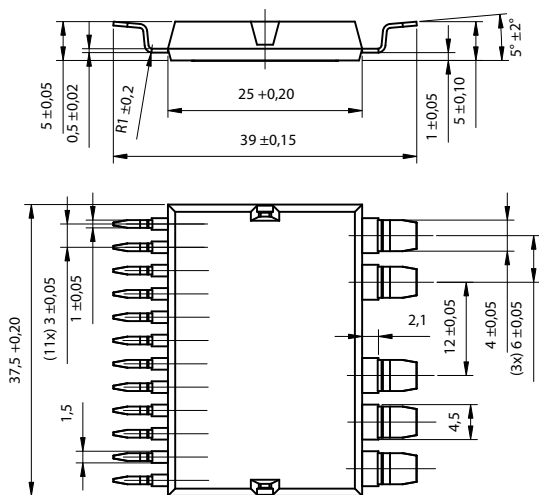
Weight = 8.5 g



| Dim. | Millimeter | | | Inches | | |
|-------|------------|-------|-------|--------|-------|-------|
| | min | typ. | max | min | typ. | max |
| A | 5.40 | 5.50 | 5.60 | 0.213 | 0.217 | 0.221 |
| A2 | 3.90 | 4.00 | 4.10 | 0.154 | 0.158 | 0.162 |
| A3 | 0.95 | 1.00 | 1.10 | 0.037 | 0.039 | 0.043 |
| A4 | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| A5 | 1.60 | 1.70 | 1.80 | 0.063 | 0.067 | 0.071 |
| A6 | 1.25 | 1.30 | 1.35 | 0.049 | 0.051 | 0.053 |
| b | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| b2 | 1.95 | 2.00 | 2.05 | 0.077 | 0.079 | 0.081 |
| C | 0.45 | 0.50 | 0.55 | 0.018 | 0.020 | 0.022 |
| D | 24.80 | 25.00 | 25.20 | 0.977 | 0.985 | 0.993 |
| E | 34.70 | 35.00 | 35.30 | 1.367 | 1.379 | 1.391 |
| e | BSC | 7.50 | | BSC | 0.296 | |
| F | 2.40 | 2.50 | 2.60 | 0.095 | 0.099 | 0.102 |
| L | 2.30 | 20.40 | 2.50 | 0.091 | 0.804 | 0.099 |
| L1 | 3.70 | 3.75 | 3.80 | 0.146 | 0.148 | 0.150 |
| O | 17.40 | 17.50 | 17.60 | 0.686 | 0.690 | 0.693 |
| Ø P | 4.10 | 4.20 | 4.30 | 0.162 | 0.165 | 0.169 |
| Q | 9.20 | 9.30 | 9.40 | 0.362 | 0.366 | 0.370 |
| 1/2 R | - | 1.77 | - | - | 0.070 | - |
| s1 | 3.45 | 3.50 | 3.55 | 0.136 | 0.138 | 0.140 |
| s2 | 1.45 | 1.50 | 1.55 | 0.057 | 0.059 | 0.061 |
| t1 | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| t2 | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| x1 | 3.20 | 3.30 | 3.40 | 0.126 | 0.130 | 0.134 |
| x2 | 1.90 | 2.00 | 2.10 | 0.075 | 0.079 | 0.083 |
| y1 | 1.60 | 1.65 | 1.70 | 0.063 | 0.065 | 0.067 |
| y2 | 4.65 | 4.70 | 4.75 | 0.183 | 0.185 | 0.187 |
| z1 | 2.80 | 2.90 | 3.00 | 0.110 | 0.114 | 0.118 |

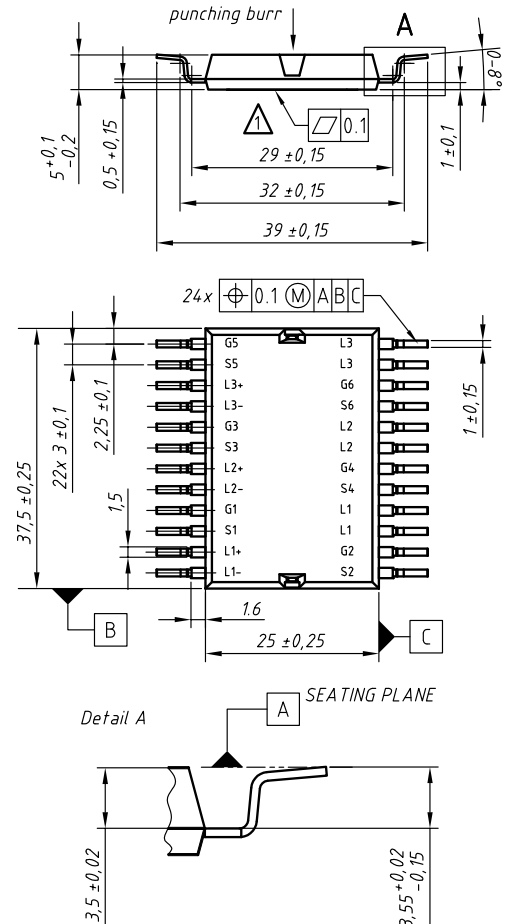
X026c ISOPLUS™-DIL (SMD)

Weight = 13 g



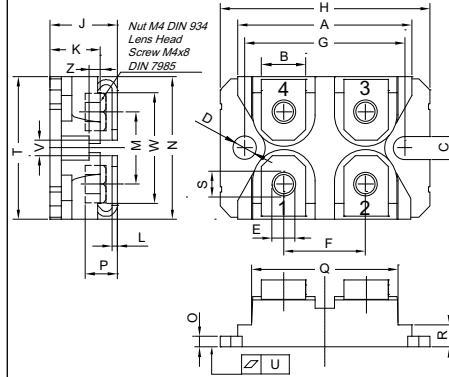
X026d ISOPLUS™-DIL (SMD)

Weight = 13 g



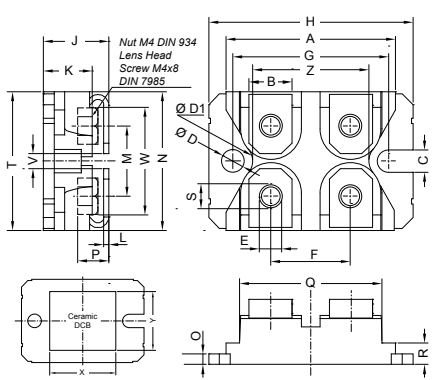
Dimensions in mm and inches (1 mm = 0.0394")

X027a SOT-227 B miniBLOC Weight = 29 g
X027b SOT-227 UI miniBLOC



| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | min | max | min | max |
| A | 31.50 | 31.88 | 1.240 | 1.255 |
| B | 7.80 | 8.20 | 0.307 | 0.323 |
| C | 4.09 | 4.29 | 0.161 | 0.169 |
| D | 4.09 | 4.29 | 0.161 | 0.169 |
| E | 4.09 | 4.29 | 0.161 | 0.169 |
| F | 14.91 | 15.11 | 0.587 | 0.595 |
| G | 30.12 | 30.30 | 1.186 | 1.193 |
| H | 37.80 | 38.23 | 1.488 | 1.505 |
| J | 11.68 | 12.22 | 0.460 | 0.481 |
| K | 8.92 | 9.60 | 0.351 | 0.378 |
| L | 0.74 | 0.84 | 0.029 | 0.033 |
| M | 12.50 | 13.10 | 0.492 | 0.516 |
| N | 25.15 | 25.42 | 0.990 | 1.001 |
| O | 1.95 | 2.13 | 0.077 | 0.084 |
| P | 4.95 | 6.20 | 0.195 | 0.244 |
| Q | 26.54 | 26.90 | 1.045 | 1.059 |
| R | 3.94 | 4.42 | 0.155 | 0.174 |
| S | 4.55 | 4.85 | 0.179 | 0.191 |
| T | 24.59 | 25.25 | 0.968 | 0.994 |
| U | -0.05 | 0.10 | -0.002 | 0.004 |
| V | 3.20 | 5.50 | 0.126 | 0.217 |
| W | 19.81 | 21.08 | 0.780 | 0.830 |
| Z | 2.50 | 2.70 | 0.098 | 0.106 |

