



# R1S~R10S

## MINI SURFACE MOUNT GLASS PASSIVATED SINGLE-PHASE FAST RECOVERY BRIDGE RECTIFIER

**VOLTAGE** 100 to 1000Volt **CURRENT** 0.5 Ampere

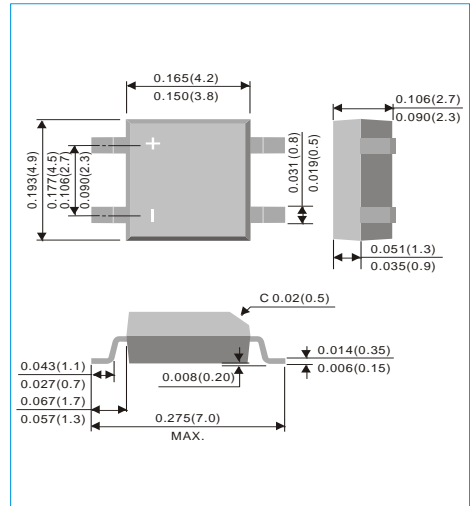
**MDI** Unit : inch(mm)

### FEATURES

- Plastic material used carries Underwriters Laboratory recognition 94V-O
- Low leakage
- Surge overload rating--30 amperes peak
- Ideal for printed circuit board
- Exceeds environmental standards of MIL-S-19500
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols molded or marking on body
- Weight: 0.0044 ounce, 0.1268 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, Resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	R1S	R2S	R4S	R6S	R8S	R10S	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	600	800	1000	V
Maximum Average Forward Current $T_A=40^{\circ}C$ $T_A=25^{\circ}C$ (Note 3)	$I_{F(AV)}$				0.5			A
					0.8*			
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$				30			A
$I^2t$ Rating for fusing ( $t < 8.35ms$ )	$I^2t$				3.735			$A^2t$
Maximum Forward Voltage Drop per Bridge Element at 0.5A	$V_F$				1.15			V
Maximum DC Reverse Current $T_J=25^{\circ}C$ at Rated DC Blocking Voltage $T_J=125^{\circ}C$	$I_R$				5.0			$\mu A$
					500			
Typical Junction capacitance (Note 1)	$C_J$				25			pF
Maximum Recovery Time (Note 4)	$t_{rr}$	150			250	500		ns
Typical thermal resistance per leg ((Note 2)	$R_{\theta JA}$ $R_{\theta JL}$				85			$^{\circ}C / W$
					20			
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$				-55 to + 150			$^{\circ}C$

### NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.5 X 0.5"(13 X 13mm) copper pads
3. \*R-load on alumina substrate
4. Reverse Recovery Test Conditions :  $I_F=0.5A, I_R=1A, I_{rr}=0.25A$



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## RATING AND CHARACTERISTIC CURVES

