New Jersey Semi-Conductor Products, Inc.

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MR2502, MR2504, MR2510

MR2504 and MR2510 are Preferred Devices

Medium-Current Silicon Rectifiers

. . . compact, highly efficient silicon rectifiers for medium–current applications requiring:

- High Current Surge — 400 Amperes @ T_J = 175°C
- Peak Performance @ Elevated Temperature — 25 Amperes @ T_C = 150°C
- Low Cost
- Compact, Molded Package — For Optimum Efficiency in a Small Case Configuration

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 1.8 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminals are Readily Solderable
- Lead Temperature for Soldering Purposes: requires a custom temperature soldering profile
- Polarity: Cathode Polarity Band

MEDIUM–CURRENT SILICON RECTIFIERS 25 AMPERES 200–1000 VOLTS DIFFUSED JUNCTION

MICRODE BUTTON CASE 193

MARKING DIAGRAM

MR25xx = Device Code
xx = 02, 04 or 10
L = Location Code
YY = Year
WW = Work Week

MR2502, MR2504, MR2510

MAXIMUM RATINGS

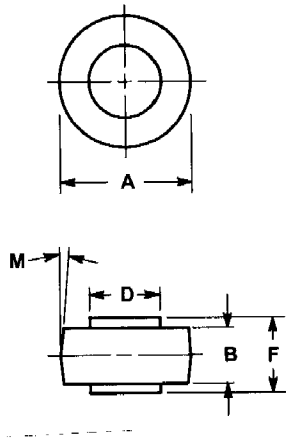
Characteristic	Symbol	MR2502	MR2504	MR2510	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	400	1000	Volts
Non–Repetitive Peak Reverse Voltage (Halfwave, single phase, 60 Hz peak)	V_{RSM}	240	480	1200	Volts
Average Rectified Forward Current (Single phase, resistive load, 60 Hz, T_C = 150°C)	I_O	25			Amps
Non–Repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I_{FSM}	400 (for 1 cycle)			Amps
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−65 to +175			°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case (Single Side Cooled)	$R_{\theta JC}$	1.0	°C/W

ELECTRICAL CHARACTERISTICS

Characteristics and Conditions	Symbol	Max	Unit
Maximum Instantaneous Forward Voltage (i_F = 78.5 Amps, T_C = 25°C)	v_F	1.18	Volts
Maximum Reverse Current (rated dc voltage) T_C = 25°C T_C = 100°C	I_R	 100 500	μA



DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	8.43	8.69	0.332	0.342
B	4.19	4.45	0.165	0.175
D	5.54	5.64	0.218	0.222
F	5.94	6.25	0.234	0.246
M	5° NOM		5° NOM	