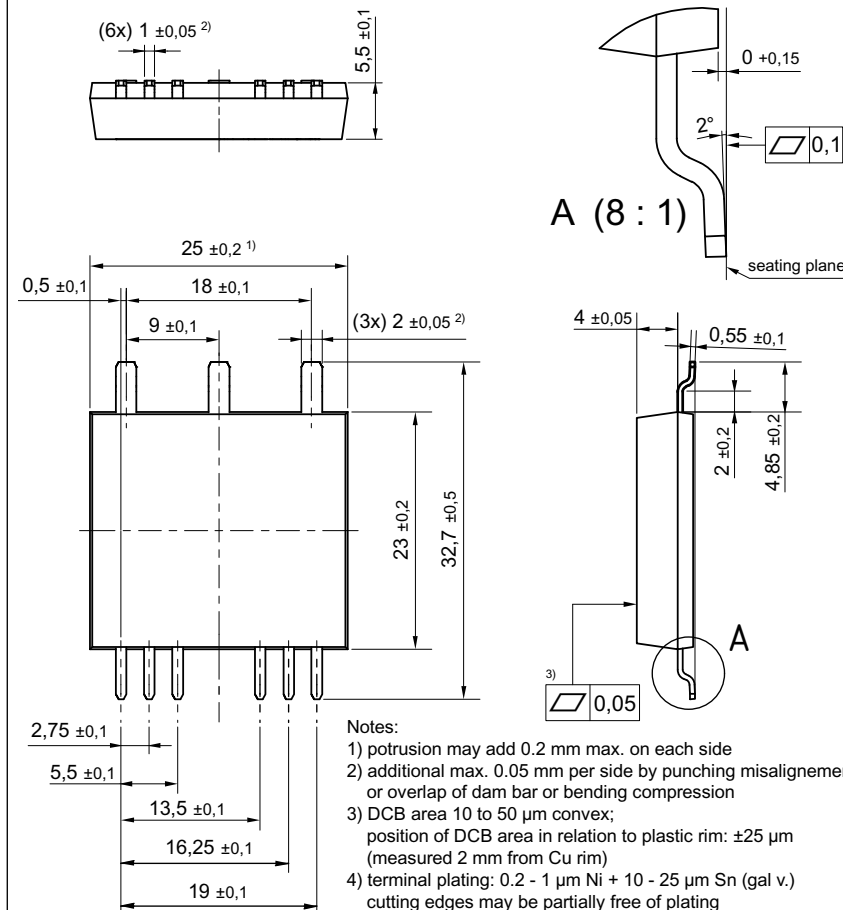
X028 ISOPLUS227™ Weight = 19 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | min | max | min | max |
| A | 31.50 | 32.26 | 1.240 | 1.270 |
| B | 7.87 | 8.38 | 0.310 | 0.330 |
| C | 3.94 | 4.19 | 0.155 | 0.165 |
| D | 3.94 | 4.19 | 0.155 | 0.165 |
| D1 | 3.81 | 3.98 | 0.150 | 0.157 |
| E | 4.06 | 4.27 | 0.160 | 0.168 |
| F | 14.91 | 15.11 | 0.587 | 0.595 |
| G | 30.12 | 30.30 | 1.186 | 1.193 |
| H | 37.80 | 38.23 | 1.489 | 1.505 |
| J | 11.81 | 12.22 | 0.465 | 0.481 |
| K | 9.40 | 9.65 | 0.370 | 0.380 |
| L | 0.76 | 0.84 | 0.030 | 0.033 |
| M | 12.60 | 12.85 | 0.496 | 0.506 |
| N | 25.15 | 25.42 | 0.990 | 1.001 |
| O | 2.54 | 2.64 | 0.100 | 0.105 |
| P | 4.95 | 5.97 | 0.195 | 0.235 |
| Q | 26.54 | 26.90 | 1.045 | 1.059 |
| R | 4.06 | 4.32 | 0.160 | 0.170 |
| S | 4.72 | 4.85 | 0.186 | 0.191 |
| T | 24.59 | 25.07 | 0.968 | 0.987 |
| U | -0.03 | 0.05 | -0.001 | 0.002 |
| V | 3.30 | 4.06 | 0.130 | 0.160 |
| W | 19.81 | 21.08 | 0.780 | 0.830 |
| X | 19.56 | 20.57 | 0.770 | 0.810 |
| Y | 17.27 | 18.29 | 0.680 | 0.720 |
| Z | 22.48 | 22.66 | 0.885 | 0.892 |

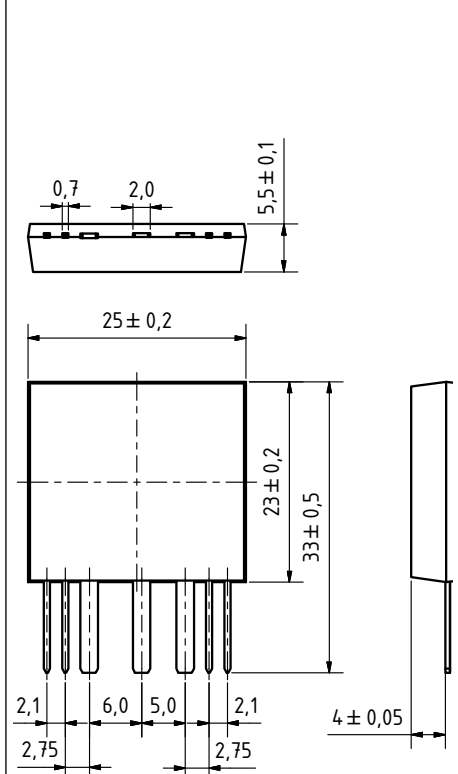
X030a SMPD-B

Weight = 8.5 g



X030b SMPD-B

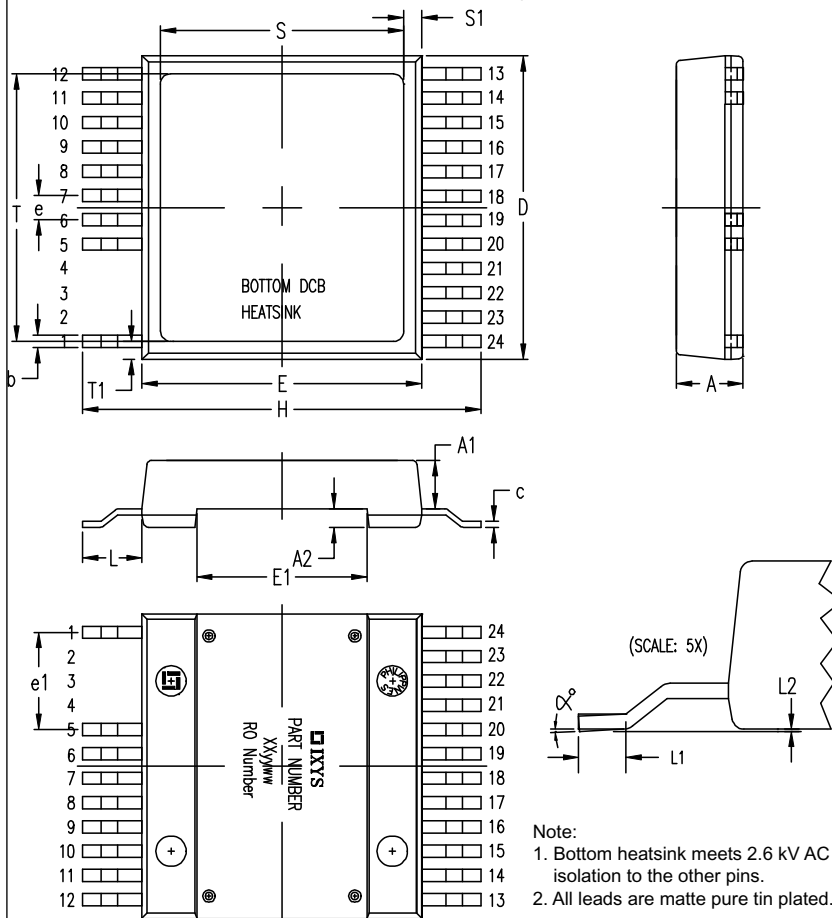
Weight = 8.5 g



Dimensions in mm and inches (1 mm = 0.0394")

X031a SMPD-X See data sheet for pin arrangement

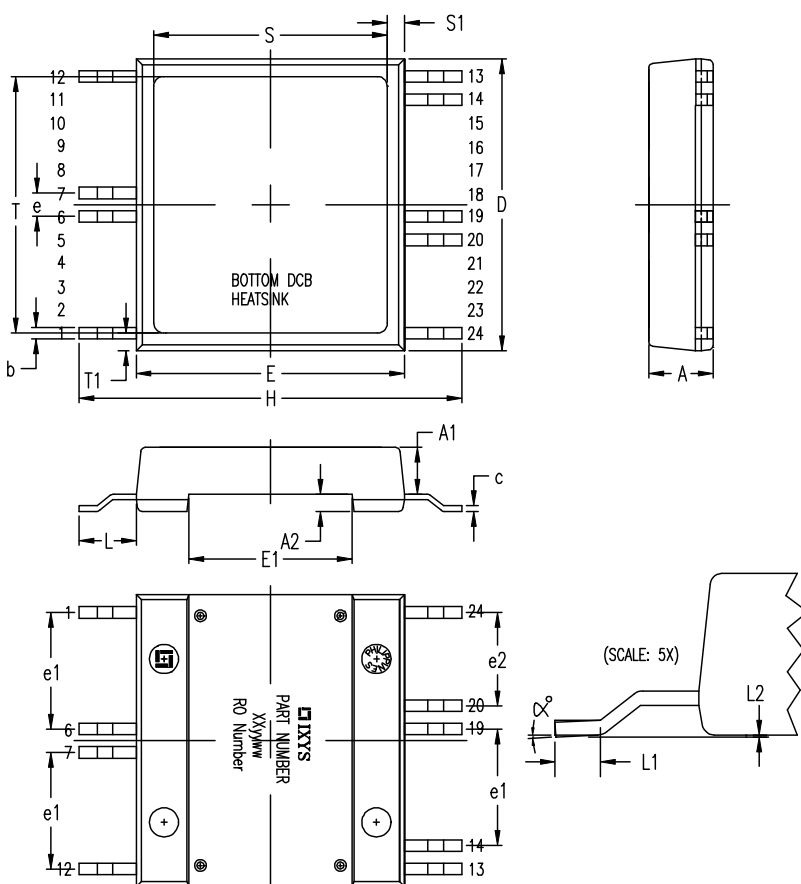
Weight = 8.5 g



| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | min | max | min | max |
| A | 5.30 | 5.70 | 0.209 | 0.224 |
| A1 | 3.90 | 4.10 | 0.154 | 0.161 |
| A2 | 1.40 | 1.60 | 0.055 | 0.063 |
| b | 0.90 | 1.15 | 0.035 | 0.045 |
| c | 0.45 | 0.65 | 0.018 | 0.026 |
| D | 24.80 | 25.25 | 0.976 | 0.994 |
| E | 22.80 | 23.25 | 0.898 | 0.915 |
| E1 | 13.80 | 14.20 | 0.543 | 0.559 |
| e | 2.00 | BSC | 0.079 | BSC |
| e1 | 8.00 | BSC | 0.315 | BSC |
| H | 32.30 | 33.30 | 1.272 | 1.311 |
| L | 4.60 | 5.30 | 0.181 | 0.209 |
| L1 | 1.30 | 1.70 | 0.051 | 0.067 |
| L2 | 0.00 | 0.15 | 0.000 | 0.006 |
| S | 18.85 | 20.12 | 0.742 | 0.792 |
| S1 | 1.45 | 2.08 | 0.057 | 0.082 |
| T | 20.90 | 22.17 | 0.823 | 0.873 |
| T1 | 1.42 | 2.03 | 0.056 | 0.080 |
| a | 4° | - | 4° | - |

Note:
 1. Bottom heatsink meets 2.6 kV AC isolation to the other pins.
 2. All leads are matte pure tin plated.

