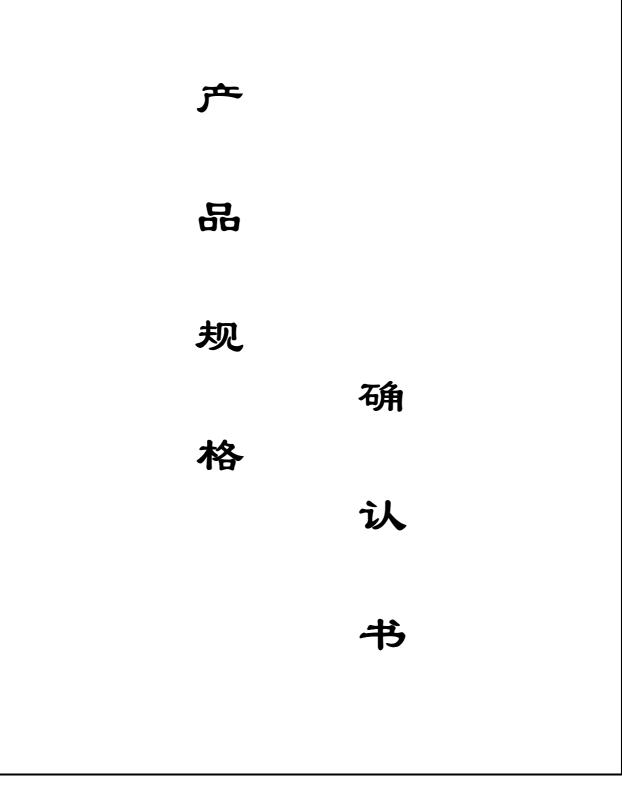
# **MDXS SERIES**

MINIATURE SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER



# MD1S THRU MD7S

MINIATURE GLASS PASSIVATED SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER

# REVERSE VOLTAGE: FORWARD CURRENT:

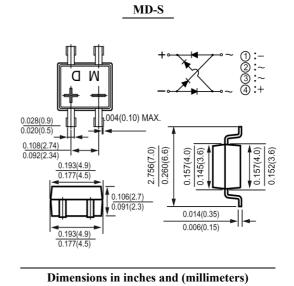
50 to 1000 VOLTS 0.5 AMPERE

# FEATURES

- $\cdot$  Glass passivated chip junction
- $\cdot$  Low forward voltage drop
- $\cdot$  High surge overload rating of 30 Amperes peak
- · Ideal for printed circuit board
- $\cdot$  High temperature soldering guaranteed:
- 260°C for 10 seconds

#### MECHANICAL DATA

Case: Molded plastic, MD-S Epoxy: UL 94V-O rate flame retardant Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed Mounting position: Any Weight: 0.008ounce, 0.22gram



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### Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified. Single phase, half wave,  $60H_Z$ , resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	MD1S	MD2S	MD3S	MD4S	MD5S	MD6S	MD7S	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current								•	
(see Fig. 1) on glass-epoxy P.C.B (Note 2)	I <sub>(AV)</sub> 0.5 0.8							Amp	
on aluminum substrate (Note 3)									
Peak Forward Surge Current,									
8.3ms single half-sine-wave	I <sub>FSM</sub>	30							Атр
superimposed on rated load (JEDEC method)									
Maximum Forward Voltage	V	1.0							Volts
at 0.4A DC and 25	$V_{\rm F}$								
Maximum Reverse Current at T <sub>A</sub> =25	т	5.0 500							uAmp
at Rated DC Blocking Voltage T <sub>A</sub> =125	I <sub>R</sub>								
Typical Junction Capacitance (Note 1)	CJ				13				pF
Typical Thermal Resistance (Note 3)	R <sub>0JA</sub>				70				/W
Typical Thermal Resistance (Note 2)	R <sub>0JL</sub>				20				/W
Operating and Storage Temperature Range	$T_{\rm J}$ , Tstg				-55 to +15	0			

#### NOTES:

1- Measured at 1  $MH_Z$  and applied reverse voltage of 4.0 VDC.

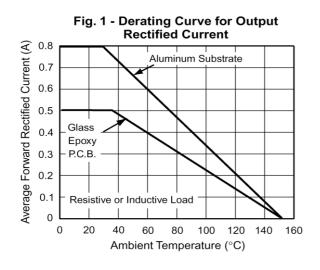
2- On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads

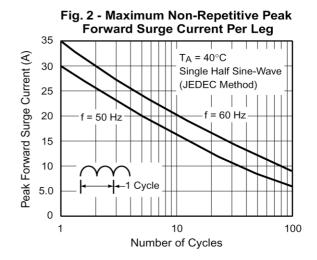
3- On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

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### RATINGS AND CHARACTERISTIC CURVES





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Fig. 3 - Typical Forward Voltage **Characteristics Per Leg** 10 Instantaneous Forward Current (A) T<sub>J</sub> = 150°C 1 T」= 25°C 0.1 Pulse Width = 300µs 1% Duty Cycle 0.01 0.4 0.2 0.6 0.8 1.0 1.2 1.4 Instantaneous Forward Voltage (V)

