

DIGITRON SEMICONDUCTORS

1N3735-1N3744

HIGH POWER RECTIFIERS

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Average Forward Current	$I_{F(AV)}$	275 Amps	$T_C = 120^\circ\text{C}$, square wave, $R_{\theta JC} = 0.18^\circ\text{C/W}$
Maximum Surge Current	I_{FSM}	5000 Amps	8.3ms, half sine, $T_J = 190^\circ\text{C}$
Max. I^2t for fusing	I^2t	104125 A^2s	8.3ms
Max. Peak Forward Voltage	V_{FM}	1.3 Volts	$I_{FM} = 300\text{A}$; $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current	I_{RM}	10mA	V_{RRM} , $T_J = 150^\circ\text{C}$
Max. Reverse Current	I_{RM}	75 μA	V_{RRM} , $T_J = 25^\circ\text{C}$

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

VOLTAGE RATINGS

Part Number	PIV
1N3735	100 V
1N3736	200 V
1N3737	300 V
1N3738	400 V
1N3739	500 V
1N3740	600 V
1N3741	800 V
1N3742	1000 V
1N3743	1200 V
1N3744	1400 V

THERMAL CHARACTERISTICS

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

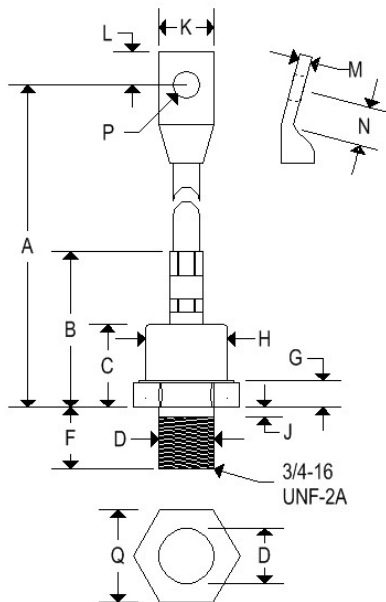
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MECHANICAL CHARACTERISTICS

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

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.