X031b SMPD-X



| SYM | INCHES | | MILLIMETERS | |
|-----|----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | .209 | .224 | 5.30 | 5.70 |
| A1 | .154 | .161 | 3.90 | 4.10 |
| A2 | .055 | .063 | 1.40 | 1.60 |
| b | .035 | .045 | 0.90 | 1.15 |
| c | .018 | .026 | 0.45 | 0.65 |
| D | .976 | .994 | 24.80 | 25.25 |
| E | .898 | .915 | 22.80 | 23.25 |
| E1 | .543 | .559 | 13.80 | 14.20 |
| e | .079 BSC | | 2.00 BSC | |
| e1 | .394 BSC | | 10.00 BSC | |
| e2 | .315 BSC | | 8.00 BSC | |
| H | 1.272 | 1.311 | 32.30 | 33.30 |
| L | .181 | .209 | 4.60 | 5.30 |
| L1 | .051 | .067 | 1.30 | 1.70 |
| L2 | .000 | .006 | 0.00 | 0.15 |
| S | .742 | .792 | 18.85 | 20.12 |
| S1 | .057 | .082 | 1.45 | 2.08 |
| T | .823 | .873 | 20.90 | 22.17 |
| T1 | .069 | .089 | 1.75 | 2.25 |
| α | 0 | 4° | 0 | 4° |

NOTE:
 1. Bottom heatsink meets 2.6KV AC isolation to the other pins.
 2. All leads are matte pure tin plated.

Dimensions in mm and inches (1 mm = 0.0394")

X031c SMPD-X Weight = 8.5 g

| SYM | INCHES | | MILLIMETERS | |
|-----|----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | .209 | .224 | 5.30 | 5.70 |
| A1 | .154 | .161 | 3.90 | 4.10 |
| A2 | .055 | .063 | 1.40 | 1.60 |
| b | .035 | .045 | 0.90 | 1.15 |
| c | .018 | .026 | 0.45 | 0.65 |
| D | .976 | .994 | 24.80 | 25.25 |
| E | .898 | .915 | 22.80 | 23.25 |
| E1 | .543 | .559 | 13.80 | 14.20 |
| e | .157 BSC | | 4.00 BSC | |
| e1 | .394 BSC | | 10.00 BSC | |
| e2 | .472 BSC | | 12.00 BSC | |
| H | 1.272 | 1.311 | 32.30 | 33.30 |
| L | .181 | .209 | 4.60 | 5.30 |
| L1 | .051 | .067 | 1.30 | 1.70 |
| L2 | .000 | .006 | 0.00 | 0.15 |
| S | .748 | .807 | 19.00 | 20.50 |
| S1 | .039 | .079 | 1.00 | 2.00 |
| T | .826 | .886 | 21.00 | 22.50 |
| T1 | .039 | .079 | 1.00 | 2.00 |
| α | 0 | 4° | 0 | 4° |

NOTE:
 1. Bottom DCB heatsink meets 2.6KV AC, 2 Sec isolation to the other pins.
 2. All leads are matte pure tin plated.

X101 ECO-PAC1 Weight = 19 g

See data sheet for pin arrangement

X102 ECO-PAC2 Weight = 23 g

See data sheet for pin arrangement

X103 V1-A-Pack Weight = 37 g

See data sheet for pin arrangement

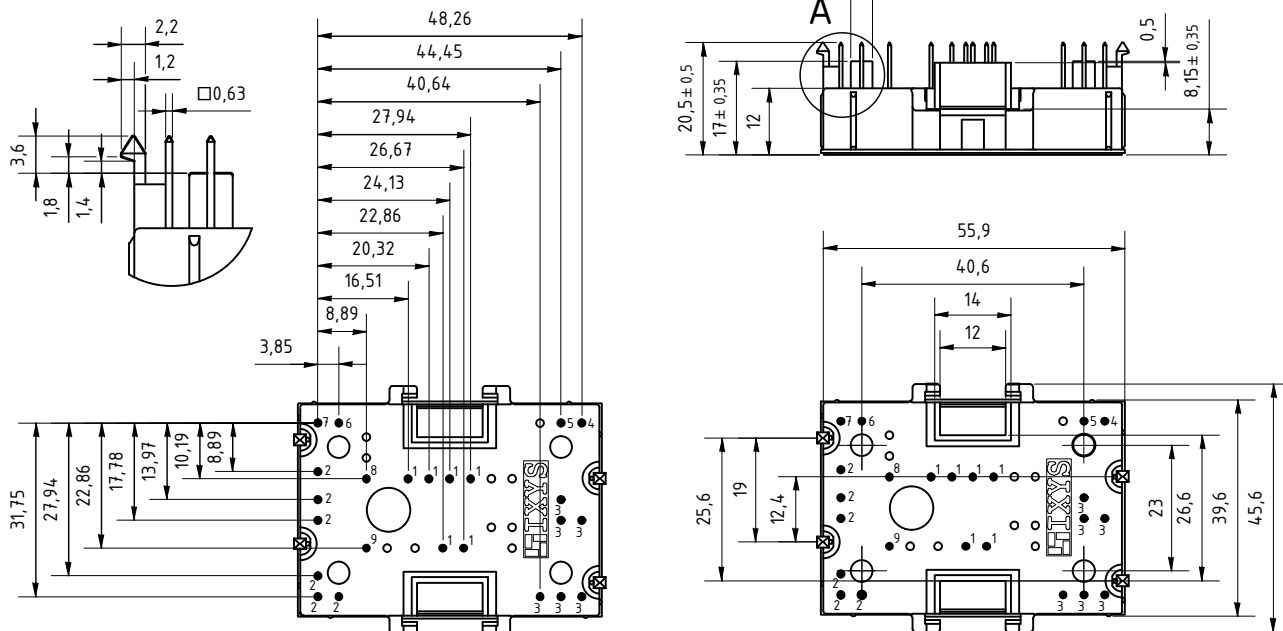
Dimensions in mm and inches (1 mm = 0.0394")

X110 MiniPack2

See data sheet for pin arrangement

Weight = 37 g

A (2:1)



Bemerkungen:

- 1) Toleranz für Pin Positionen entsprechend $\oplus \ominus \varnothing 0,4$
- 2) Vorgesehen für die Montage auf Leiterplatten mit einer Dicke von $1,6 \pm 0,2$ mm

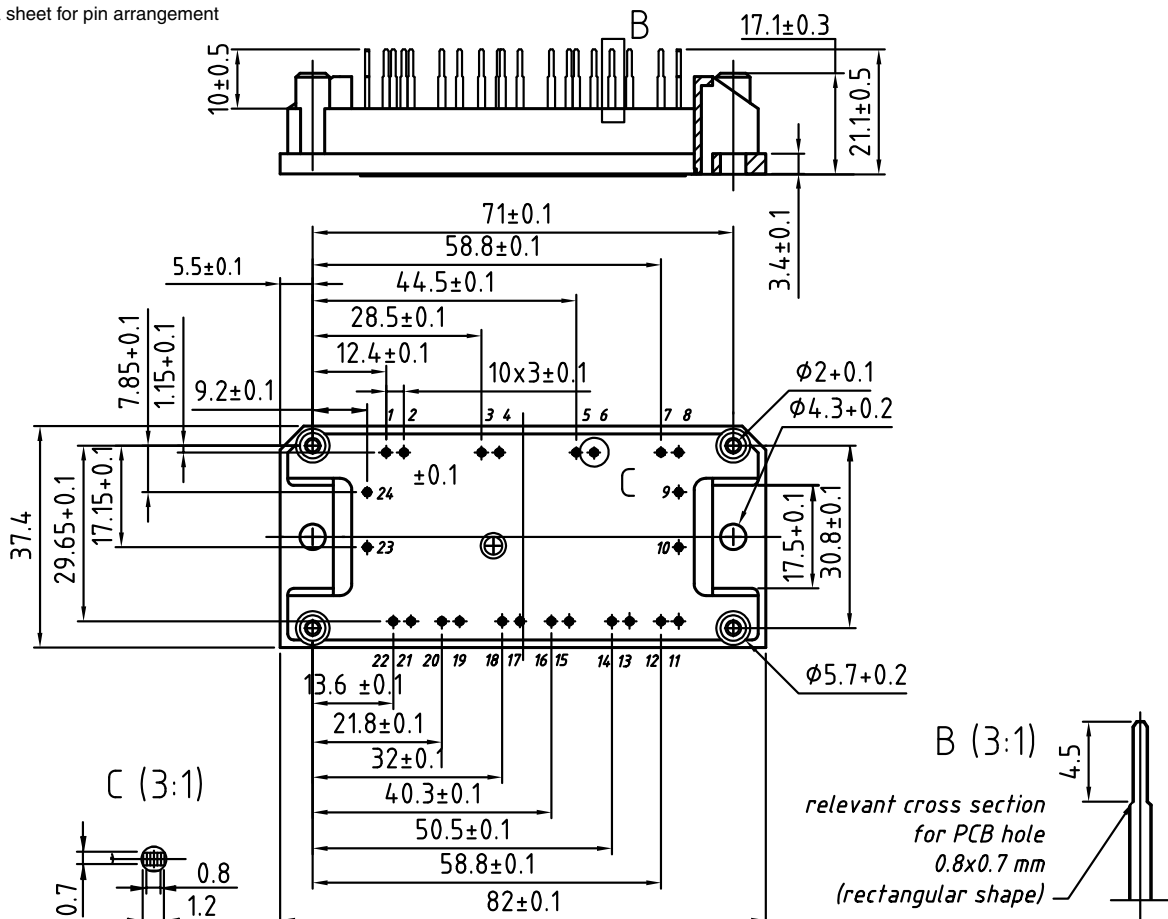
Remarks:

- 1) Pin positions with tolerance $\oplus \ominus \varnothing 0.4$
- 2) Mounting on PCB with thickness of 1.6 ± 0.2 mm

