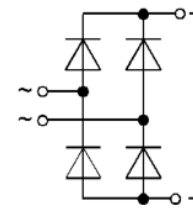


### Single Phase Bridge Rectifier, 160 Amps

#### Features

- Easy connections
- Excellent power volume ratio
- Insulated type



MDQ



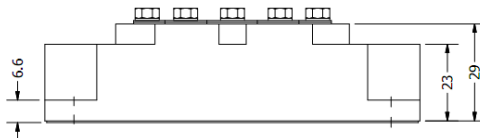
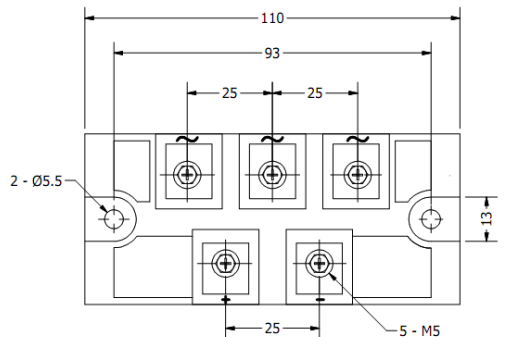
| Voltage Ratings ( $T_J = 25^\circ\text{C}$ unless otherwise noted) |              |                                                         |                                                             |                                   |
|--------------------------------------------------------------------|--------------|---------------------------------------------------------|-------------------------------------------------------------|-----------------------------------|
| Type number                                                        | Voltage code | $V_{RRM}$ , Max. repetitive peak reverse voltage<br>(V) | $V_{RSM}$ , Max. non-repetitive peak reverse voltage<br>(V) | $I_{RRM}$ max @ $T_J$ max<br>(mA) |
| MDQ160                                                             | 80           | 800                                                     | 900                                                         | 15                                |
|                                                                    | 100          | 1000                                                    | 1100                                                        |                                   |
|                                                                    | 120          | 1200                                                    | 1300                                                        |                                   |
|                                                                    | 140          | 1400                                                    | 1500                                                        |                                   |
|                                                                    | 160          | 1600                                                    | 1700                                                        |                                   |

| Electrical Specifications ( $T_J = 25^\circ\text{C}$ unless otherwise noted) |                                                |           |        |                      |
|------------------------------------------------------------------------------|------------------------------------------------|-----------|--------|----------------------|
| Parameters                                                                   | Conditions                                     | Symbol    | Values | Units                |
| Maximum DC output current                                                    | $T_C = 85^\circ\text{C}$                       | $I_{DC}$  | 160    | A                    |
| Forward surge current (non-repetitive), one cycle                            | $f = 50\text{ Hz}$                             | $I_{FSM}$ | 1500   | A                    |
| Fusing current                                                               |                                                | $I^2t$    | 11250  | $\text{A}^2\text{s}$ |
| Maximum forward voltage drop                                                 | $I_{FM} = 150\text{A}, T_J = 25^\circ\text{C}$ | $V_{FM}$  | 1.35   | V                    |
| RMS isolation voltage                                                        |                                                | $V_{ISO}$ | 3000   | V                    |

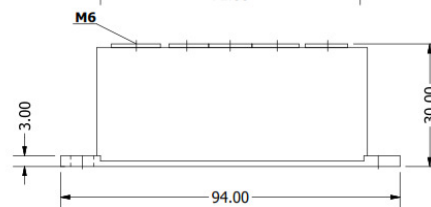
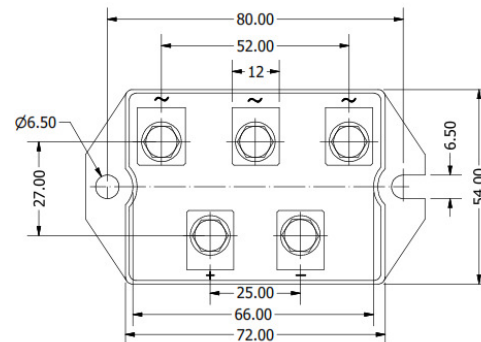
| Thermal and Mechanical Specifications ( $T_J = 25^\circ\text{C}$ unless otherwise noted) |             |               |               |                    |
|------------------------------------------------------------------------------------------|-------------|---------------|---------------|--------------------|
| Parameters                                                                               |             | Symbol        | Values        | Units              |
| Maximum operating junction temperature range                                             |             | $T_J$         | - 40 to + 125 | $^\circ\text{C}$   |
| Maximum storage temperature range                                                        |             | $T_{STG}$     | - 40 to + 125 | $^\circ\text{C}$   |
| Maximum thermal resistance, junction to case                                             |             | $R_{th(J-C)}$ | 0.12          | $^\circ\text{C/W}$ |
| Mounting torque                                                                          | to heatsink | F             | $4 \pm 15\%$  | Nm                 |
|                                                                                          | to terminal |               | $4 \pm 15\%$  |                    |
| Approximate weight                                                                       | Package – E | W             | 340           | g                  |
|                                                                                          | Package – F |               | 460           |                    |
|                                                                                          | Package – S |               | 295           |                    |

## Package Outline

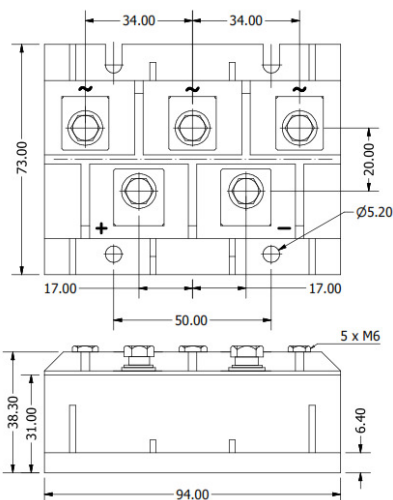
(All dimensions in mm)



**Package Type E**



**Package Type S**



**Package Type F**

## Ordering Table

| MDQ | 160 | - | 120 |
|-----|-----|---|-----|
| 1   | 2   | 3 | 4   |

1 – Single-Phase Bridge

2 – Current =  $I_D$

3 – Package Type

4 – Voltage Code x 10 =  $V_{RRM}$  (See Voltage Ratings Table)