

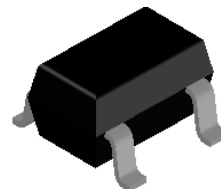


VMB054S~VMB0510S

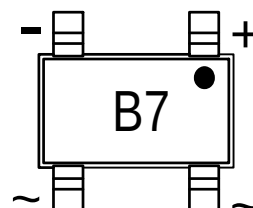
Infinitesimal surface mount bridge rectifier

Features

- Low profile space
- Ideal for printed circuit board
- Low reverse leakage
- Applicated in power supply equipment
- High ring wave immunity capability
- High temperature soldering guaranteed:
260°C/10 seconds
- Component in accordance to
RoHS 2011/65/EU and WEEE 2002/96/EC



RoHS
COMPLIANT



Mechanical Date

- **Case:** IBS
The plastic package carries Underwriters Laboratory
Flammability Classification 94V-0
- **Terminals:** Solder plated, solderable per
MIL-STD-750, Method 2026
- **Polarity:** Mark a dot at the positive position
The other end on the same side is negative
AC pole is on the other side
- **Mounting Position:** Any

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A
V_{RRM}	400V to 1000V
I_{FSM}	20A
V_F	0.95V
$T_{Jmax.}$	125°C

Maximum Ratings

 ($T_A=25^\circ\text{C}$ unless otherwise noted)

Items	Symbol	VMB054S	VMB056S	VMB058S	VMB0510S	Unit
Marking	-	B4	B5	B6	B7	-
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	400	600	800	1000	V
Average forward rectified current	I _{F(AV)}	0.5				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	20				A
Rating for fusing (t < 8.3 ms)	I ² t	1.66				A ² s
Thermal resistance from junction to ambient	R _{θJA} ⁽¹⁾	180				°C/W
Thermal resistance from junction to lead	R _{θJL}	35				
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +125				

Note 1: On 1.6mm thick glass epoxy P.C.B.(10Z) mounted on 0.05 x 0.05" (1.3 x 1.3 mm) solder pads.





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Electrical & Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions	Symbol	Min.	Typ.	Max.	Unit
Junction temperature	$I_F=0.10\text{A}, V_{\text{RMS}}=220\text{V}, T_A=25^\circ\text{C}$ and conduction angle= 80°	T_J	-	-	70	$^\circ\text{C}$
Instantaneous forward voltage	$I_F=0.5\text{A}^{(2)}$	V_F	-	0.95	1.1	V
Reverse current	$V_R=V_{\text{DC}}$	$T_J=25^\circ\text{C}$	-	-	5.0	μA
		$T_J=125^\circ\text{C}$	-	-	100.0	

Note 2: Pulse test:300 μs pulse width,1% duty cycle.

