

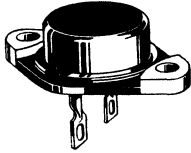
# 2N2552 thru 2N2559

For Specifications, See 2N1038 Data.

# 2N2560 thru 2N2567

For Specifications, See 2N1042 Data.

# 2N2573 thru 2N2579 (SILICON)



Industrial-type, silicon controlled rectifiers in a "diamond" package for applications requiring a high surge-current rating or low thermal resistance.

**CASE 61 CASE 54**  
(TO-41) (TO-3 Modified)

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	$\text{A}^2\text{s}$
Peak Surge Current (One Cycle, 60 Hz, $T_J = -65$ to $+125^\circ\text{C}$ )	$I_{TSM}$	260	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	$V_{GFM}$	10	Volts
Reverse	$V_{GRM}$	5.0	
Operating Junction Temperature Range	$T_J$	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$

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

$V_{RSM}$  Ratings apply for zero or negative gate voltage.

## 2N2573 thru 2N2579 (continued)

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

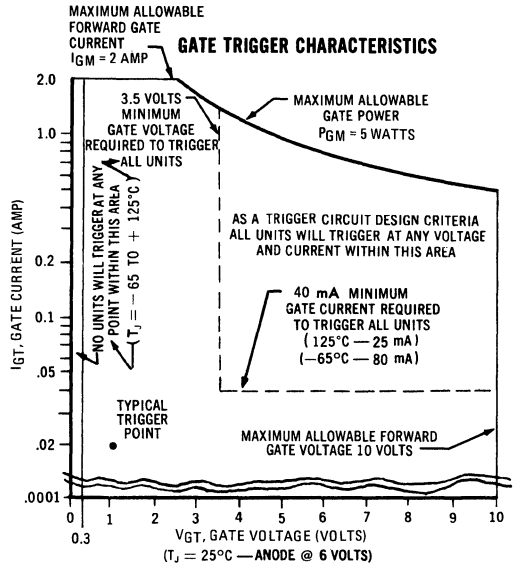
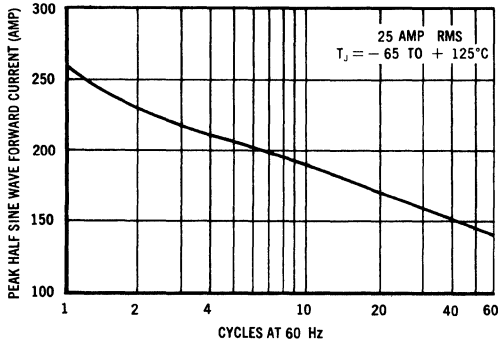
Characteristic	Symbol	Min	Typ	Max	Units
Peak Forward Blocking Voltage* ( $T_J = 125^\circ\text{C}$ )	$V_{\text{DRM}}^*$	25	—	—	Volts
2N2573		50	—	—	
2N2574		100	—	—	
2N2575		200	—	—	
2N2576		300	—	—	
2N2577		400	—	—	
2N2578		500	—	—	
2N2579					
Peak Forward Blocking Current (Rated $V_{\text{DRM}}$ with gate open, $T_J = 125^\circ\text{C}$ )	$I_{\text{DRM}}$	—	0.6	5.0	mA
Peak Reverse Blocking Current (Rated $V_{\text{RSM}}$ , $T_J = 125^\circ\text{C}$ )	$I_{\text{RRM}}$	—	0.6	5.0	mA
Gate Trigger Current (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 100 \Omega$ )	$I_{\text{GT}}$	—	20	40	mA
Gate Trigger Voltage (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 100 \Omega$ ) ( $V_{\text{DRM}} = \text{Rated}$ , $R_L = 100 \Omega$ , $T_J = 125^\circ\text{C}$ )	$V_{\text{GT}}$ $V_{\text{GNT}}$	— 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 ( $t_d + t_r$ ) ( $I_{\text{GT}} = 50 \text{ mA}$ , $I_T = 10 \text{ A}$ )	$t_{\text{gt}}$	—	1.0	—	$\mu\text{s}$
Turn-Off Time ( $I_T = 10 \text{ A}$ , $I_R = 10 \text{ A}$ , $dv/dt = 20 \text{ V}/\mu\text{s}$ , $T_J = 125^\circ\text{C}$ ) ( $V_{\text{DRM}} = \text{rated voltage}$ )	$t_q$	—	30	—	$\mu\text{s}$
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)	$\theta_{\text{JC}}$	—	1.0	1.5	$^\circ\text{C}/\text{W}$

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

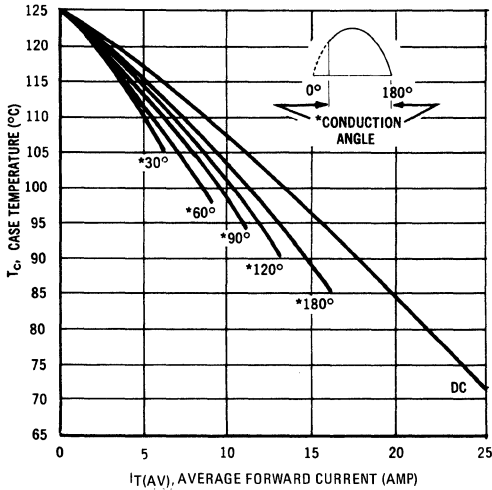
$V_{\text{DRM}}$  ratings apply for zero or negative gate voltage.

# 2N2573 thru 2N2579 (continued)

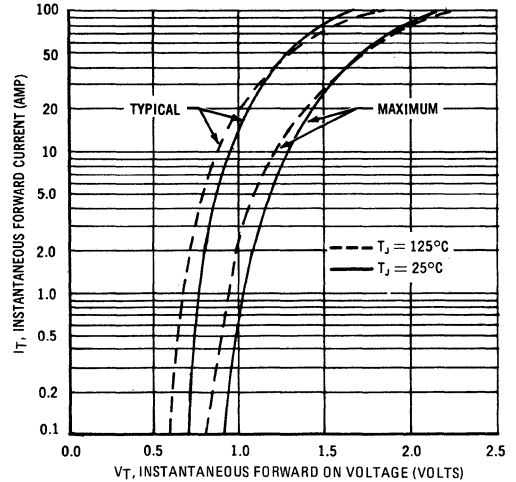
## MAXIMUM ALLOWABLE NON-RECURRENT SURGE CURRENT



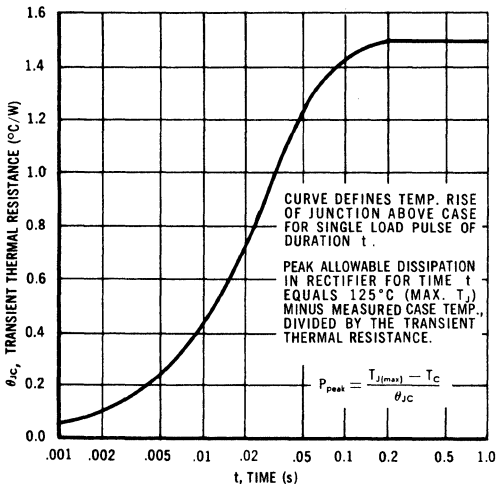
## MAXIMUM ALLOWABLE CASE TEMPERATURE



## LOW CURRENT LEVEL



## MAXIMUM TRANSIENT THERMAL RESISTANCE JUNCTION TO CASE



## POWER DERATING CURVE

