

### 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.

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
<b>Peak repetitive forward and reverse blocking voltage<sup>(1)</sup></b> (T <sub>c</sub> = -65 to +125°C) C35U C35F C35A C35G C35B C35H C35C C35D C35E C35M C35S C35N	V <sub>DRM</sub> or V <sub>RRM</sub>	25 50 100 150 200 250 300 400 500 600 700 800	Volts
<b>Non-repetitive peak reverse voltage</b> (T <sub>c</sub> = -65 to +125°C, V < 5.0ms) C35U C35F C35A C35G C35B C35H C35C C35D C35E C35M C35S C35N	V <sub>RSM</sub>	35 75 150 225 300 350 400 500 600 720 840 960	Volts
<b>Forward current RMS</b> (all conduction angles)	I <sub>T(RMS)</sub>	35	Amps
<b>Peak non-repetitive surge current</b> (1cycle, 60 Hz)	I <sub>TSM</sub>	225	Amps
<b>Circuit fusing considerations</b> (t = 8.3ms)	I <sup>2</sup> t	75	A <sup>2</sup> s
<b>Forward peak gate power</b>	P <sub>GM</sub>	5	Watts
<b>Forward average gate power</b>	P <sub>G(AV)</sub>	0.5	Watts
<b>Peak reverse gate voltage</b>	V <sub>GRM</sub>	5	Volts
<b>Operating junction temperature range</b>	T <sub>J</sub>	-65 to +125	°C
<b>Storage temperature range</b>	T <sub>stg</sub>	-65 to +150	°C

### THERMAL CHARACTERISTICS

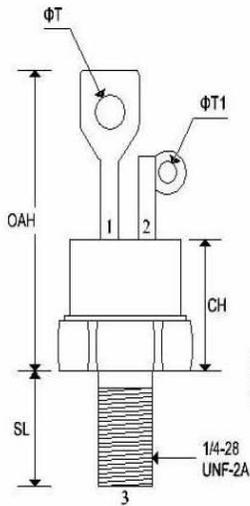
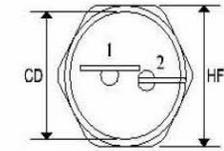
Characteristic	Symbol	Maximum	Unit
Thermal resistance, junction to case	$R_{\theta JC}$	1.7	$^{\circ}\text{C}/\text{W}$

### ELECTRICAL CHARACTERISTICS ( $T_C = 25^{\circ}\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ.	Max	Unit
<b>Peak reverse or forward blocking current</b> $(V_D = \text{Rated } V_{DRM}, T_C = 125^{\circ}\text{C})$ $(V_R = \text{Rated } V_{RRM}, T_C = 125^{\circ}\text{C})$ C35U, F, A, G C35B C35H C35C C35D C35E C35M C35S C35N	$I_{DRM}$ or $I_{RRM}$	-	-	13 12 11 10 8 6 5 4.5 4	mA
<b>Average forward or reverse blocking current</b> $(V_D = \text{Rated } V_{DRM}, T_C = 125^{\circ}\text{C})$ $(V_R = \text{Rated } V_{RRM}, T_C = 125^{\circ}\text{C})$ C35U, F, A, G C35B C35H C35C C35D C35E C35M C35S C35N	$I_{DRM(AV)}$ or $I_{RRM(AV)}$	-	-	6.5 6 5.5 5 4 3 2.5 2.25 2	mA
<b>Peak on-state voltage</b> $(I_{TM} = 50.3\text{A peak, pulse width } \leq 1\text{ms, duty cycle } \leq 2.0\%)$	$V_{TM}$	-	-	2	Volts
<b>Gate trigger current (continuous dc)</b> $(V_D = 12\text{V}, R_L = 50\Omega)$ $(V_D = 12\text{V}, R_L = 50\Omega, T_C = -65^{\circ}\text{C})$	$I_{GT}$	-	6	40 80	mA
<b>Gate trigger voltage (continuous dc)</b> $(V_D = 12\text{V}, R_L = 50\Omega, T_C = -65^{\circ}\text{C to } +125^{\circ}\text{C})$ $(V_D = \text{Rated } V_{DRM}, R_L = 1000\Omega, T_C = 125^{\circ}\text{C})$	$V_{GT}$	- 0.25	-	3 -	Volts
<b>Holding current</b> $(V_D = 24\text{V, gate supply} = 10\text{V, } 20\Omega, 45\mu\text{s minimum pulse width, } I_T = 0.5\text{A})$	$I_H$	-	-	100	mA
<b>Critical rate of rise of forward blocking voltage</b> $(V_D = \text{Rated } V_{DRM}, T_C = 125^{\circ}\text{C})$ C35U, F, M, S, N C35A, G, B, H C35C, D, E	$dv/dt$	10 20 25	- - -	- - -	$\text{V}/\mu\text{s}$

### MECHANICAL CHARACTERISTICS

Case	TO-48
Marking	Body painted, alpha-numeric
Polarity	Cathode is stud



Pin 1: Cathode  
Pin 2: Gate  
Pin 3: Anode

	TO-48			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.543	-	13.793
CH	-	0.550	-	13.970
HF	0.544	0.563	13.817	14.301
OAH	-	1.193	-	30.303
SL	0.422	0.453	10.718	11.507
ΦT	0.125	0.165	3.175	4.191
ΦT <sub>1</sub>	0.060	0.075	1.524	1.905