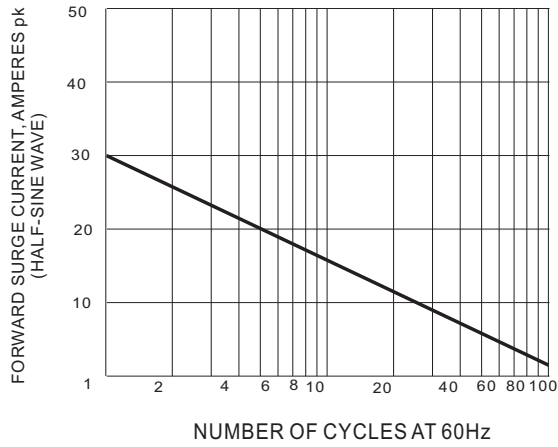


Fig.1 MAXIMUM NON-REPETITIVE SURGE CURRENT

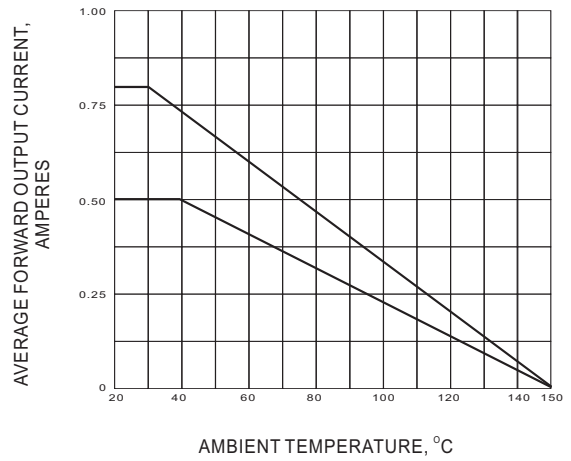


Fig.2 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

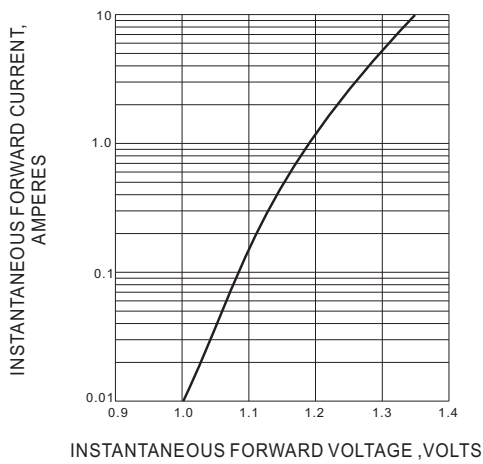


Fig.3 TYPICAL FORWARD CHARACTERISTICS

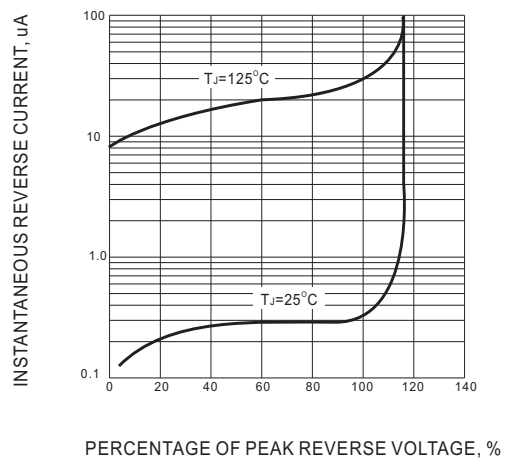
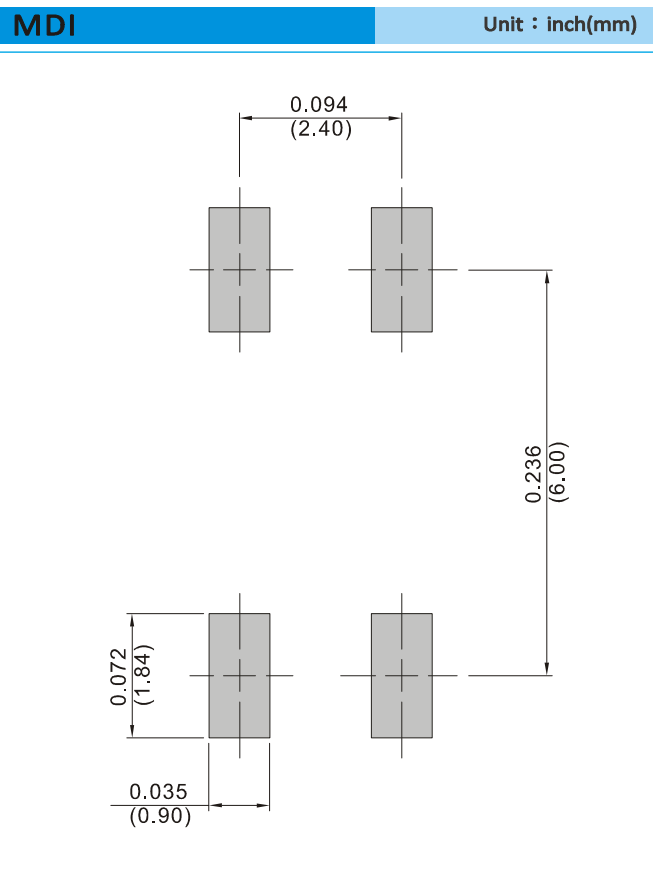


Fig.4 TYPICAL REVERSE CHARACTERISTICS



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 3K per 13" plastic Reel



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Part No\_packing code\_Version

R1S\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			