X111 E1-Pack

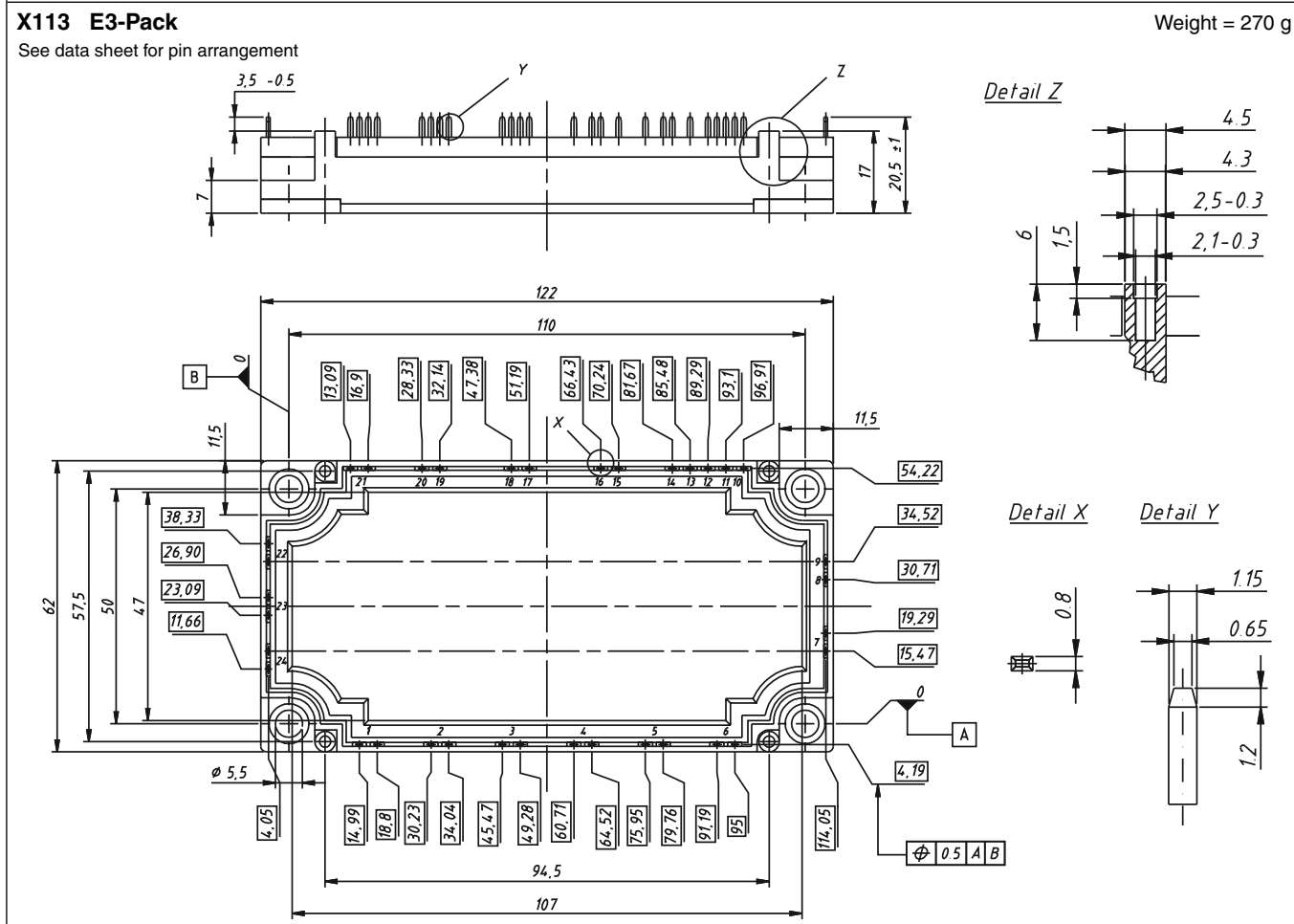
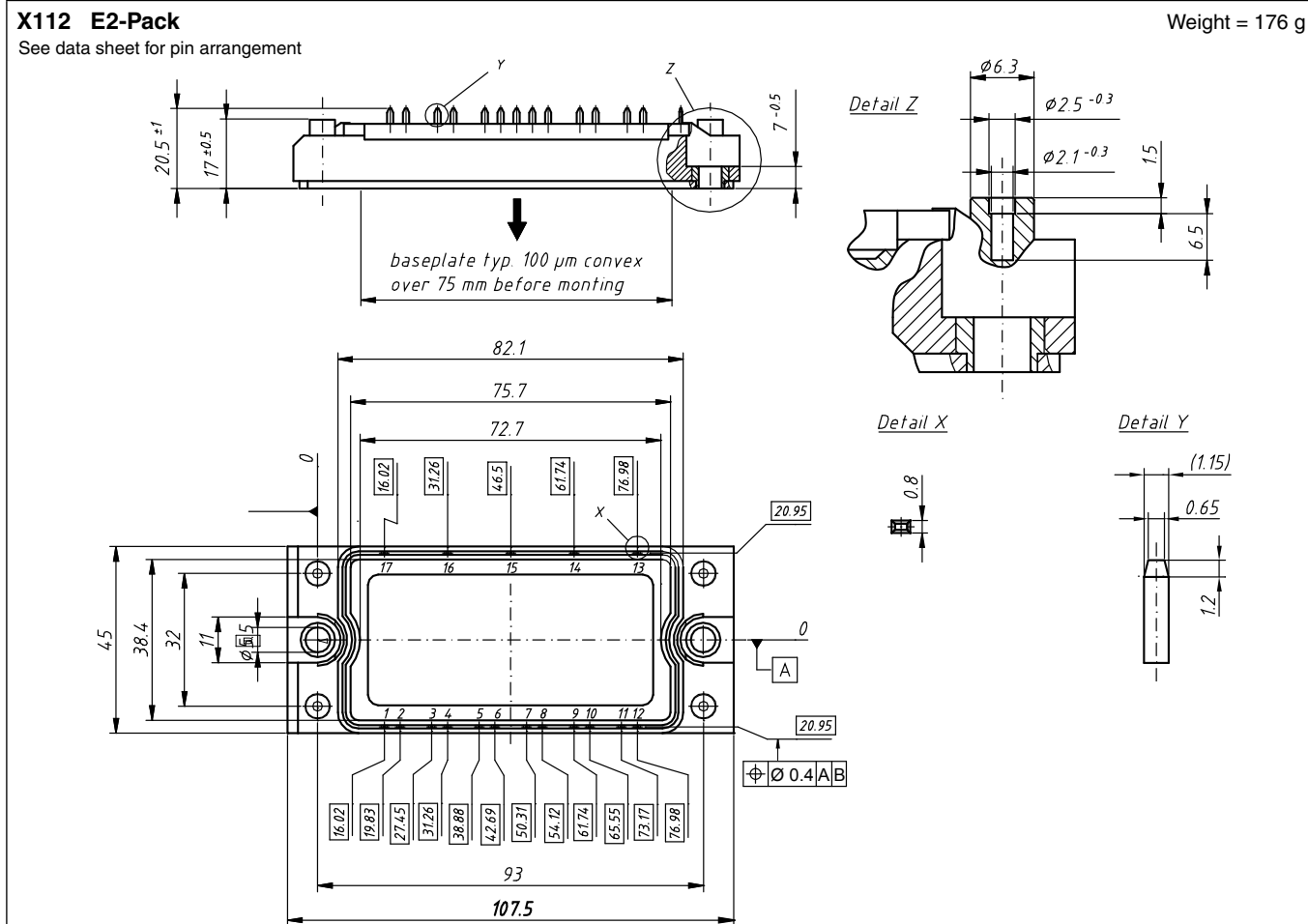
See data sheet for pin arrangement

