

New Jersey Semi-Conductor Products, Inc.

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2N2573 thru 2N2579 (SILICON)



TO-3

For units with pins (TO-3 Modified) specify devices MCR649AP-1(2N2573) thru MCR649AP-7(2N2579).

MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Reverse Blocking Voltage* 2N2573 2N2574 2N2575 2N2576 2N2577 2N2578 2N2579	$V_{RSM(rep)}$ *	25 50 100 200 300 400 500	Volts
Forward Current RMS (all conduction angles)	$I_T(RMS)$	25	Amp
Circuit Fusing Considerations ($T_J = -65^\circ$ to $+125^\circ\text{C}$, $t \leq 8.3$ ms)	I^2t	275	A^2s
Peak Surge Current (One Cycle, 60 Hz, $T_J = -65$ to $+125^\circ\text{C}$)	I_{TSM}	280	Amp
Peak Gate Power - Forward	P_{GM}	5.0	Watts
Average Gate Power - Forward	$P_{G(AV)}$	0.5	Watt
Peak Gate Current - Forward	I_{GM}	2.0	Amp
Peak Gate Voltage - Forward Reverse	V_{GFM} V_{GRM}	10 5.0	Volts
Operating Junction Temperature Range	T_J	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$



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

Characteristic	Symbol	Min	Typ	Max	Units
Peak Forward Blocking Voltage* ($T_J = 125^\circ\text{C}$)	V_{DRM}^*	25 50 100 200 300 400 500	—	—	Volts
Peak Forward Blocking Current (Rated V_{DRM} with gate open, $T_J = 125^\circ\text{C}$)	I_{DRM}	—	0.6	5.0	mA
Peak Reverse Blocking Current (Rated V_{RSM} , $T_J = 125^\circ\text{C}$)	I_{RRM}	—	0.6	5.0	mA
Gate Trigger Current (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 100 \Omega$)	I_{GT}	—	20	40	mA
Gate Trigger Voltage (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 100 \Omega$) ($V_{DRM} = \text{Rated}$, $R_L = 100 \Omega$, $T_J = 125^\circ\text{C}$)	V_{GT} V_{GNT}	— 0.3	1.0 —	3.5 3.5	Volts
Forward On Voltage ($I_T = 20 \text{ Adc}$)	V_T	—	1.1	1.4	Volts
Holding Current (Anode Voltage = 7 Vdc, Gate Open)	I_H	—	20	—	mA
Turn-On Time ($t_d + t_r$) ($I_{GT} = 50 \text{ mA}$, $I_T = 10 \text{ A}$)	t_{gt}	—	1.0	—	μs
Turn-Off Time ($I_T = 10 \text{ A}$, $I_R = 10 \text{ A}$, $dv/dt = 20 \text{ V}/\mu\text{s}$, $T_J = 125^\circ\text{C}$) ($V_{DRM} = \text{rated voltage}$)	t_q	—	30	—	μs
Forward Voltage Application Rate (Gate Open, $T_J = 125^\circ\text{C}$)	dv/dt	—	30	—	$\text{V}/\mu\text{s}$
Thermal Resistance (Junction to Case)	θ_{JC}	—	1.0	1.5	$^\circ\text{C}/\text{W}$

* V_{DRM} for all types can be applied on a continuous dc basis without incurring damage.

V_{DRM} ratings apply for zero or negative gate voltage.