

DIGITRON SEMICONDUCTORS

MR2400F-MR2406F 24A FAST RECOVERY RECTIFIER

MAXIMUM RATINGS

Rating	Symbol	MR					Unit
		2400F	2401F	2402F	2404F	2406F	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	V
Non-repetitive peak reverse voltage	V_{RSM}	75	150	250	450	650	V
RMS reverse voltage	$V_{R(RMS)}$	35	70	140	280	420	V
Average rectified forward current (single phase, resistive load, $T_C = 125^\circ\text{C}$)	I_O	24					A
Non repetitive peak surge current (@ rated load)	I_{FSM}	300					A
Operating junction temperature range	T_J	-65 to +150					$^\circ\text{C}$
Storage junction temperature range	T_{stg}	-65 to +175					$^\circ\text{C}$
Thermal resistance, junction to case	$R_{\theta JC}$	0.8					$^\circ\text{C/W}$
Thermal resistance, junction to air, (PC board mount, perpendicular to surface)	$R_{\theta JA}$	55					$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Instantaneous forward voltage ($I_F = 75\text{A}$, $T_J = 150^\circ\text{C}$)	V_F	-	1.15	1.29	V
Forward voltage ($I_F = 24\text{A}$, $T_C = 25^\circ\text{C}$)	V_F	-	1.00	1.15	V
Reverse current (Rated dc voltage, $T_C = 25^\circ\text{C}$) (Rated dc voltage, $T_C = 100^\circ\text{C}$) (Rated dc voltage, $T_C = 150^\circ\text{C}$)	I_R	- - -	10 0.5 7.0	25 1.0 10	μA mA mA
Reverse recovery time – soft recovery ($I_F = 1.0\text{A}$ to $V_R = 30\text{Vdc}$) ($I_{FM} = 36\text{A}$, $di/dt = 25\text{A}/\mu\text{s}$)	t_{rr}	- -	150 200	200 300	ns
Reverse recovery current ($I_F = 1.0\text{A}$ to $V_R = 30\text{Vdc}$)	$I_{RM(REC)}$	-	-	4.0	A

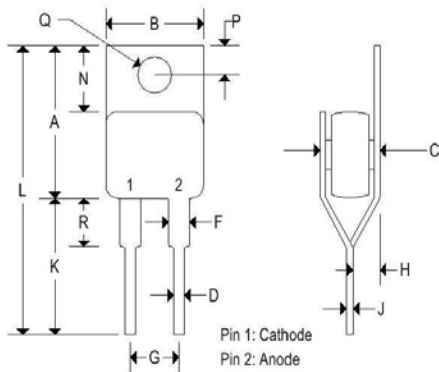
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MECHANICAL CHARACTERISTICS

Case	Digi AA
Marking	Alpha-numeric
Pin out	See below



	Digi AA			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.560	0.625	14.220	15.88
B	0.380	0.420	9.650	10.670
C	0.284	0.310	7.210	7.870
D	0.025	0.045	0.640	1.140
F	0.060	0.090	1.520	2.290
G	0.170	0.210	4.320	5.330
H	0.080	0.115	2.030	2.920
J	0.023	0.029	0.580	0.740
K	-	0.562	-	14.270
L	-	1.187	-	30.150
N	0.230	0.270	5.840	6.860
P	0.100	0.120	2.5400	3.050
Q	0.139	0.147	3.530	3.730
R	-	0.200	-	5.080

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 — MAXIMUM FORWARD VOLTAGE

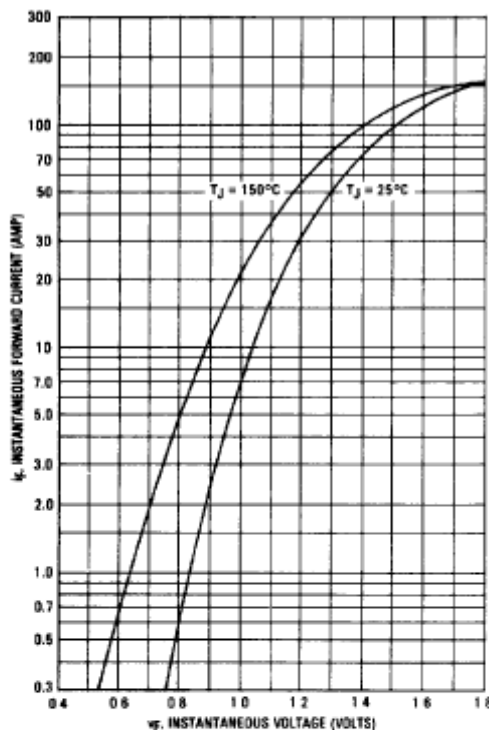
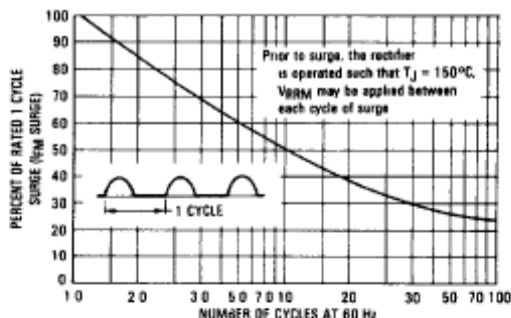


