

DIGITRON SEMICONDUCTORS

1N1183-1N1190, 1N3765-1N3768

STANDARD RECOVERY RECTIFIER

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Characteristics	Symbol		Conditions
Average forward current	$I_{F(AV)}$	40 Amps	$T_C = 146^\circ\text{C}$, half sine wave, $R_{\theta JC} = 1.25^\circ\text{C/W}$
Maximum surge current	I_{FSM}	800 Amps	8.3ms, half sine, $T_J = 200^\circ\text{C}$
Maximum I^2t for fusing	I^2t	2600 A^2s	
Maximum peak forward voltage	V_{FM}	1.19 Volts	$I_{FM} = 90\text{A}$; $T_J = 25^\circ\text{C}$
Maximum peak reverse current	I_{RM}	10 μA	V_{RRM} , $T_J = 25^\circ\text{C}^*$
Maximum peak reverse current	I_{RM}	2.0 mA	V_{RRM} , $T_J = 150^\circ\text{C}$
Maximum thermal resistance	$R_{\theta JC}$	1.25°C/W	Junction to case
Maximum recommended operating frequency		10 kHz	
Storage temperature range	T_{stg}	-65 to $+200^\circ\text{C}$	
Operating junction temperature range	T_J	-65 to $+200^\circ\text{C}$	

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

VOLTAGE RATINGS

Part numbers	Peak reverse voltage
1N1183, 1N1183A	50V
1N1184, 1N1184A	100V
1N1185, 1N1185A	150V
1N1186, 1N1186A	200V
1N1187, 1N1187A	300V
1N1188, 1N1188A	400V
1N1189, 1N1189A	500V
1N1190, 1N1190A	600V
1N3765	700V
1N3766	800V
1N3767	900V
1N3768	1000V

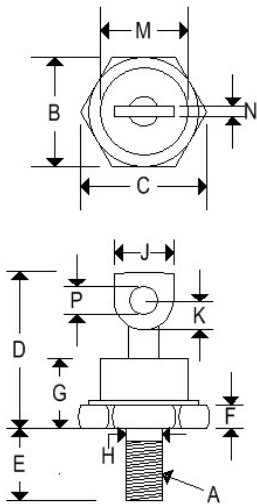
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MECHANICAL CHARACTERISTICS

Case	DO-5(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	¼-28 UNF2A threads			
B	0.669	0.688	16.990	17.480
C	-	0.794	-	20.160
D	-	1.000	-	25.400
E	0.422	0.453	10.720	11.510
F	0.115	0.200	2.920	5.080
G	-	0.450	-	11.430
H	0.220	0.249	5.580	6.320
J	0.250	0.375	6.350	9.530
K	0.156	-	3.960	-
M	-	0.667	-	16.940
N	0.030	0.080	0.760	2.030
P	0.140	0.175	3.560	4.450

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.

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Figure 1
Typical Forward Characteristics

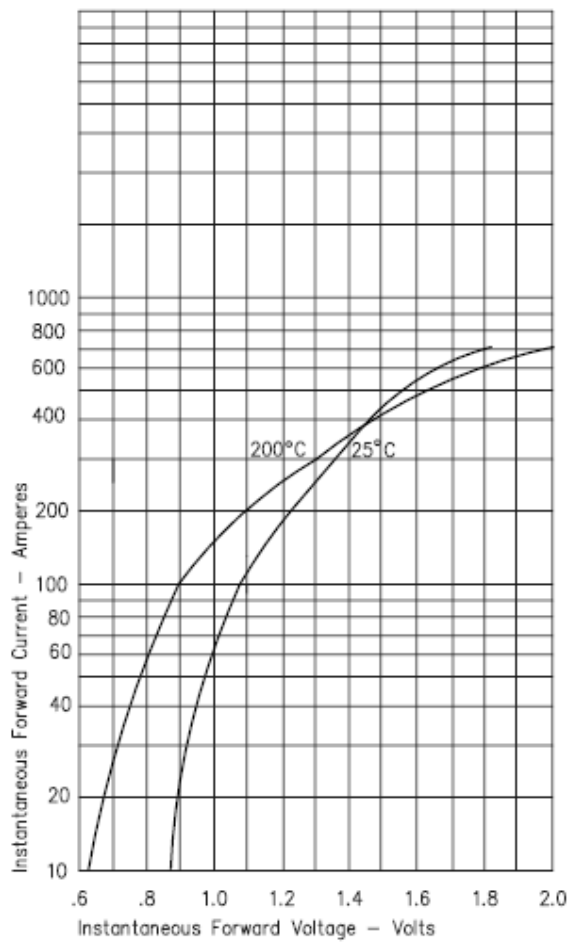


Figure 3
Forward Current Derating

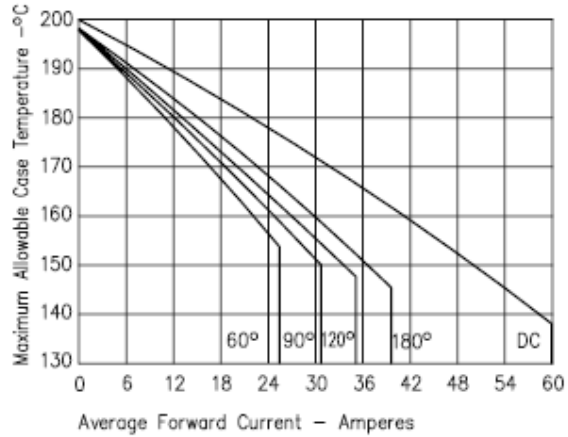


Figure 4
Maximum Forward Power Dissipation

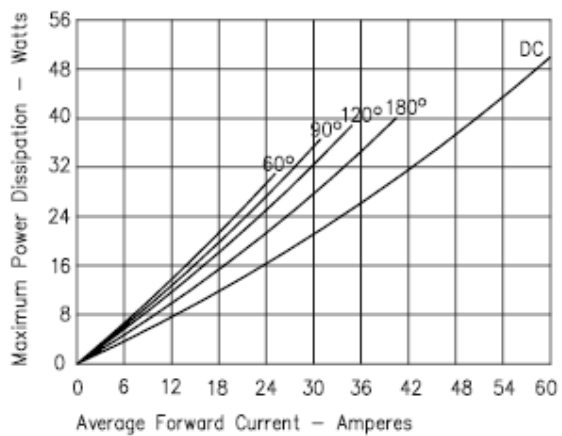


Figure 2
Typical Reverse Characteristics

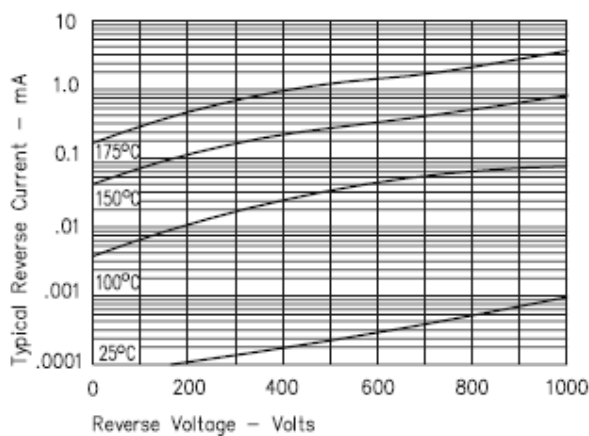


Figure 5
Transient Thermal Impedance

