

Silicon Controlled Rectifier Reverse Blocking Triode Thyristor

C230 ()3

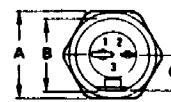
MAXIMUM RATINGS

Rating	Suffix	Symbol	Value	Unit
Peak Repetitive Off-State Voltage (1) ($T_C = -40$ to $+100^\circ\text{C}$)	F	V_{DRM}	50	Volts
	A	and	100	
	B	V_{RRM}	200	
	C		300	
	D		400	
	E		500	
Non-Repetitive Reverse Voltage ($T_C = -40$ to 100°C)	F	V_{RSM}	75	Volts
	A		150	
	B		300	
	C		400	
	D		500	
	E		600	
Forward Current RMS		$I_T(\text{RMS})$	25	Amps
Peak Surge Current (One Cycle, 60 Hz, $T_C = -40$ to 100°C)		I_{TSM}	250	Amps
Circuit Fusing ($T_C = -40$ to 100°C , $t = 1$ to 8.3 ms)		I^2t	260	A^2s
Peak Gate Power		P_{GM}	5	Watts
Average Gate Power		$P_{G(AV)}$	0.5	Watt
Peak Forward Gate Current		I_{GM}	2	Amps
Operating Junction Temperature Range		T_J	-40 to $+100$	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-40 to $+125$	$^\circ\text{C}$
Stud Torque		—	30	in. lb.

THERMAL CHARACTERISTICS

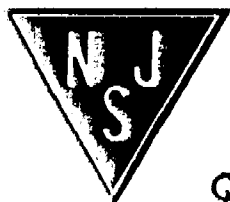
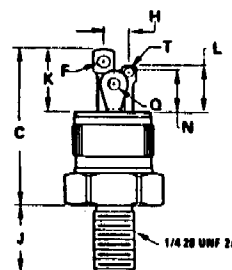
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$		$^\circ\text{C/W}$
Isolated Stud		1.15	

SCRs
25 AMPERES RMS
50 thru 600 VOLTS



STYLE 2:
PIN 1. MAIN TERMINAL 1
2. GATE
3. MAIN TERMINAL 2
STUD. ISOLATED

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.00	14.20	0.551	0.559
B	12.73	12.83	0.501	0.505
C	—	26.16	—	1.030
F	1.65	4.06	0.065	0.160
G	—	6.48	—	0.255
H	3.75	4.41	0.148	0.174
J	10.67	11.56	0.420	0.455
K	9.78	10.54	0.385	0.415
L	6.99	7.75	0.275	0.305
N	6.48	6.99	0.255	0.275
O	3.43	3.81	0.135	0.150
T	0.89	2.16	0.035	0.085



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

Characteristic	Symbol	Min	Typ	Max	Unit
Peak Forward or Reverse Blocking Current (Rated V_{DRM} or V_{RRM} , gate open) $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	I_{DRM} , I_{RRM}	— —	— —	10 1	μA mA
Forward "On" Voltage ($I_{TM} = 100\text{ A Peak}$, Pulse Width $\leq 1\text{ ms}$, Duty Cycle $\leq 2\%$)	V_{TM}	—	—	1.9	Volts
Gate Trigger Current, ($V_D = 12\text{ Vdc}$, $R_L = 120\text{ Ohms}$) ($V_D = 12\text{ Vdc}$, $R_L = 60\text{ Ohms}$) $T_C = -40^\circ\text{C}$	I_{GT}	— —	— —	25 40	mA
Gate Trigger Voltage ($V_D = 12\text{ Vdc}$, $R_L = 120\text{ Ohms}$) ($V_D = 12\text{ Vdc}$, $R_L = 60\text{ Ohms}$) $T_C = -40^\circ\text{C}$ ($V_D = \text{Rated } V_{DRM}$, $R_L = 1000\text{ Ohms}$) $T_C = +100^\circ\text{C}$	V_{GT}	— — 0.2	— — —	1.5 2 —	Volts
Holding Current ($V_D = 24\text{ V}$, gate open, $I_T = 0.5\text{ A}$) $T_C = -40^\circ\text{C}$	I_H	— —	— —	50 100	mA
Turn-On Time ($t_d + t_r$) ($I_{TM} = 25\text{ Adc}$, $I_{GT} = 40\text{ mAdc}$, $V_D = \text{Rated } V_{DRM}$)	t_{gt}	—	1	—	μs
Turn-Off Time ($I_{TM} = 10\text{ A}$, $I_R = 10\text{ A}$, Pulse Width = $50\text{ }\mu\text{s}$, $dv/dt = 20\text{ V}/\mu\text{s}$, $V_D = \text{Rated } V_{DRM}$) $T_C = 100^\circ\text{C}$	t_q	— —	25 35	— —	μs
Forward Voltage Application Rate ($V_D = \text{Rated } V_{DRM}$) $T_C = 100^\circ\text{C}$	dv/dt	—	100	—	$\text{V}/\mu\text{s}$