DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

1N3735-1N3744

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 AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Average Forward Current	$I_{F(AV)}$	275 Amps	T_C = 120°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
Max. I^2t for fusing	I^2t	104125 A^2s	8.3ms
Max. Peak Forward Voltage	V_{FM}	1.3 Volts	I_{FM} = 300A: T_J = 25°C*
Max. Peak Reverse Current	I_{RM}	10mA	V_{RRM}, T_J = 150°C
Max. Reverse Current	I_{RM}	75µA	V_{RRM}, T_J = 25°C

VOLTAGE RATINGS

Part Number	Maximum Repetitive Peak Reverse Voltage	Maximum DC Reverse Voltage
	V_{RRM}	V_R
1N3735	100 V	100 V
1N3736	200 V	200 V
1N3737	300 V	300 V
1N3738	400 V	400 V
1N3739	500 V	500 V
1N3740	600 V	600 V
1N3741	800 V	800 V
1N3742	1000 V	1000 V
1N3743	1200 V	1200 V
1N3744	1400 V	1400 V

THERMAL CHARACTERISTICS

Characteristic	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	$R_{\theta CS}$	.08°C/W case to sink
Mounting Torque		300-325 inch pounds

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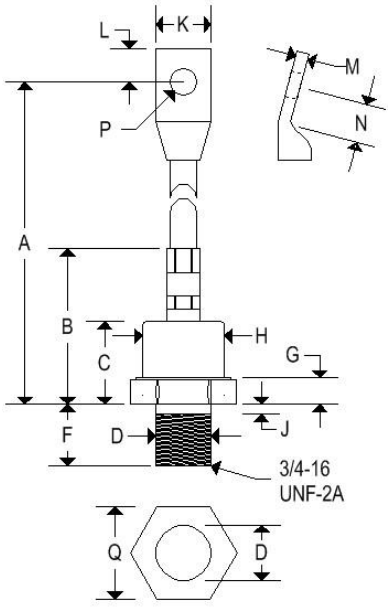
MECHANICAL CHARACTERISTICS

Case:	DO-9(R)
Marking:	Alpha-numeric
Polarity:	Cathode is stud
	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	0.400	7.870	9.140
H	-	1.100	-	27.940
J	-	0.125	-	3.180
K	-	0.755	-	19.180
L	0.325	-	8.255	-
M	-	0.170	-	4.320
N	0.375	-	9.525	-
P	0.265	0.350	6.740	8.890
Q	1.218	1.250	30.940	31.750