Weight = 39 g

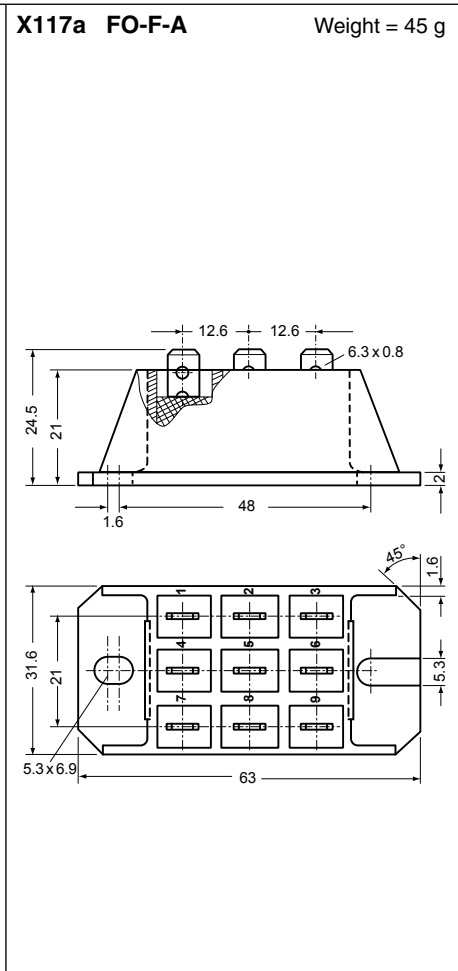
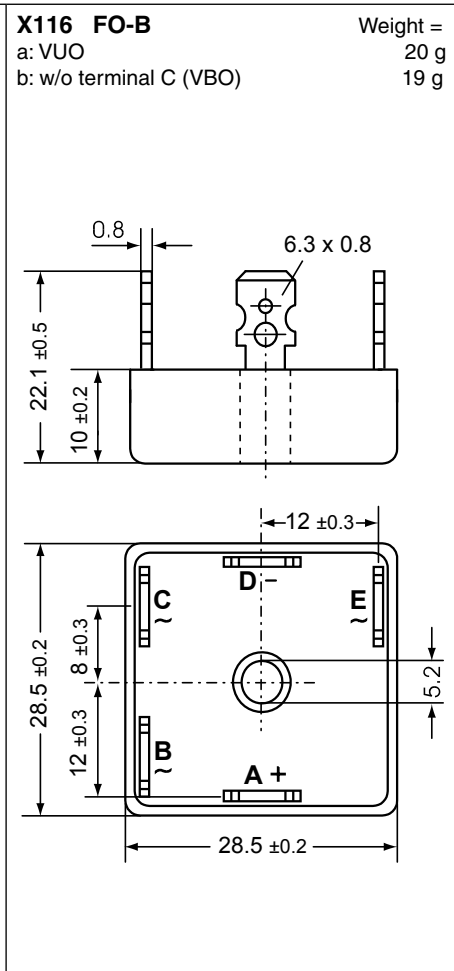
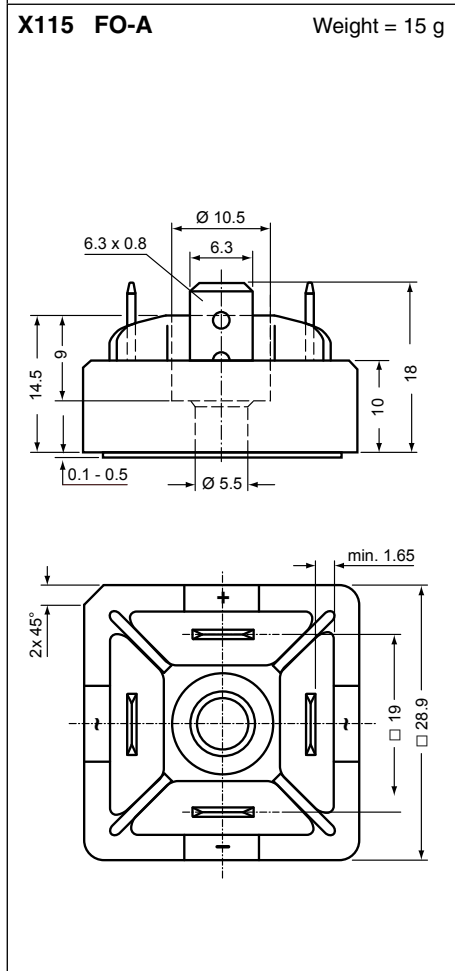
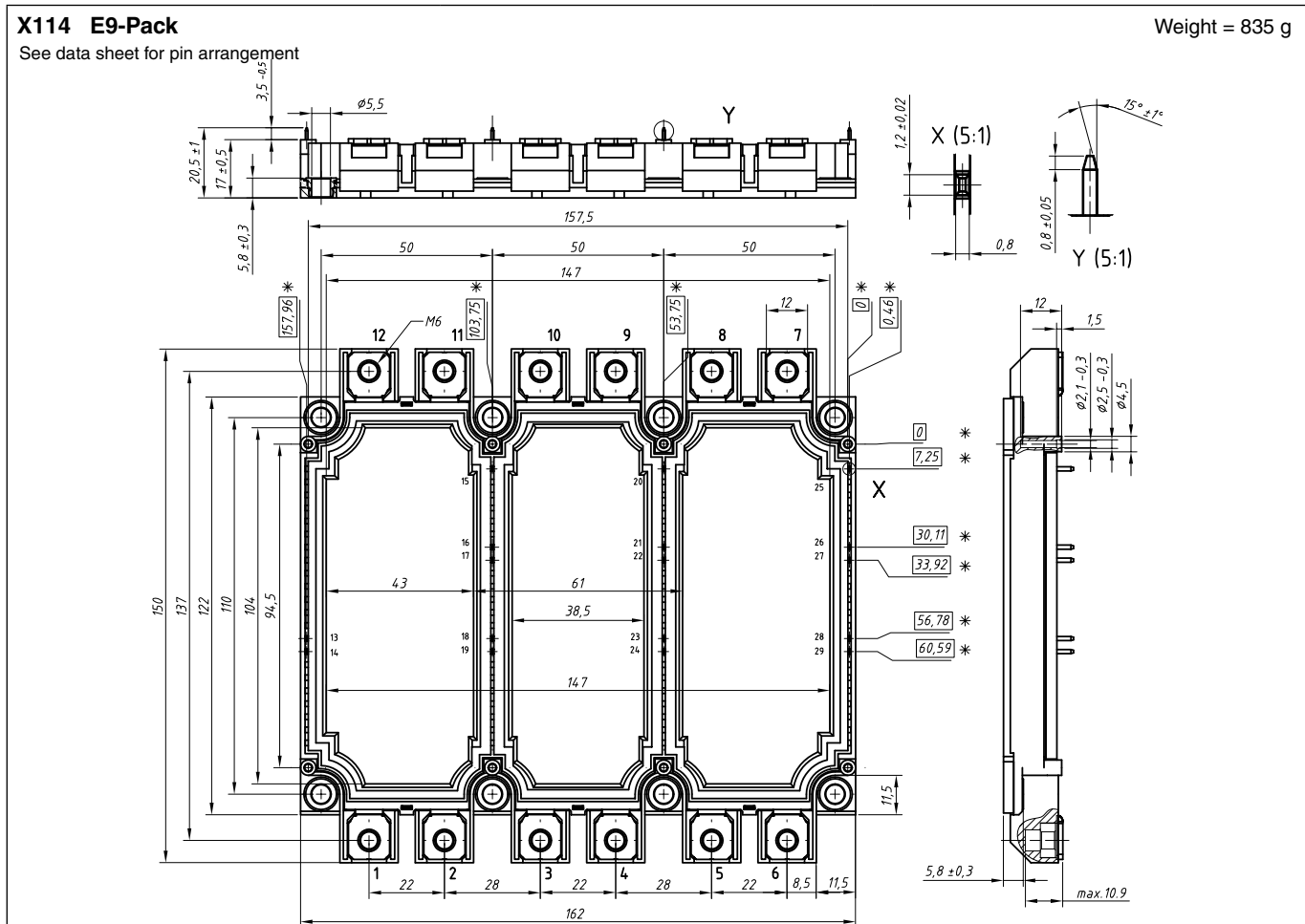


B (3:1)
relevant cross section
for PCB hole
0.8x0.7 mm
(rectangular shape)

Dimensions in mm and inches (1 mm = 0.0394")



Dimensions in mm and inches (1 mm = 0.0394")



Dimensions in mm and inches (1 mm = 0.0394")

| | | |
|--|--|--|
| <p>X117b FO-F-B Weight = 45 g</p> | <p>X118 FO-T-A Weight = 104 g c: w/o terminal 4, 5, & 6 (VVZ & VVZF) d: w/o terminal 1, 2, 3, 4, 5, & 6 (VUO)</p> <p>See data sheet for pin arrangement</p> | |
| <p>X119 PWS-A Weight = 104 g a: VUO b: w/o terminal D (VBO)</p> | <p>X120 PWS-B Weight = 203 g a: VUO b: w/o terminal D (VBO)</p> | <p>X121 PWS-C Weight = 250 g a: VUO b: w/o terminal D (VBO)</p> |

Dimensions in mm and inches (1 mm = 0.0394")

| | | |
|--|---|--|
| <p>X122 PWS-D Weight =</p> <p>a: VUO 159 g</p> <p>b: w/o terminal C (VBO) 153 g</p> | <p>X122 PWS-D Flat Weight =</p> <p>c: VUO 118 g</p> <p>Max. allowed screw-in depth: 6 mm</p> | <p>X123 PWS-E Weight =</p> <p>a: VTO 284 g</p> <p>b: w/o terminal 4, 5 & 6 (VVZ) 284 g</p> <p>c: w/o terminal 1, 2, 3, 4, 5 & 6 (VUO) 284 g</p> <p>d: w/o terminal D, 3, 4, 5 & 6 (VHF) 273 g</p> <p>e: w/o terminal D, 1, 2, 3, 4, 5 & 6 (VBO) 273 g</p> |
| <p>X123 PWS-E Flat Weight = 220 g</p> <p>h: w/o terminal 1, 2, 3, 4, 5 & 6 (VUO)</p> <p>Max. allowed screw-in depth: 7.2 mm</p> | <p>X125 TO-240 AA Weight =</p> <p>a: + Kelvin contact (MCC) 81 g</p> <p>b: + Kelvin contact, w/o pin 6 & 7 (MCD) 81 g</p> <p>c: w/o Kelvin contact 4 & 7 (MCC) 81 g</p> <p>d: w/o Kelvin contact 4, 7 & pin 6 (MCD) 81 g</p> <p>e: w/o pin 4, 5, 6 & 7 (MDD) 81 g</p> <p>f: w/o terminal 2 and pin 4 & 7 (VMO) 74 g</p> <p>g: + Kelvin contact, w/o pin 7 (VMM) 81 g</p> <p>A 2.8 - 0.8 DIN 46244</p> <p>General tolerance: DIN ISO 2768 class „c“</p> <p>Optional accessories: Keyed gate/cathode twin plugs Wire length: 350 mm, gate = white, cathode = red UL 758, style 3751 Type ZY 200L (L = Left for pin pair 4/5) Type ZY 200R (R = Right for pin pair 6/7)</p> | |

Dimensions in mm and inches (1 mm = 0.0394")

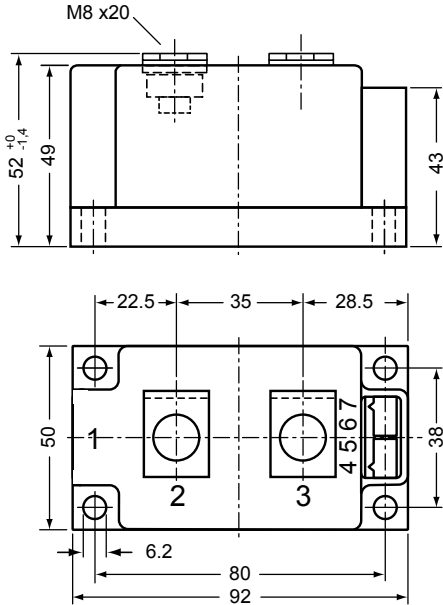
| | | |
|--|--|--|
| <p>X126 Y4-M6 Weight = a: + Kelvin cont., w/o pin 8 up to 11 (MCC) 131 g b: + Kelvin cont., w/o pin 6 up to 11 (MCD) 131 g c: w/o pin 4 up to 11 (MDD) 126 g d: w/o terminal 2 & pin 4 up to 11 (MEO) 108 g</p> <p>Optional accessories for modules Keyed gate/cathode twin plugs with wire length = 350 mm, gate = white, cathode = red Type ZY 180L (L = Left for pin pair 4/5) } UL 758, style 3751 Type ZY 180R (R = Right for pin pair 6/7)</p> | <p>X127 Y4-M5 Weight = a: w/o pin 8 up to 11 (MII) 110 g b: w/o pin 6 up to 11 (MID) 108 g c: w/o pin 4, 5 & 8 up to 11 (MDI) 108 g</p> <p>General tolerances: DIN ISO 2768-T1-m</p> | <p>X128 Y3-DCB Weight = a: w/o pin 4 up to 7 (VMM, MII) 222 g b: w/o pin 4 up to 9 (MID) 220 g c: w/o pin 4 up to 7, 10 & 11 (MDI) 220 g d: w/o terminal 3 & pin 6 up to 11 (VMO) 200 g</p> |
| <p>X129 Y2-DCB Weight = a: + Kelvin contact (MCC) 245 g b: + Kelvin contact, w/o pin 6 & 7 (MCD) 245 g c: w/o pin 4, 5, 6 & 7 (MDD) 244 g</p> | <p>X130 Y3-Li Weight = a: w/o pin 4-7, low inductance (VMM, MII) 226 g b: w/o pin 4-9, low inductance (MID) 226 g c: w/o pin 4-7, 10&11, low inductance (MDI) 226 g d: w/o terminal 1&pin 6-11, low ind. (VMO) 206 g e: w/o pin 4&5, low ind. (VMM, MII+NTC) 226 g f: w/o pin 4, 5, 8 & 9, low ind. (MID+NTC) 226 g</p> | <p>X131 Y1-CU Weight = a: + Kelvin contact (MCC) 680 g b: + Kelvin contact, w/o pin 6&7 (MCD) 680 g c: w/o pin 4, 5, 6 & 7 (MDD) 680 g</p> <p>Optional accessories for modules Keyed gate/cathode twin plugs with wire length = 350 mm, gate = white, cathode = red Type ZY 180L (L = Left for pin pair 4/5) } UL 758, style 3751 Type ZY 180R (R = Right for pin pair 6/7)</p> |

