

New Jersey Semi-Conductor Products, Inc.

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MR2400F thru MR2406F

FAST RECOVERY POWER RECTIFIERS

50-600 VOLTS
24 AMPERES

MAXIMUM RATINGS

Rating	Symbol	MR2400F	MR2401F	MR2402F	MR2404F	MR2406F	Unit
Peak Repetitive Reverse Voltage	VRRM	50	100	200	400	600	Volts
Working Peak Reverse Voltage	VRWM						
DC Blocking Voltage	VR						
Nonrepetitive Peak Reverse Voltage	VRSM	75	150	250	450	650	Volts
RMS Reverse Voltage	VR(RMS)	35	70	140	280	420	Volts
Average Rectified Forward Current (Single phase, resistive load, $T_C = 125^\circ\text{C}$)	I_O	24					Amp
Nonrepetitive Peak Surge Current (surge applied @ rated load conditions)	IFSM	300 (for 1 cycle)					Amp
Operating Junction Temperature Range	T_J	-65 to +150					$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +175					$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.8	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Air, PC Board Mount; Perpendicular to Surface	$R_{\theta JA}$	55	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage ($I_F = 75$ Amp, $T_J = 150^\circ\text{C}$)	V_F	—	1.15	1.29	Volts
Forward Voltage ($I_F = 24$ Amp, $T_C = 25^\circ\text{C}$)	V_F	—	1.00	1.15	Volts
Reverse Current (rated dc voltage) $T_C = 25^\circ\text{C}$	I_R	—	10	25	μA
$T_C = 100^\circ\text{C}$		—	0.5	1.0	mA
$T_C = 150^\circ\text{C}$		—	7.0	10	mA

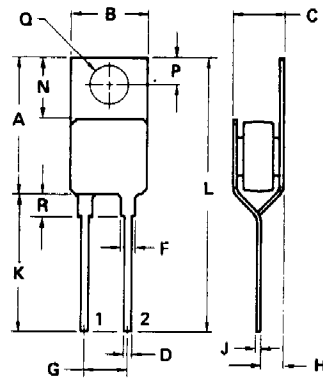
REVERSE RECOVERY CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recover Time — Soft Recovery ($I_F = 1.0$ Amp to $V_R = 30$ Vdc, Figure 19)	t_{rr}	—	150	200	ns
($I_{FM} = 35$ Amp, $di/dt = 25$ A/ μs , Figure 20)		—	200	300	
Reverse Recovery Current ($I_F = 1.0$ Amp to $V_R = 30$ Vdc, Figure 19)	$I_{RM(REC)}$	—	—	4.0	Amp



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Quality Semi-Conductors



1-CATHODE 2-ANODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	14.22	15.88	0.560	0.625
B	9.65	10.67	0.380	0.420
C	7.21	7.87	0.284	0.310
D	0.64	1.14	0.025	0.045
F	1.52	2.29	0.060	0.090
G	4.32	5.33	0.170	0.210
H	2.03	2.92	0.080	0.115
J	0.58	0.74	0.023	0.029
K	—	14.27	—	0.562
L	—	30.15	—	1.187
N	5.84	6.86	0.230	0.270
P	2.54	3.05	0.100	0.120
Q	3.53	3.73	0.139	0.147
R	—	5.08	—	0.200