

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### ELECTRICAL CHARACTERISTICS

| Characteristics                         | Symbol      | Value  | Test Conditions                                                                |
|-----------------------------------------|-------------|--------|--------------------------------------------------------------------------------|
| Working peak reverse voltage            | $V_{RWM}$   | 35V    |                                                                                |
| Repetitive peak reverse voltage         | $V_{RRM}$   | 35V    |                                                                                |
| Average forward current                 | $I_{F(AV)}$ | 60A    | $T_C = 135^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$ |
| Maximum surge current                   | $I_{FSM}$   | 800A   | 8.3ms, half-sine, $T_J = 175^\circ\text{C}$                                    |
| Maximum repetitive peak reverse current | $I_{R(OV)}$ | 2A     | $f = 1\text{KHz}$ , $25^\circ\text{C}$ , 1μsec square wave                     |
| Maximum peak forward voltage            | $V_{FM}$    | 0.60V  | $I_{FM} = 60\text{A}$ , $T_J = 125^\circ\text{C}^*$                            |
| Maximum peak forward voltage            | $V_{FM}$    | 0.70V  | $I_{FM} = 60\text{A}$ , $T_J = 25^\circ\text{C}^*$                             |
| Maximum peak reverse current            | $I_{RM}$    | 30mA   | $V_{RRM}$ , $T_J = 125^\circ\text{C}^*$                                        |
| Maximum peak reverse current            | $I_{RM}$    | 2mA    | $V_{RRM}$ , $T_J = 25^\circ\text{C}$                                           |
| Typical junction capacitance            | $C_J$       | 2300pF | $V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$                                 |

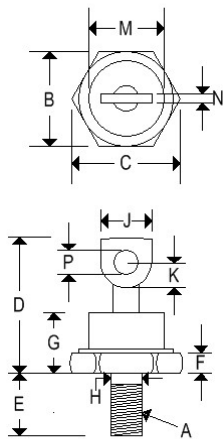
\*Pulse test: pulse width 300μsec, duty cycle 2%

### THERMAL CHARACTERISTICS

| Characteristics                      | Symbol          | Test Conditions                        |
|--------------------------------------|-----------------|----------------------------------------|
| Storage temperature range            | $T_{stg}$       | $-65^\circ$ to $175^\circ\text{C}$     |
| Operating junction temperature range | $T_J$           | $-65^\circ$ to $175^\circ\text{C}$     |
| Maximum thermal resistance           | $R_{\theta JC}$ | $1.0^\circ\text{C/W}$ junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | $0.5^\circ\text{C/W}$ case to sink     |
| Mounting torque                      |                 | 25-30 inch pounds                      |
| Weight                               |                 | 0.54 ounce (15.3 grams) typical        |

### MECHANICAL CHARACTERISTICS

|                         |                                |
|-------------------------|--------------------------------|
| <b>Case</b>             | DO-5(R)                        |
| <b>Marking</b>          | Alpha numeric                  |
| <b>Normal polarity</b>  | Cathode is stud                |
| <b>Reverse polarity</b> | Anode is stud (add "R" suffix) |



|          | DO-5(R)            |       |             |        |
|----------|--------------------|-------|-------------|--------|
|          | Inches             |       | Millimeters |        |
|          | Min                | Max   | Min         | Max    |
| <b>A</b> | ¼-28 UNF2A threads |       |             |        |
| <b>B</b> | 0.669              | 0.688 | 16.990      | 17.480 |
| <b>C</b> | -                  | 0.794 | -           | 20.160 |
| <b>D</b> | -                  | 1.000 | -           | 25.400 |
| <b>E</b> | 0.422              | 0.453 | 10.720      | 11.510 |
| <b>F</b> | 0.115              | 0.200 | 2.920       | 5.080  |
| <b>G</b> | -                  | 0.450 | -           | 11.430 |
| <b>H</b> | 0.220              | 0.249 | 5.580       | 6.320  |
| <b>J</b> | 0.250              | 0.375 | 6.350       | 9.530  |
| <b>K</b> | 0.156              | -     | 3.960       | -      |
| <b>M</b> | -                  | 0.667 | -           | 16.940 |
| <b>N</b> | 0.030              | 0.080 | 0.760       | 2.030  |
| <b>P</b> | 0.140              | 0.175 | 3.560       | 4.450  |

