

MR2000S SERIES (SILICON)

MEDIUM-CURRENT SILICON RECTIFIERS

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

- High Current Surge — 400 Amperes @ $T_J = 175^\circ\text{C}$
- Peak Performance @ Elevated Temperature — 20 Amperes @ $T_C = 150^\circ\text{C}$
- Low Cost

MEDIUM-CURRENT
SILICON RECTIFIERS
20 AMPERE
50-1000 VOLTS
DIFFUSED JUNCTION



MAXIMUM RATINGS

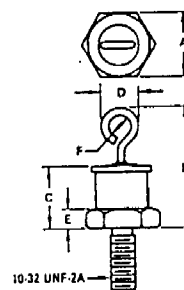
Characteristic	Symbol	MR 2000S	MR 2001S	MR 2002S	MR 2004S	MR 2006S	MR 2008S	MR 2010S	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
Non-Repetitive Peak Reverse Voltage (half-wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	Volts
RMS Forward Current	$I_{(RMS)}$	40							Amp
Average Rectified Forward Current (Single phase, resistive load, 60 Hz, $T_C = 150^\circ\text{C}$)	I_O	20							Amp
Non-Repetitive Peak Surge Current (surge applied @ rated load conditions, half wave, single phase, 60 Hz)	I_{FSM}	400 (for 1 cycle)							Amp
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +175							$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.3	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

Characteristic and Conditions	Symbol	Max	Unit
Maximum Instantaneous Forward Voltage ($I_F = 63 \text{ Amp}$, $T_C = 25^\circ\text{C}$)	V_F	1.1	Volts
Maximum Reverse Current (rated dc voltage) $T_C = 25^\circ\text{C}$ $T_C = 100^\circ\text{C}$	I_R	100 500	μA



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.77	11.10	0.424	0.437
C	—	10.28	—	0.405
D	—	6.35	—	0.250
E	1.91	4.45	0.075	0.175
F	1.52	—	0.060	—
J	10.77	11.51	0.422	0.453
K	—	20.32	—	0.800

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MECHANICAL CHARACTERISTICS

CASE: Void Free, Transfer Moulded.

FINISH: All External Surfaces are Corrosion Resistant and the Terminal Lead is Readily Solderable.

POLARITY: Cathode to Case (Reverse Polarity Units are Available and Designated by an "R" Suffix e.g., MR2000SR).

MOUNTING POSITIONS: Any

STUD TORQUE: 15 in. lbs. Maximum

MAXIMUM TERMINAL TEMPERATURE FOR SOLDERING PURPOSES: 275°C for 10 Seconds @ 3 Kg Tension.

WEIGHT: 6 Grams (Approximately).

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