

# DIGITRON SEMICONDUCTORS

1N2054-1N2068

HIGH POWER RECTIFIER

## MAXIMUM RATINGS

Part number	1N															Unit
	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	
Peak inverse voltage	50	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	V

## ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Value	Test Conditions
Average forward current	$I_{F(AV)}$	250 Amps	$T_C = 135^\circ\text{C}$ , square wave, $R_{\theta JC} = 0.18^\circ\text{C/W}$
Maximum surge current	$I_{FSM}$	5000 Amps	8.3ms, half sine, $T_J = 190^\circ\text{C}$
Maximum $I^2t$ for fusing	$I^2t$	104125 $\text{A}^2\text{s}$	8.3ms
Maximum peak forward voltage	$V_{FM}$	1.3 Volts	$I_{FM} = 300\text{A}$ , $T_J = 25^\circ\text{C}^*$
Maximum peak reverse current	$I_{RM}$	10 mA	$V_{RRM}$ , $T_J = 150^\circ\text{C}$
Maximum reverse current	$I_{RM}$	75 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$

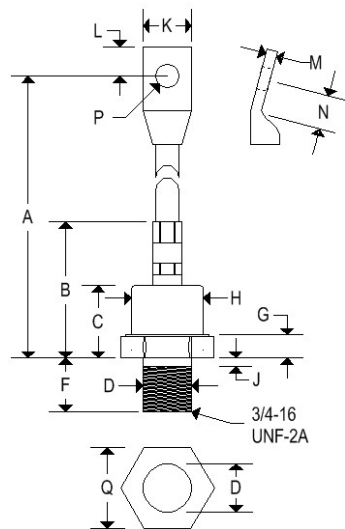
\*Pulse test: Pulse width 300 $\mu\text{s}$ . Duty cycle 2%.

## THERMAL CHARACTERISTICS

Characteristics	Symbol	Value
Storage temperature range	$T_{stg}$	-65 to +190 $^\circ\text{C}$
Operating junction temperature range	$T_J$	-65 to +190 $^\circ\text{C}$
Maximum thermal resistance	$R_{\theta JC}$	0.18 $^\circ\text{C/W}$ junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.08 $^\circ\text{C/W}$ case to sink
Mounting torque		300-325 inch pounds
Weight		8.5 ounces (240 grams) typical

## MECHANICAL CHARACTERISTICS

Case	DO-9(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-9(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	5.300	5.900	134.60	149.90
B	-	2.100	-	53.340
C	-	1.120	-	28.450
D	-	0.749	-	19.020
F	0.793	0.828	20.140	21.030
G	0.310	0.360	7.870	9.140
H	-	1.100	-	27.940
J	-	0.125	-	3.180
K	-	0.755	-	19.180
L	0.423	0.453	10.740	11.510
M	-	0.170	-	4.320
N	0.470	0.530	11.940	13.460
P	0.338	0.350	8.580	8.890
Q	1.218	1.250	30.940	31.750

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Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

Figure 1  
Typical Forward Characteristics

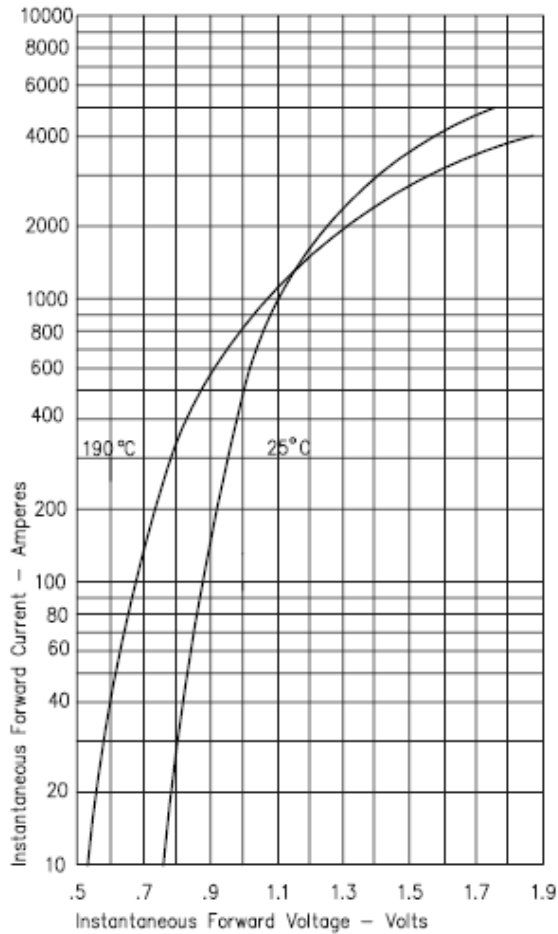


Figure 3  
Forward Current Derating

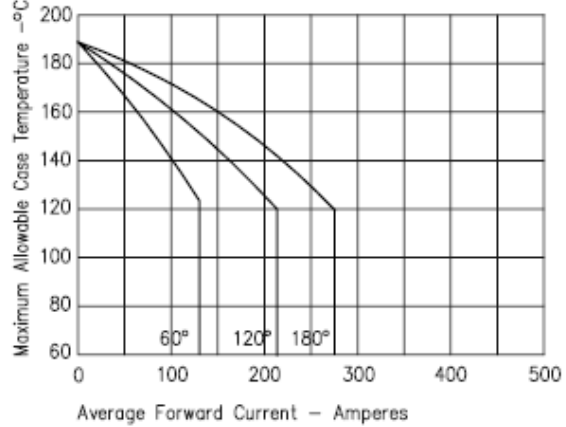


Figure 4  
Maximum Forward Power Dissipation

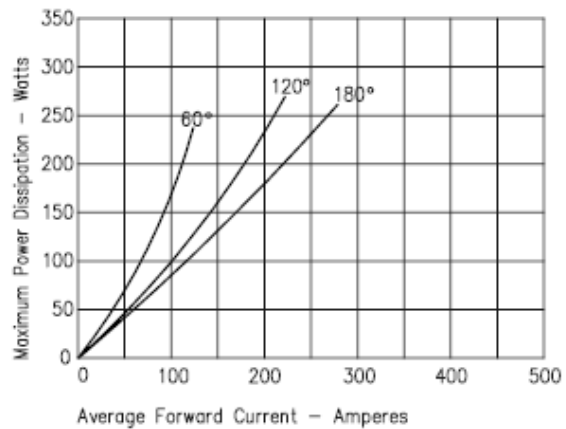


Figure 2  
Typical Reverse Characteristics