Dimensions in mm and inches (1 mm = 0.0394")

X132 Y1-2-CU

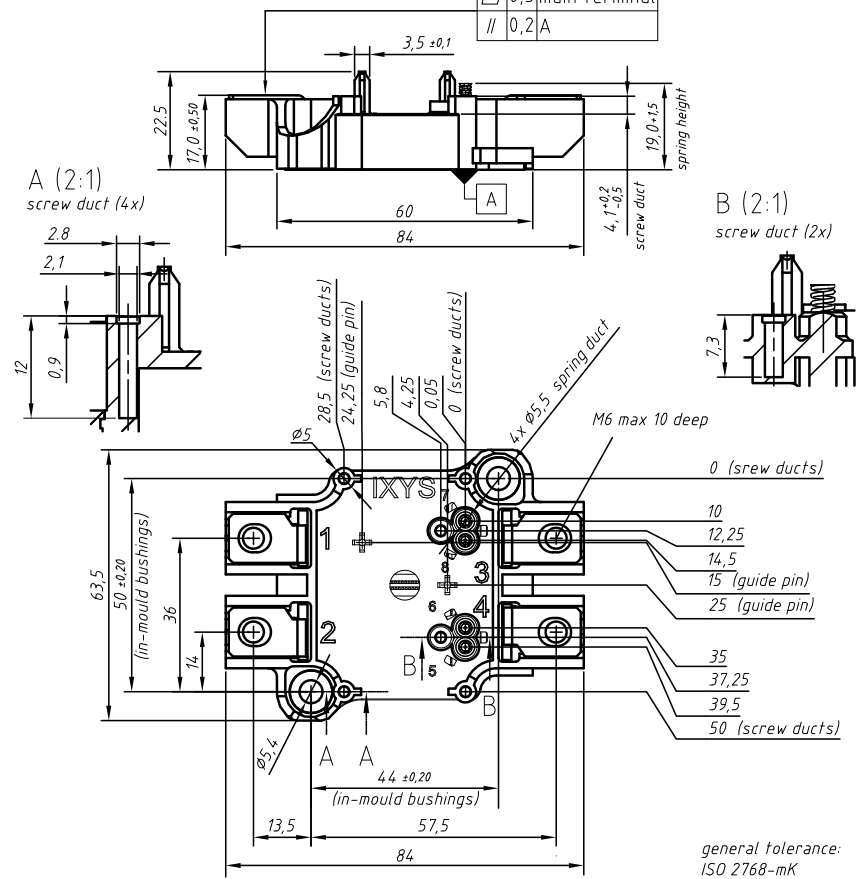
a: + Kelvin contact and pin 6&7 (MCO)
b: w/o pin 4, 5, 6 & 7 (MDO)

Weight = 650 g
650 g



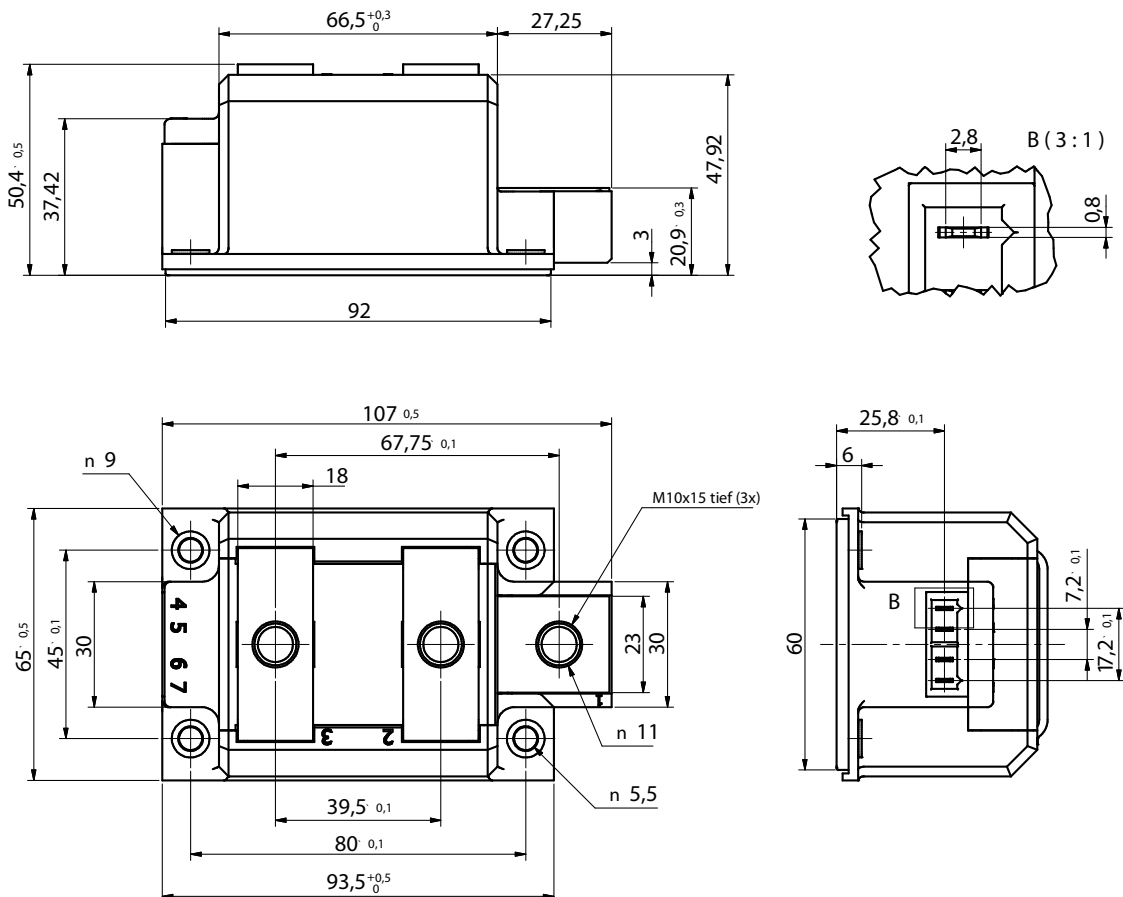
X141 SimBus A

Weight = 150 g



X142a ComPack

Weight = ??? g

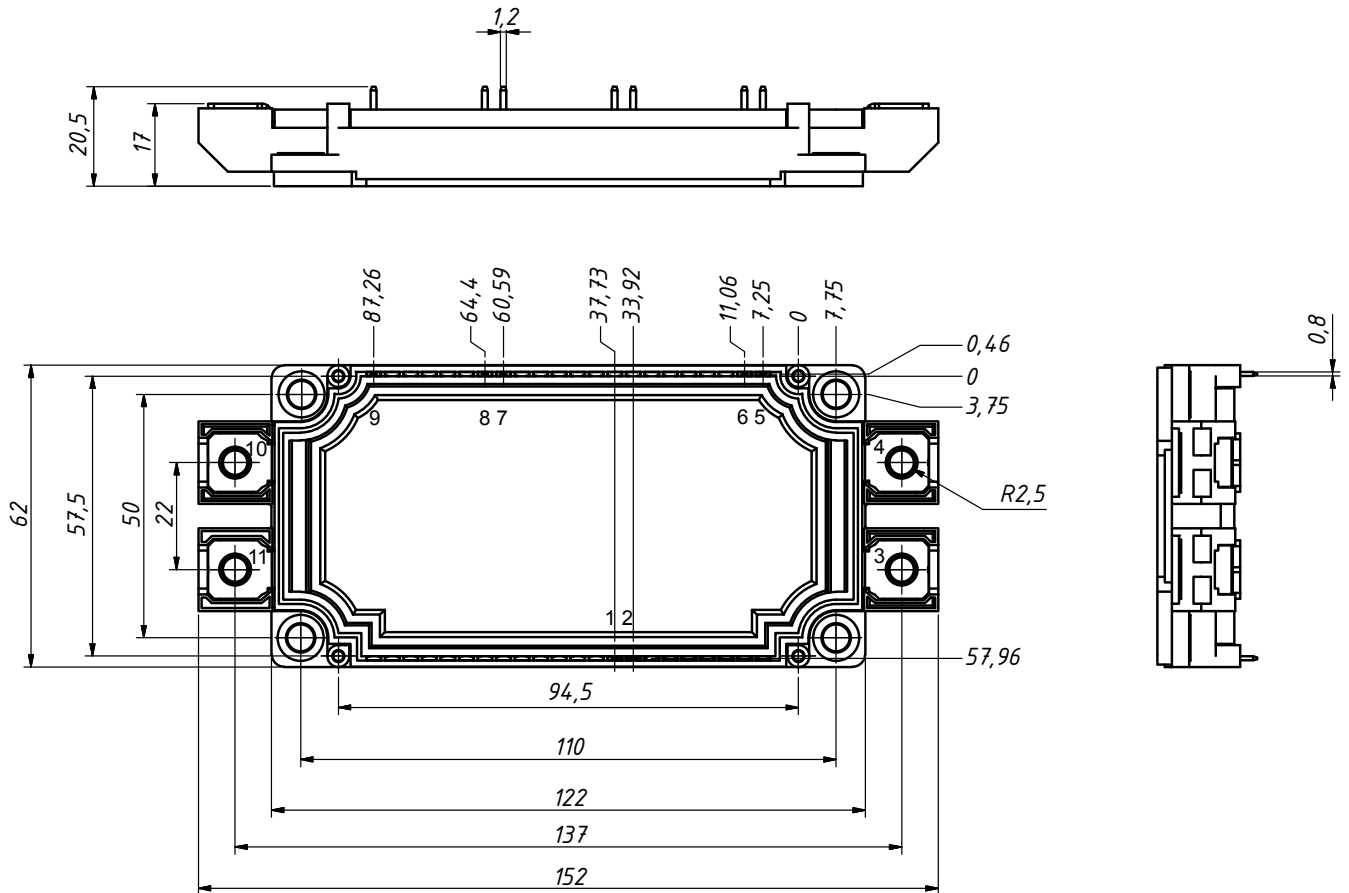


Outline drawings

Dimensions in mm and inches (1 mm = 0.0394")

