

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 (halfwave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	Volts
RMS Forward Current	$I_F(\text{RMS})$	← 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	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

Characteristic and Conditions	Symbol	Max	Unit
Maximum Instantaneous Forward Voltage ($I_F = 63$ 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

MECHANICAL CHARACTERISTICS

CASE: Void Free, Transfer Moulded.

FINISH: All External Surfaces are Corrosion Resistant and the Terminal Lead is Ready to Solder.

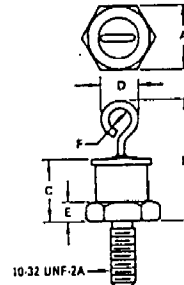
POLARITY: Cathode to Case (Reverse Polarity Units are Available and Designated by an "R" Suffix e.g., MR2000SR).

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).



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.77	11.10	0.424	0.437
C	-	10.29	-	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

00-4

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

