

## R1S~R10S

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

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

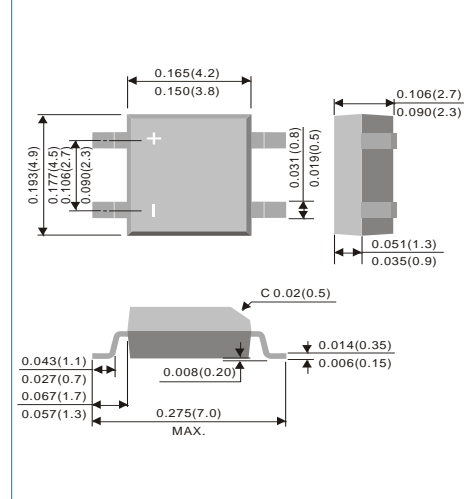
#### FEATURES

- 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

**MDI** Unit : inch(mm)



### 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 <sub>RRM</sub>	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	600	800	1000	V
Maximum Average Forward Current T <sub>A</sub> =40°C T <sub>A</sub> =25°C (Note 3)	I <sub>F(AV)</sub>	0.5 0.8*						A
Peak Forward Surge Current : 8.3ms single half sine-wave superi mposed on rated load	I <sub>FSM</sub>	30						A
I²t Rating for fusing ( t<8.35ms)	I²t	3.735						A²t
Maximum Forward Voltage Drop per Bridge Element at 0.5A	V <sub>F</sub>	1.15						V
Maximum DC Reverse Current T <sub>J</sub> =25 °C at Rated DC Blocking Voltage T <sub>J</sub> =125 °C	I <sub>R</sub>	5.0 500						µA
Typical Junction capacitance (Note 1)	C <sub>J</sub>	25						pF
Maximum Recovery Time (Note 4)	t <sub>rr</sub>	150			250	500		ns
Typical thermal resistance per leg ((Note 2)	R <sub>θJA</sub> R <sub>θJL</sub>	85 20						°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150						°C

#### NOTES:

- Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- 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
- \*R-load on alumina substrate
- Reverse Recovery Test Conditions :  $I_F=0.5A, I_R=1A, I_{rr}=0.25A$

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### RATING AND CHARACTERISTIC CURVES