FIGURE 2 — MAXIMUM SURGE CAPABILITY



NOTE 1

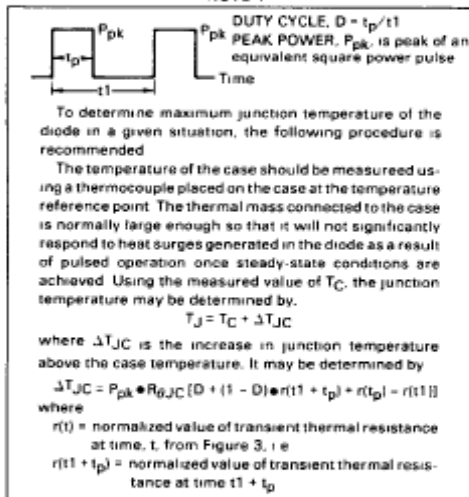
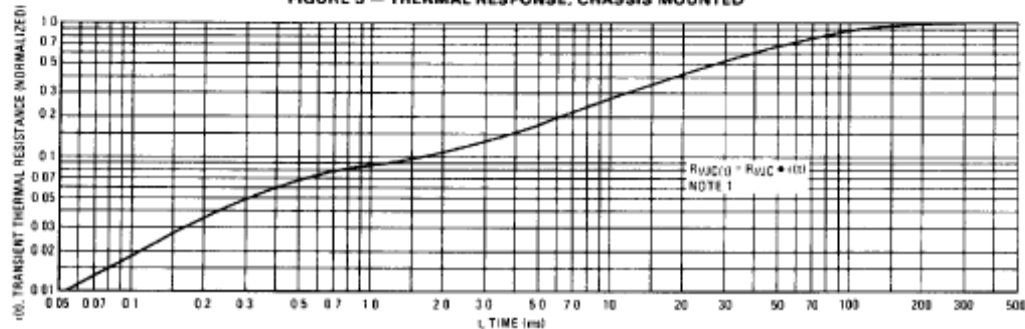


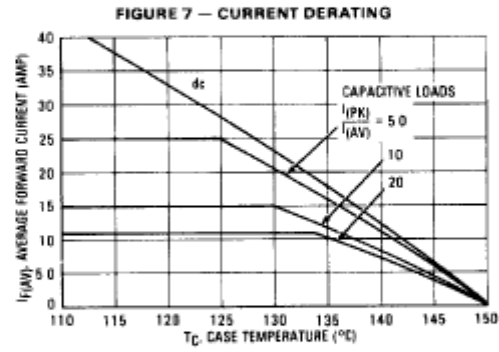
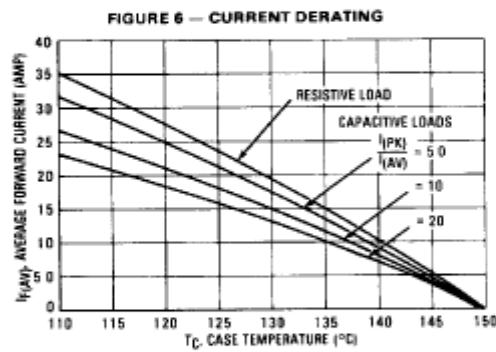
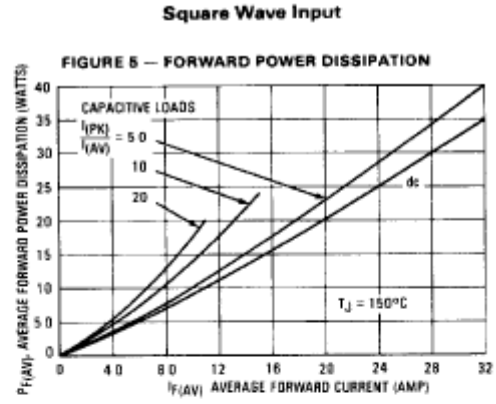
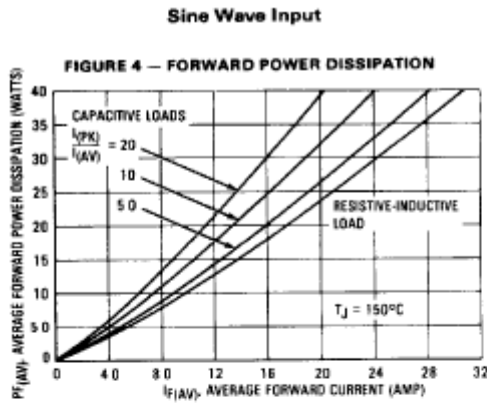
FIGURE 3 — THERMAL RESPONSE, CHASSIS MOUNTED



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CHASSIS MOUNT RATING DATA



PRINTED CIRCUIT BOARD RATING DATA

