

### 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	
Standard average forward current	$I_{F(AV)}$	30A	$T_C = 148^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.4^\circ\text{C/W}$
Reverse average forward current	$I_{F(AV)}$	30A	$T_C = 132^\circ\text{C}$ , square wave, $R_{\theta JC} = 2.2^\circ\text{C/W}$
Maximum surge current	$I_{FSM}$	600A	8.3ms, half-sine, $T_J = 175^\circ\text{C}$
Maximum repetitive peak reverse current	$I_{R(OV)}$	2A	$f = 1\text{KHz}$ , $25^\circ\text{C}$ , $1\mu\text{sec}$ square wave
Maximum peak forward voltage	$V_{FM}$	0.57V	$I_{FM} = 30\text{A}$ , $T_J = 175^\circ\text{C}^*$
Maximum peak forward voltage	$V_{FM}$	0.70V	$I_{FM} = 30\text{A}$ , $T_J = 25^\circ\text{C}^*$
Maximum peak reverse current	$I_{RM}$	25mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Maximum peak reverse current	$I_{RM}$	1.5mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance	$C_J$	1350pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

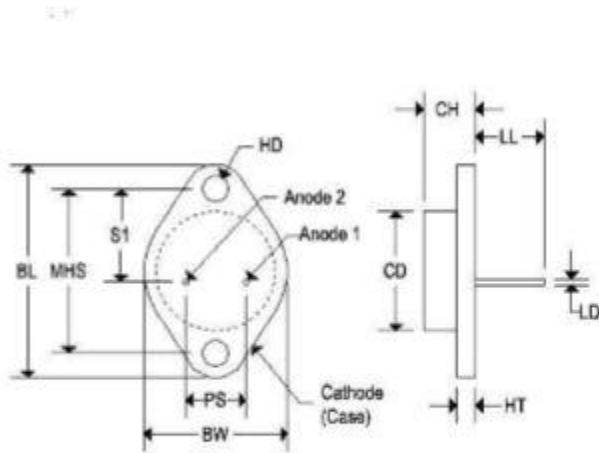
\*Pulse test: pulse width 300 $\mu\text{sec}$ , duty cycle 2%

### 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 $175^\circ\text{C}$
Standard maximum thermal resistance	$R_{\theta JC}$	$1.4^\circ\text{C/W}$ junction to case
Reverse maximum thermal resistance	$R_{\theta JC}$	$2.2^\circ\text{C/W}$ junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.5^\circ\text{C/W}$ case to sink

### MECHANICAL CHARACTERISTICS

Case	TO-3
Marking	Alpha numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	TO-3 Dual			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	-	0.135	-	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150

Figure 1  
Typical Forward Characteristics

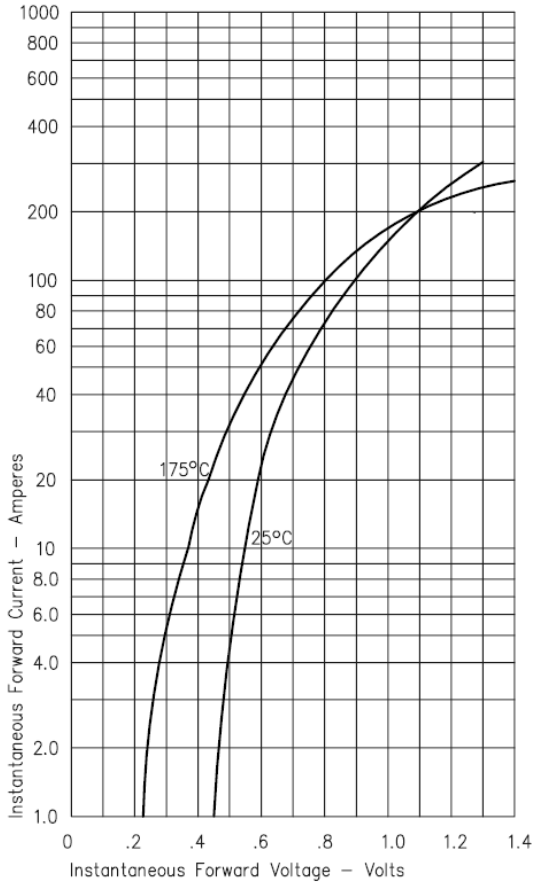


Figure 3  
Typical Junction Capacitance

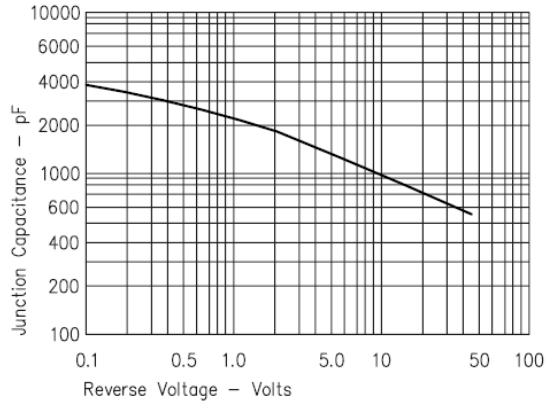


Figure 4  
Forward Current Derating - Standard Polarity

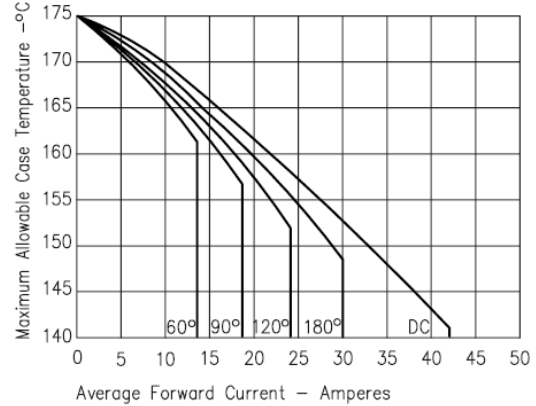


Figure 2  
Typical Reverse Characteristics

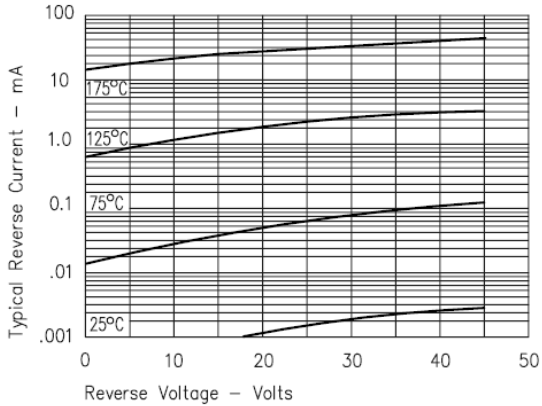


Figure 5  
Forward Current Derating - Reverse Polarity