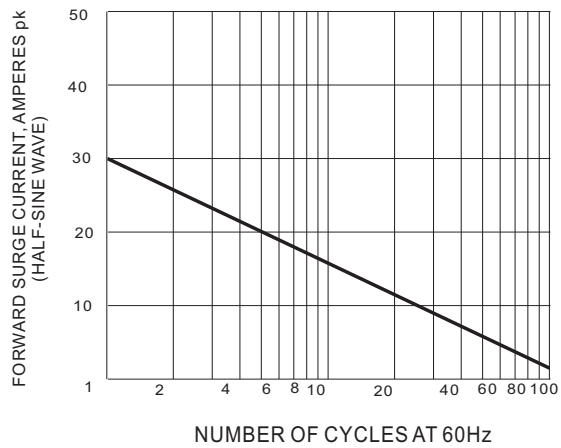


Fig.1 MAXIMUM NON-REPETITIVE SURGE CURRENT

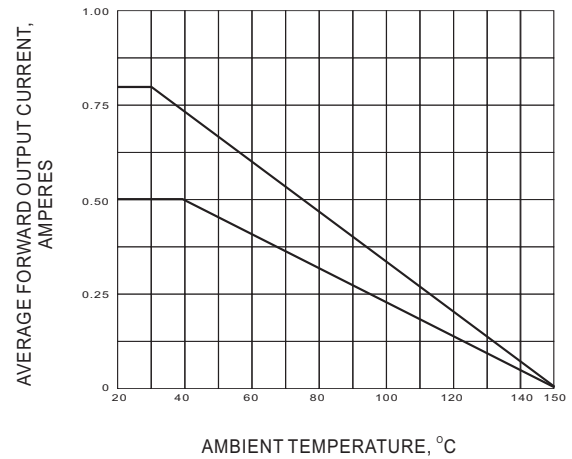


Fig.2 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

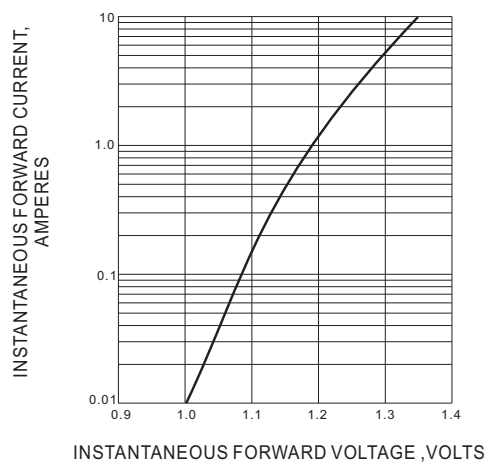


Fig.3 TYPICAL FORWARD CHARACTERISTICS

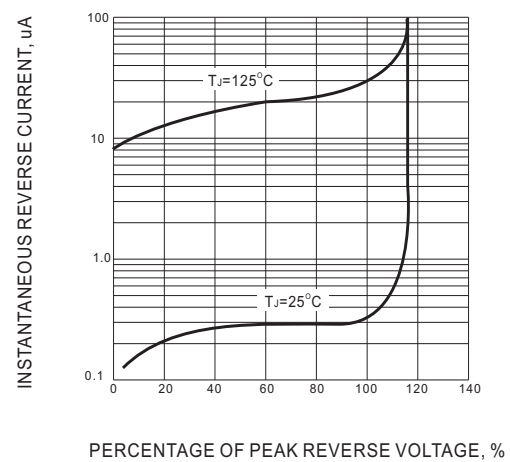


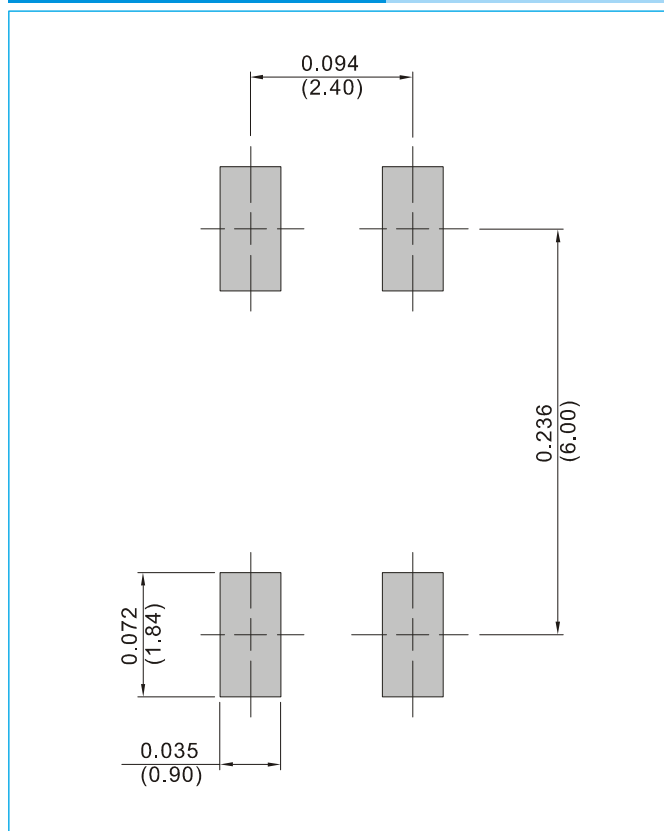
Fig.4 TYPICAL REVERSE CHARACTERISTICS

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### MOUNTING PAD LAYOUT

**MDI**

Unit : inch(mm)



### 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)	<b>A</b>	N/A	<b>0</b>	HF	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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