

New Jersey Semi-Conductor Products, Inc.

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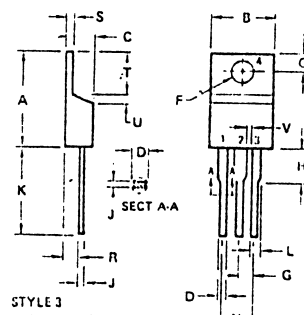
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2N6398

SILICON CONTROLLED
RECTIFIER

*MAXIMUM RATINGS				
Rating	Symbol	Value	Unit	
Peak Repetitive Forward and Reverse Blocking Voltage ($T_J = -40$ to 125°C)	V_{RRM} V_{DRM}	600	Volts	
RMS On-State Current $T_C = 90^\circ\text{C}$ (All Conduction Angles)	$I_T(\text{RMS})$	12	Amps	
Peak Non-Repetitive Surge Current (1/2 cycle, Sine Wave, 60 Hz, $T_J = 125^\circ\text{C}$)	I_{TSM}	100	Amps	
Circuit Fusing ($T_J = -40$ to $+125^\circ\text{C}$, $t = 1.0$ to 8.3 ms)	I^2t	40	A^2s	
Forward Peak Gate Power	P_{GM}	20	Watts	
Forward Average Gate Power	$P_{G(AV)}$	0.5	Watt	
Forward Peak Gate Current	I_{GM}	2.0	Amps	
Operating Junction Temperature Range	T_J	-40 to $+125$	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-40 to $+150$	$^\circ\text{C}$	
THERMAL CHARACTERISTICS				
Characteristic	Symbol	Max	Unit	
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.0	$^\circ\text{C/W}$	

*Indicates JEDEC Registered Data.

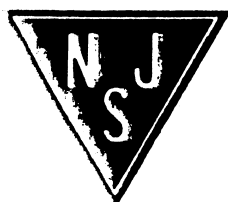


STYLE 3
PIN 1. CATHODE
2. ANODE
3. GATE
4. ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.11	15.75	0.595	0.620
B	9.65	10.29	0.380	0.405
C	4.06	4.82	0.160	0.190
D	0.64	0.89	0.025	0.035
E	3.61	3.73	0.142	0.147
F	2.41	2.67	0.095	0.105
G	2.79	3.30	0.110	0.130
H	0.36	0.56	0.014	0.022
I	12.70	14.27	0.500	0.562
J	1.14	1.27	0.045	0.050
K	4.83	5.33	0.190	0.210
L	2.54	3.04	0.100	0.120
M	2.04	2.79	0.080	0.110
N	1.14	1.39	0.045	0.055
O	5.97	6.48	0.235	0.255
P	0.76	1.27	0.030	0.050
Q	1.14	-	0.045	-

TO-220 AB

ALL JEDEC dimensions and notes apply



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

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

Characteristic	Symbol	Min	Typ	Max	Unit
* Peak Forward Blocking Current ($V_D = \text{Rated } V_{DRM} @ T_J = 125^\circ\text{C}$)	I_{DRM}	—	—	2.0	mA
* Peak Reverse Blocking Current ($V_R = \text{Rated } V_{RRM} @ T_J = 125^\circ\text{C}$)	I_{RRM}	—	—	2.0	mA
* Forward "On" Voltage ($I_{TM} = 24 \text{ A Peak}$)	V_{TM}	—	1.7	2.2	Volts
* Gate Trigger Current (Continuous dc) ($V_D = 12 \text{ Vdc}, R_L = 100 \text{ Ohms}$)	I_{GT}	—	5.0	30	mA
* Gate Trigger Voltage (Continuous dc) ($V_D = 12 \text{ Vdc}, R_L = 100 \text{ Ohms}$) ($V_D = \text{Rated } V_{DRM}, R_L = 100 \text{ Ohms}, T_J = 125^\circ\text{C}$)	V_{GT}	—	0.7	1.5	Volts
	V_{GD}	0.2	—	—	Volts
* Holding Current ($V_D = 12 \text{ Vdc}$)	I_H	—	6.0	40	mA
Turn-On Time ($I_{TM} = 12 \text{ A}, I_{GT} = 40 \text{ mAdc}, V_D = \text{Rated } V_{DRM}$)	t_{gt}	—	1.0	2.0	μs
Turn-Off Time ($V_D = \text{Rated } V_{DRM}$) ($I_{TM} = 12 \text{ A}, I_R = 12 \text{ A}$) ($I_{TM} = 12 \text{ A}, I_R = 12 \text{ A}, T_J = 125^\circ\text{C}$)	t_q	—	15	—	μs
		—	35	—	
Critical Rate-of-Rise of Off-State Voltage Exponential ($V_D = \text{Rated } V_{DRM}, T_J = 125^\circ\text{C}$)	dv/dt	—	50	—	$\text{V}/\mu\text{s}$

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