

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	S2600B	S2600D	S2600M	Unit
Non-repetitive peak reverse voltage ¹ (gate open)	V_{RSOM}	250	500	700	V
Non-repetitive peak off-state voltage ¹ (gate open)	V_{DSOM}	250	500	700	V
Repetitive peak reverse voltage ¹ (gate open)	V_{RROM}	200	400	600	V
Repetitive peak off-state voltage ¹ (gate open)	V_{DROM}	200	400	600	V
Peak surge (non-repetitive) on-state current 60Hz (sinusoidal) 50Hz (sinusoidal)	I_{TSM}	100 85	100 85	100 85	A
Peak repetitive on-state current (Duty factor = 0.1%, $T_c = 75^\circ\text{C}$) Pulse duration = 5 μ (min), 20 μ s(max)	I_{TRM}	100	100	100	A
Rate of change of on-state current $V_{DM} = V_{DROM}$, $I_{GT} = 200\text{mA}$, $t_r = 0.5\mu\text{s}$	di/dt	200			A/ μ s
Fusing current $T_J = -65$ to $+100^\circ\text{C}$, $t = 1$ to 8.3ms	I^2t	40			A ² s
Gate power dissipation ² Peak forward Average (averaging time = 10ms max)	P_{GM} $P_{G(AV)}$	40 0.5			W
Temperature range Storage Operating	T_{stg} T_c	-65 to +150 -65 to +100			$^\circ\text{C}$
Lead temperature (during soldering) ³ For 10s max. for case or leads		225			$^\circ\text{C}$

- These values do not apply if there is a positive gate signal. Gate must be open, terminated or have negative bias
- Any values of peak gate current or peak gate voltage that yield the maximum gate power are permissible.
- When these devices are soldered directly to the heat sink, a 60/400 solder should be used. Case heating time should be a minimum, sufficient to allow the solder to flow freely.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Limits			Units
		Min	Typ	Max	
Peak off-state current Gate open, $T_c = 100^\circ\text{C}$, forward, $V_D = V_{DROM}$ Reverse	I_{DOM}	- -	0.1 0.05	0.5 0.5	mA
Instantaneous on-state voltage For $I_T = 30\text{A}$ and $T_c = 25^\circ\text{C}$	V_T	-	1.9	2.6	V
DC gate trigger current $V_D = 12\text{V (DC)}$, $R_L = 30\Omega$, $T_c = 25^\circ\text{C}$	IGT	-	6	15	mA
DC gate trigger voltage $V_D = 12\text{V (DC)}$, $R_L = 30\Omega$, $T_c = 25^\circ\text{C}$	V_{GT}	-	0.65	1.5	V
Instantaneous holding current Gate open and $T_c = 25^\circ\text{C}$	i_{HO}	-	9	20	mA

S2600 SERIES

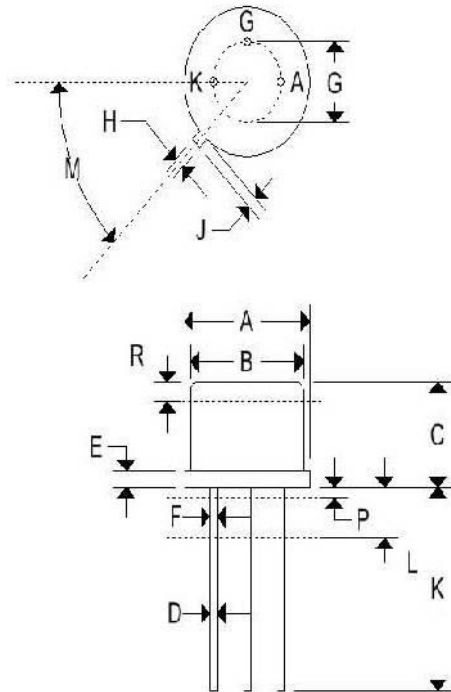
HIGH VOLTAGE SILICON CONTROLLED RECTIFIER

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Characteristic	Symbol	Limits			Units
		Min	Typ	Max	
Critical rate of rise of off-state voltage V _D = V _{DROM} , exponential rise, T _C = 100°C	dv/dt	20	200	-	V/μs
Gate controlled turn-on time V _D = V _{DROM} , I _T = 4.5A, I _{GT} = 200mA, 0.1μs rise time, T _C = 25°C	t _{gt}	-	1	2	μs
Circuit commutated turn-off time V _D = V _{DROM} , I _T = 2A, pulse duration = 50μs, dv/dt = -30A/μs, I _{GT} = 200mA at turn-on, T _C = 75°C	t _q	-	15	50	μs
Thermal resistance					
Junction to case	R _{θJC}	-	-	5	°C/W
Junction to ambient	R _{θJA}	-	-	120	
Junction to heat spreader	R _{θJHS}	-	-	-	

MECHANICAL CHARACTERISTICS

Case:	TO-39
Marking:	Aalpha-numeric
Polarity:	See below



	TO-39			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.335	0.370	8.510	9.390
B	0.305	0.335	7.750	8.500
C	0.240	0.260	6.100	6.600
D	0.016	0.021	0.410	0.530
E	0.009	0.041	0.230	1.040
F	0.016	0.019	0.410	0.480
G	0.200 BSC		5.080 BSC	
H	0.028	0.034	0.720	0.860
J	0.029	0.045	0.740	1.140
K	0.500	0.750	12.700	19.050
L	0.250	-	6.350	-
M	45°C BSC		45°C BSC	
P	-	0.050	-	1.270
R	0.100	-	2.540	-