DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N2054-1N2068

HIGH POWER RECTFIERS

FEATURES

- Available as “HR” (high reliability) screened per MIL-PRF-19500, JANTX level. Add “HR” suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding “-PBF” suffix.

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 (T_A = 25°C unless otherwise specified)

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

*Pulse test: Pulse width 300µs. Duty cycle 2%.

THERMAL CHARACTERISTICS

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

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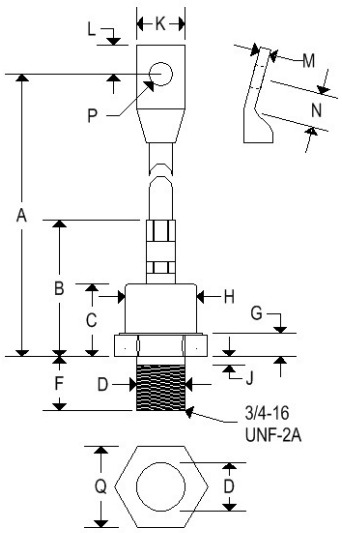
MECHANICAL CHARACTERISTICS

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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Figure 1
Typical Forward Characteristics

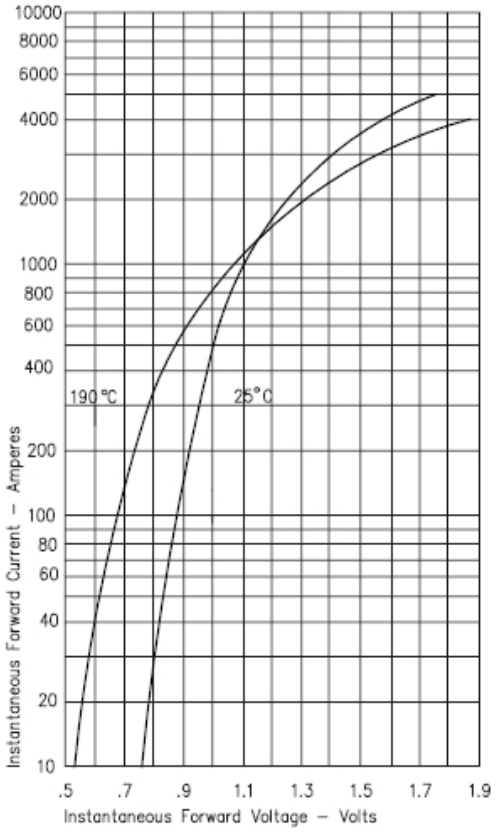

Figure 2
Typical Reverse Characteristics

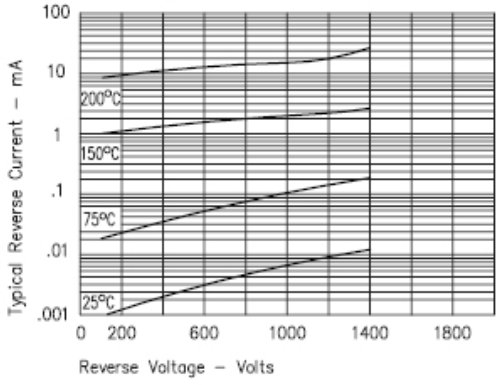

Figure 3
Forward Current Derating

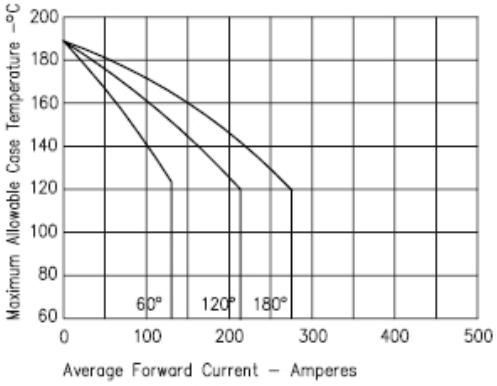

Figure 4
Maximum Forward Power Dissipation