

Cathode to Stud Shown

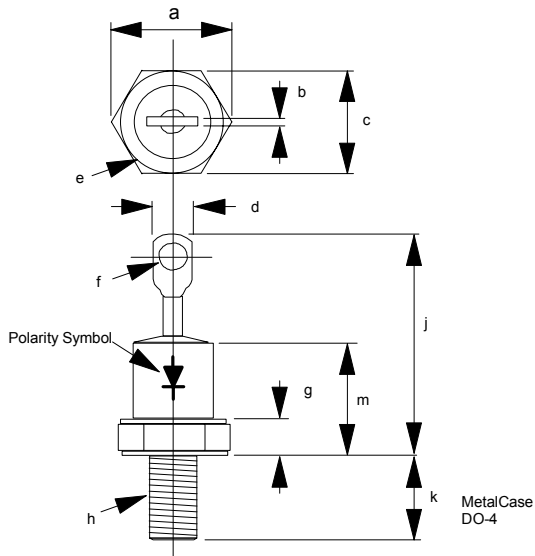
(Anode to Stud add Suffix R)

Symbol



| MAXIMUM RATINGS (T <sub>J</sub> = 25°C unless stated otherwise) |                    |                                  |                                     |                                     |                                     |                                     |                        |                          |                   |
|---|--------------------|----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------|--------------------------|-------------------|
| Parameter   | Symbol             | 12FL5S02<br>12FL5S05<br>12FL5S10 | 12FL10S02<br>12FL10S05<br>12FL10S10 | 12FL20S02<br>12FL20S05<br>12FL20S10 | 12FL40S02<br>12FL40S05<br>12FL40S10 | 12FL60S02<br>12FL60S05<br>12FL60S10 | 12FL80S05<br>12FL80S10 | 12FL100S05<br>12FL100S10 | Unit              |
| Repetitive Peak Reverse Voltage                                 | V <sub>RRM</sub>   | 50                               | 100                                 | 200                                 | 400                                 | 600                                 | 800                    | 1000                     | Volt              |
| Maximum Average On-State Current                                | I <sub>F(AV)</sub> | 12.0                             |                                     |                                     |                                     |                                     |                        |                          | Amp               |
| Peak Forward Surge Current 8.3mS                                | I <sub>FSM</sub>   | 150                              |                                     |                                     |                                     |                                     |                        |                          | Amp               |
| Maximum I <sup>2</sup> T for Fusing 8.3ms                       | I <sup>2</sup> T   | 94                               |                                     |                                     |                                     |                                     |                        |                          | A <sup>2</sup> /S |
| Maximum Storage Temperature Range                               | T <sub>(STG)</sub> | -65 to +175                      |                                     |                                     |                                     |                                     |                        |                          | °C                |
| Maximum Junction Temperature Range                              | T <sub>J</sub>     | -65 to +150                      |                                     |                                     |                                     |                                     |                        |                          | °C                |

| ELECTRICAL CHARACTERISTICS at T <sub>J</sub> = 25°C Maximum. Unless stated Otherwise |                       |                                   |       |     |     |      |
|--|-----------------------|-----------------------------------|-------|-----|-----|------|
| Parameter  | Symbol                | Condition                         | Value |     |     | Unit |
|  |                       |                                   | Min   | Typ | Max |      |
| Maximum Forward Voltage  | V <sub>FM</sub>       | I <sub>FM</sub> = 12 Amps         |       |     | 1.4 | Volt |
| Repetitive Peak Off- State Current   | I <sub>DRM</sub>      | V <sub>R</sub> = V <sub>RRM</sub> |       |     | 50  | µA   |
| Reverse Recovery Time for S02  | t <sub>RR</sub>       |                                   |       |     | 100 | nS   |
| Reverse Recovery Time for S05  | t <sub>RR</sub>       |                                   |       |     | 250 | nS   |
| Reverse Recovery Time for S10  | t <sub>RR</sub>       |                                   |       |     | 430 | nS   |
| Thermal Resistance (Junction to Case)  | R <sub>TH (J-c)</sub> |                                   |       |     | 2.0 | °C/W |
| Mounting Torque  | M <sub>T</sub>        |                                   |       |     | 1.2 | NM   |
| Weight   | Wt                    |                                   |       |     | 7.0 | grms |



| Dim | DIMENSIONS  |              |        |       |
|-----|-------------|--------------|--------|-------|
|     | Millimetres |              | Inches |       |
|     | Min         | Max          | Min    | Max   |
| a   |             | 12.82        |        | 0.505 |
| b   | 0.020       | 0.065        | 0.51   | 1.65  |
| c   | 0.424       | 0.437        | 10.77  | 11.20 |
| d   |             | 0.310        |        | 7.87  |
| e   |             | 0.413        |        | 10.49 |
| f   | 0.060       | 0.100        | 1.53   | 2.54  |
| g   | 0.075       | 0.175        | 1.91   | 4.44  |
| h   |             | 10 -32 UNF3A |        |       |
| j   | 0.600       | 0.820        | 15.24  | 20.82 |
| k   | 0.422       | 0.453        | 10.72  | 11.50 |
| m   |             | 0.405        |        | 10.29 |