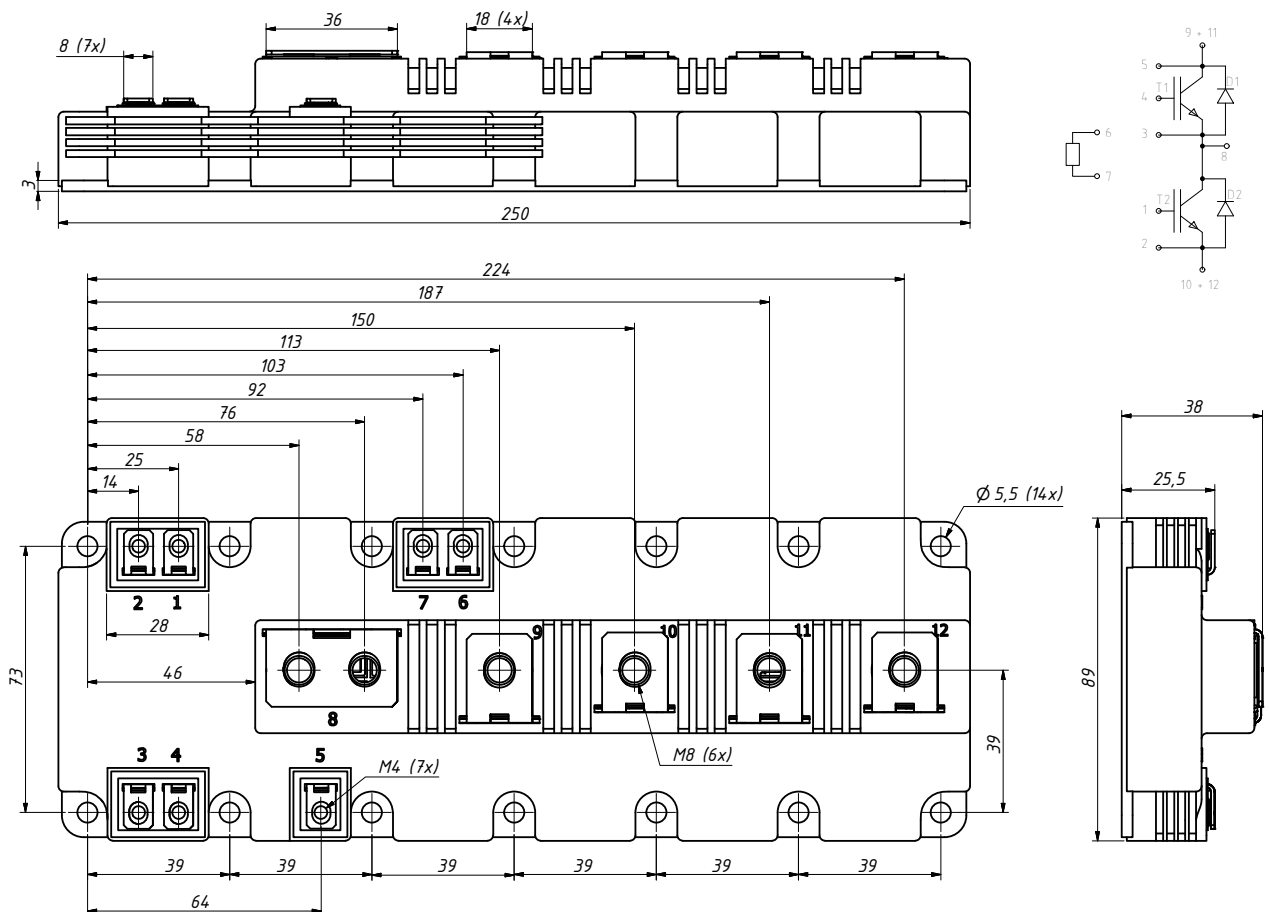
X143a SimBus F

Weight = 150 g



X144 SimBus P

Weight = 1200 g



Dimensions in mm and inches (1 mm = 0.0394")

| <p>X200 Metal-can Weight = 2.5 g</p> | <p>X201 FP-Case (oilproof) Weight = 0.9 g</p> | <p>X202 BOD-Package Weight = 9.5 g</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|-----------|--------|--|------|------|------|------|---|-------|-------|-------|-------|---|---|-------|---|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|------|------|-------|-------|---|-----------|--|-----------|--|---|-------|-------|-------|-------|---|------|------|-------|-------|---|-------|-------|-------|-------|---|-------|-------|-------|-------|---|------|------|-------|-------|---|-------|-------|-------|-------|--|--|
| <p>X203 TO-204 AE Weight = 18 g</p> <table border="1"> <thead> <tr> <th rowspan="2">Dim.</th> <th colspan="2">Millimeter</th> <th colspan="2">Inches</th> </tr> <tr> <th>Min.</th> <th>Max.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>38.61</td> <td>39.12</td> <td>1.520</td> <td>1.540</td> </tr> <tr> <td>B</td> <td>-</td> <td>22.22</td> <td>-</td> <td>0.875</td> </tr> <tr> <td>C</td> <td>6.40</td> <td>11.4</td> <td>0.252</td> <td>0.449</td> </tr> <tr> <td>D</td> <td>1.45</td> <td>1.60</td> <td>0.057</td> <td>0.063</td> </tr> <tr> <td>E</td> <td>1.52</td> <td>3.43</td> <td>0.060</td> <td>0.135</td> </tr> <tr> <td>F</td> <td colspan="2">30.15 BSC</td> <td colspan="2">1.187 BSC</td> </tr> <tr> <td>G</td> <td>10.67</td> <td>11.17</td> <td>0.420</td> <td>0.440</td> </tr> <tr> <td>H</td> <td>5.21</td> <td>5.71</td> <td>0.205</td> <td>0.225</td> </tr> <tr> <td>J</td> <td>16.64</td> <td>17.14</td> <td>0.655</td> <td>0.675</td> </tr> <tr> <td>K</td> <td>11.18</td> <td>12.19</td> <td>0.440</td> <td>0.480</td> </tr> <tr> <td>Q</td> <td>3.84</td> <td>4.19</td> <td>0.151</td> <td>0.165</td> </tr> <tr> <td>R</td> <td>25.16</td> <td>26.66</td> <td>0.991</td> <td>1.050</td> </tr> </tbody> </table> | Dim. | Millimeter | | Inches | | Min. | Max. | Min. | Max. | A | 38.61 | 39.12 | 1.520 | 1.540 | B | - | 22.22 | - | 0.875 | C | 6.40 | 11.4 | 0.252 | 0.449 | D | 1.45 | 1.60 | 0.057 | 0.063 | E | 1.52 | 3.43 | 0.060 | 0.135 | F | 30.15 BSC | | 1.187 BSC | | G | 10.67 | 11.17 | 0.420 | 0.440 | H | 5.21 | 5.71 | 0.205 | 0.225 | J | 16.64 | 17.14 | 0.655 | 0.675 | K | 11.18 | 12.19 | 0.440 | 0.480 | Q | 3.84 | 4.19 | 0.151 | 0.165 | R | 25.16 | 26.66 | 0.991 | 1.050 | <p>X204 DO-203 AA [M] (DO-4) Weight = 6 g</p> | <p>X205 DO-203 AA [UNF] (DO-4) Weight = 5.5 g</p> |
| Dim. | | Millimeter | | Inches | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Min. | Max. | Min. | Max. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 38.61 | 39.12 | 1.520 | 1.540 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | - | 22.22 | - | 0.875 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 6.40 | 11.4 | 0.252 | 0.449 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 1.45 | 1.60 | 0.057 | 0.063 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | 1.52 | 3.43 | 0.060 | 0.135 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | 30.15 BSC | | 1.187 BSC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | 10.67 | 11.17 | 0.420 | 0.440 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 5.21 | 5.71 | 0.205 | 0.225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | 16.64 | 17.14 | 0.655 | 0.675 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| K | 11.18 | 12.19 | 0.440 | 0.480 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q | 3.84 | 4.19 | 0.151 | 0.165 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R | 25.16 | 26.66 | 0.991 | 1.050 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Dimensions in mm and inches (1 mm = 0.0394")

| | | |
|--|---|--|
| <p>X206a DO-203 AB [UNF] (DO-5) X206b DO-203 AB [M] (DO-5) Weight = 14 g</p> | <p>X207 DO-203 AB (DO-5) Weight = 20 g</p> | <p>X209 TO-208 AA (TO-48) Weight = 11.6 g</p> |
| <p>X210 TO-208 AC (TO-65) Weight = 21.7 g</p> | | |

Dimensions in mm and inches (1 mm = 0.0394")