Figure 1  
Typical Forward Characteristics

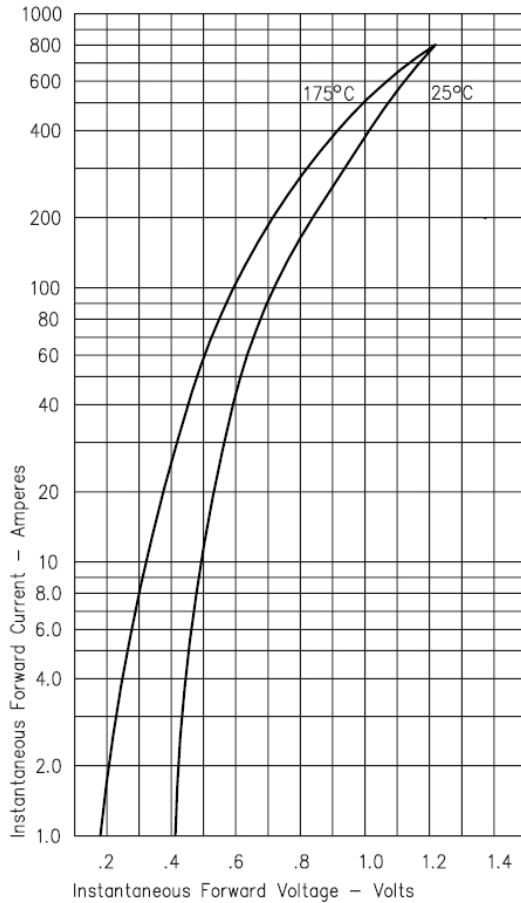


Figure 2  
Typical Reverse Characteristics

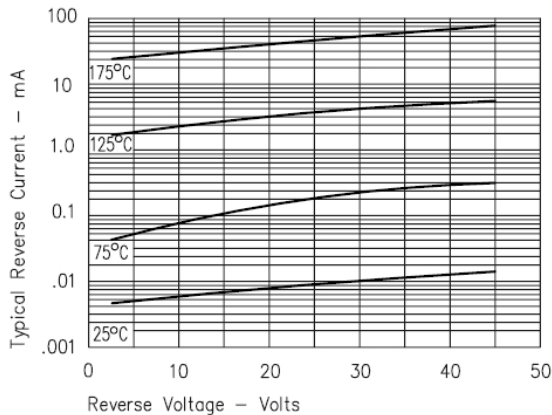


Figure 3  
Typical Junction Capacitance

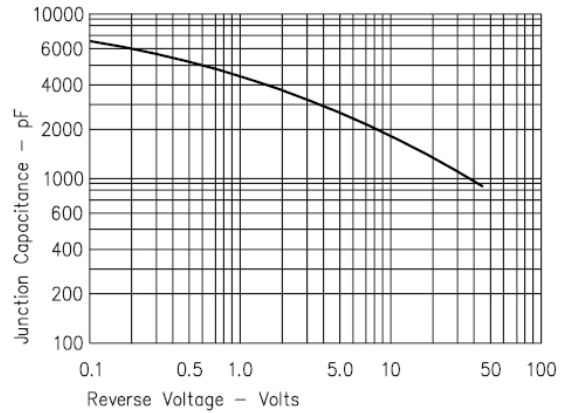


Figure 4  
Forward Current Derating

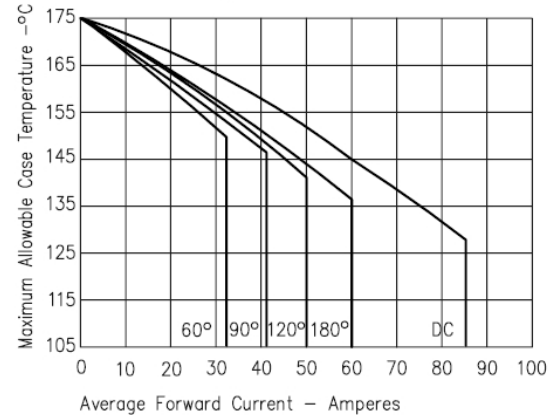


Figure 5  
Maximum Forward Power Dissipation