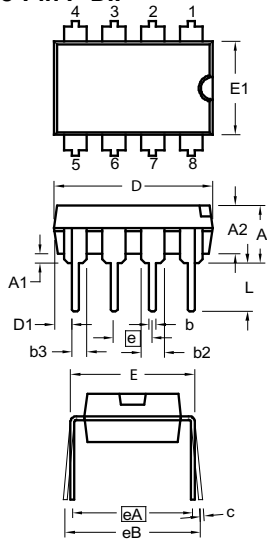
| <p>X251 UGE-single Weight = 125 g</p> | <p>X252 UG Weight = 155 g</p> | <p>X253a UG Weight = 310 g b: w/o middle terminal</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------------|--|------|------|-----|----|------|----|------|----|---|---|---|-------------|----|----|----|------|-----|---|----|----|----|--|-------------|-----|-----|-----|------|-----|----|------|----|------|--|-------------|-----|-----|-----|------|-----|---|----|----|----|----|-------------|-----|-----|-----|------|-----|---|----|----|----|----|
| <table border="1"> <thead> <tr> <th>Type</th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> <th>g</th> <th>h</th> <th>i</th> <th>k</th> </tr> </thead> <tbody> <tr> <td>UGB 3132 AD</td> <td>80</td> <td>70</td> <td>57</td> <td>58.5</td> <td>260</td> <td>6</td> <td>15</td> <td>15</td> <td>15</td> <td></td> </tr> <tr> <td>UGB 6124 AG</td> <td>135</td> <td>125</td> <td>112</td> <td>58.5</td> <td>260</td> <td>11</td> <td>32.5</td> <td>25</td> <td>32.5</td> <td></td> </tr> <tr> <td>UGD 6123 AG</td> <td>135</td> <td>125</td> <td>112</td> <td>58.5</td> <td>260</td> <td>8</td> <td>30</td> <td>18</td> <td>18</td> <td>30</td> </tr> <tr> <td>UGD 8124 AG</td> <td>135</td> <td>125</td> <td>112</td> <td>58.5</td> <td>260</td> <td>8</td> <td>30</td> <td>18</td> <td>18</td> <td>30</td> </tr> </tbody> </table> | | | Type | a | b | c | d | e | f | g | h | i | k | UGB 3132 AD | 80 | 70 | 57 | 58.5 | 260 | 6 | 15 | 15 | 15 | | UGB 6124 AG | 135 | 125 | 112 | 58.5 | 260 | 11 | 32.5 | 25 | 32.5 | | UGD 6123 AG | 135 | 125 | 112 | 58.5 | 260 | 8 | 30 | 18 | 18 | 30 | UGD 8124 AG | 135 | 125 | 112 | 58.5 | 260 | 8 | 30 | 18 | 18 | 30 |
| Type | a | b | c | d | e | f | g | h | i | k | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UGB 3132 AD | 80 | 70 | 57 | 58.5 | 260 | 6 | 15 | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UGB 6124 AG | 135 | 125 | 112 | 58.5 | 260 | 11 | 32.5 | 25 | 32.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UGD 6123 AG | 135 | 125 | 112 | 58.5 | 260 | 8 | 30 | 18 | 18 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UGD 8124 AG | 135 | 125 | 112 | 58.5 | 260 | 8 | 30 | 18 | 18 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Dimensions in mm

| | | |
|---------------------------------------|---------------------------------------|---------------------------------------|
| <p>X254 VG-A Weight = 61 g</p> | <p>X255 VG-B Weight = 87 g</p> | <p>X256 VG-C Weight = 50 g</p> |
|---------------------------------------|---------------------------------------|---------------------------------------|

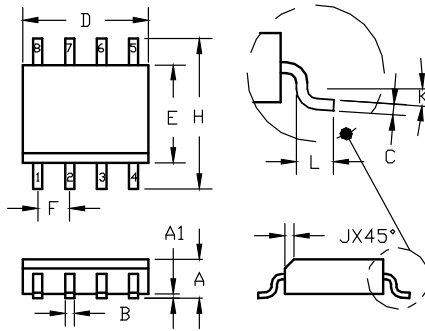
Dimensions in mm and inches (1 mm = 0.0394")

X502 8-Pin P-DIP



| Dim. | Millimeter | | Inches | |
|------|------------|-------|-----------|-------|
| | min | max | min | max |
| A | 3.56 | 4.57 | 0.140 | 0.180 |
| A1 | 0.38 | 1.02 | 0.015 | 0.040 |
| A2 | 3.18 | 3.68 | 0.125 | 0.145 |
| b | 0.38 | 0.51 | 0.015 | 0.020 |
| b2 | 1.40 | 1.65 | 0.055 | 0.065 |
| b3 | 0.89 | 1.14 | 0.035 | 0.045 |
| c | 0.23 | 0.30 | 0.009 | 0.012 |
| D | 9.02 | 10.16 | 0.355 | 0.400 |
| D1 | 0.25 | 1.02 | 0.010 | 0.040 |
| E | 7.62 | 8.26 | 0.300 | 0.325 |
| E1 | 6.10 | 6.86 | 0.240 | 0.270 |
| e | 2.54 BSC | | 0.100 BSC | |
| eA | 7.62 BSC | | 0.300 BSC | |
| eB | 7.62 | 10.92 | 0.300 | 0.430 |
| L | 3.05 | 3.56 | 0.120 | 0.140 |

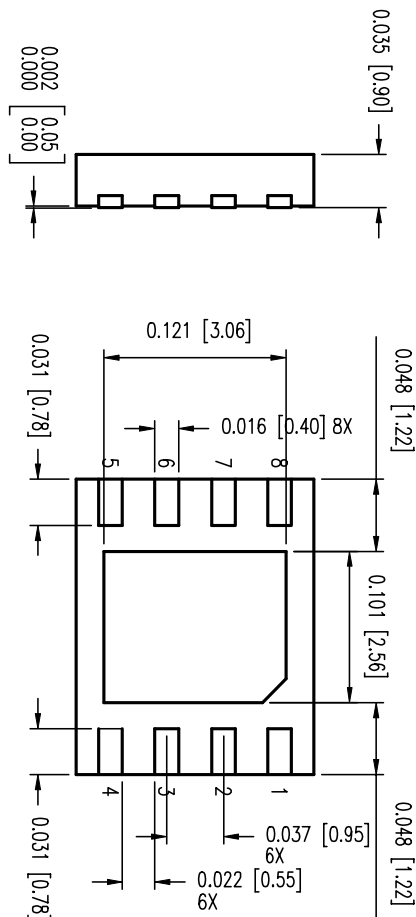
X512 8-pin SOIC/SOP X512a 8-pin SOIC-CT/SOP-CT



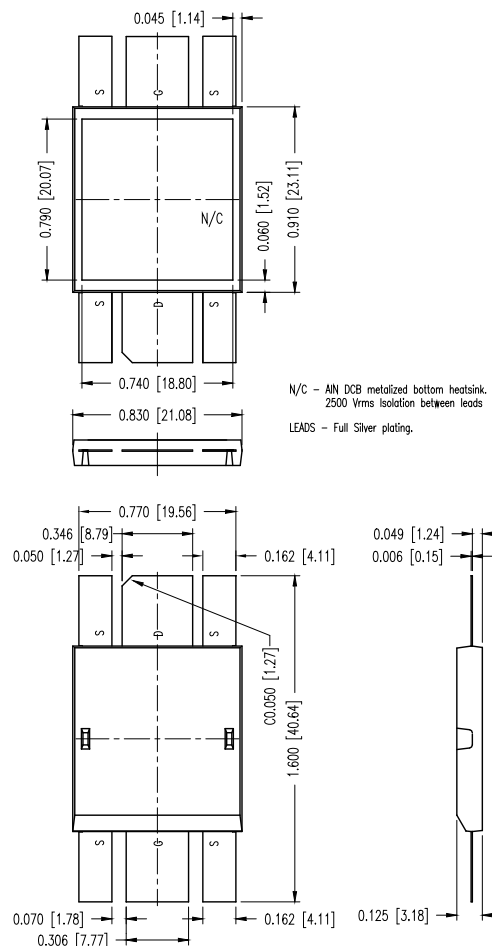
| Dim. | Millimeter | | Inches | |
|------|------------|------|-----------|-------|
| | min | max | min | max |
| A | 1.35 | 1.75 | 0.053 | 0.069 |
| A1 | 0.10 | 0.25 | 0.004 | 0.010 |
| B | 0.33 | 0.51 | 0.013 | 0.020 |
| C | 0.19 | 0.25 | 0.007 | 0.010 |
| D* | 4.80 | 5.00 | 0.189 | 0.197 |
| E* | 3.80 | 4.00 | 0.150 | 0.158 |
| E1 | 6.10 | 6.86 | 0.240 | 0.270 |
| F | 1.27 BSC | | 0.050 BSC | |
| H | 5.8 | 6.2 | 0.229 | 0.244 |
| J | 0.25 | 0.50 | 0.010 | 0.020 |
| K | 0° | 8° | 0° | 8° |
| L | 0.40 | 1.27 | 0.016 | 0.050 |

* do not include Mold protrusions

X532 8-Pin DFN 4x5



D5 DE475



| Power Factor Correction | |
|--|--|
| IXAN0001 | 3-Phase PFC using Vienna Rectifier Approach and Modular Construction for Improved Overall Performance, Efficiency and Reliability |
| IXAN0002 | Single and Three-Phase Rectifiers with Active Power Factor Correction for Enhanced Mains Power Quality |
| IXAN0003 | Rectifiers with Power Factor Correction |
| IXAN0004 | Design and Experimental Investigation of a Three-Phase, High Power Density, High Efficiency, Unity Power Factor PWM (VIENNA) Rectifier Employing a Novel Integrated Power Semiconductor Module |
| IXAN0005 | Status of the Techniques of Three-Phase Rectifier Systems with Low Effects on the Mains |
| MOSFETs and IGBTs Drivers | |
| IXAN0012 | MOSFET/IGBT Drivers - Theory and Applications |
| IXAN0011 | Driving Your MOSFETs Wild to Obtain Greater Efficiencies, Power Densities and Lower Overall Cost |
| BiMOSFETs Applications | |
| IXAN0013 | Capacitor Charge/Discharge Circuits, utilizing High Voltage IGBTs and ZCS Resonant Mode Techniques |
| IXAN0014 | Comparative Performance of BiMOSFETs in Fly-back Converter Circuits |
| IXAN0015 | Use of BiMOSFETs in Modern Radar Transmitters |
| IXAN0016 | IXBH40N160 BiMOSFET Developed for High Voltage and High Frequency Applications |
| IXAN0017 | New 1600V BiMOSFET Transistors Open Up New Applications |
| Automotive Applications | |
| IXAN0018 | A High Current Dual Inline Packaged Trench MOSFET Three Phase Full Bridge as Contribution to Automotive System Integration |
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