Characteristics Curves

Fig.1 Foward Current Derating Curve

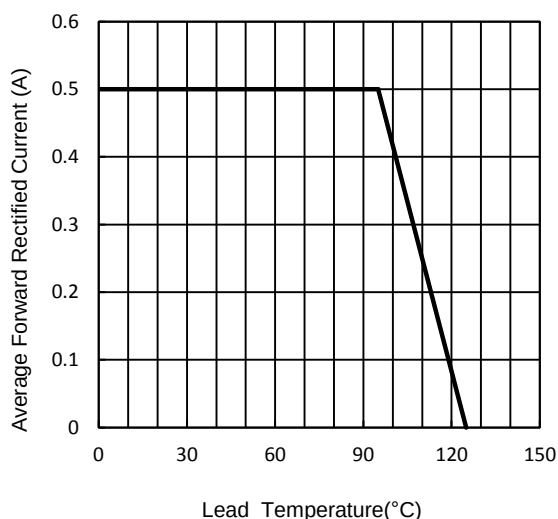


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

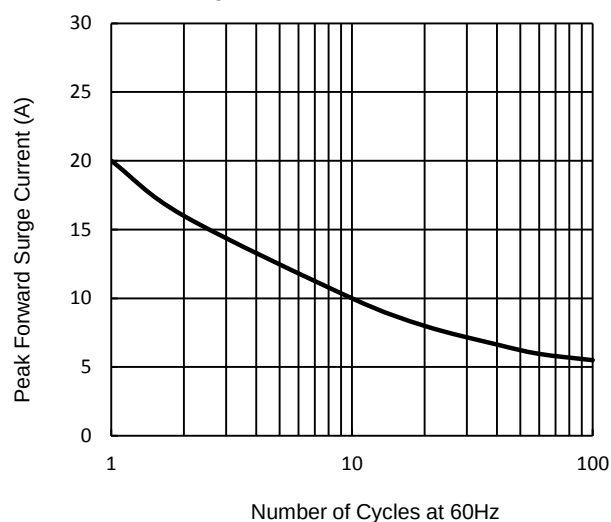


Fig.3 Typical Forward Current Characteristics

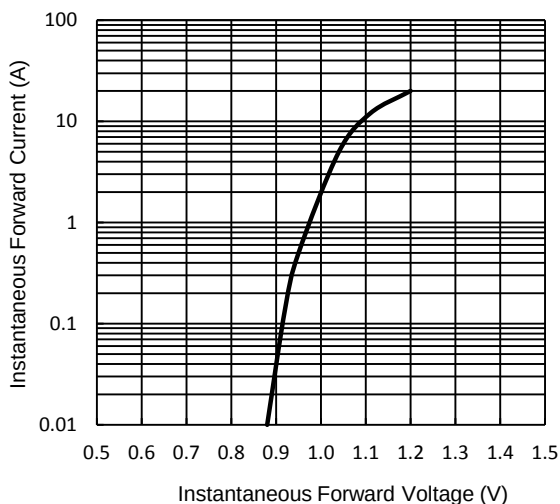
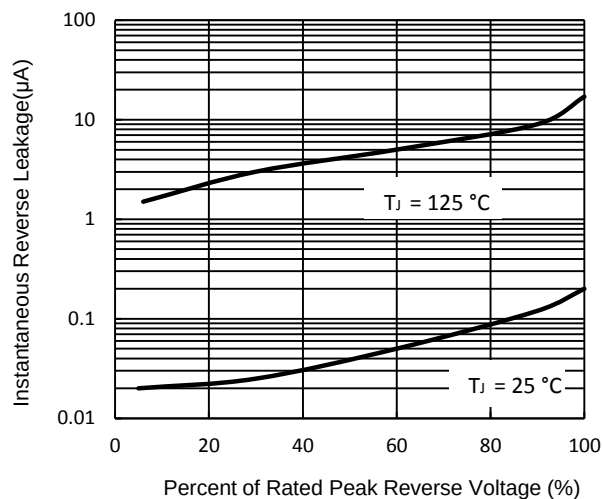


Fig.4 Typical Reverse Characteristics



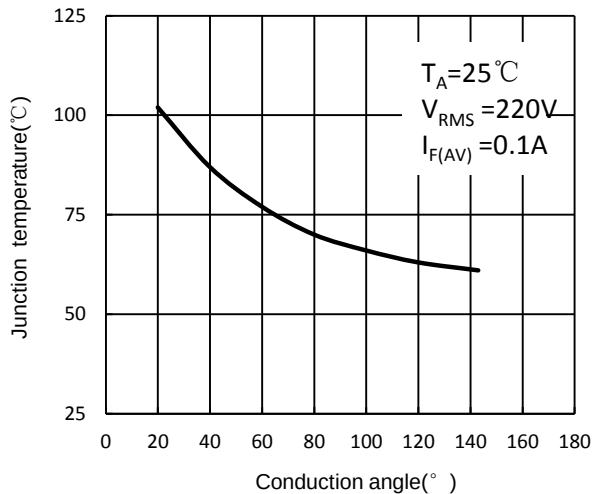


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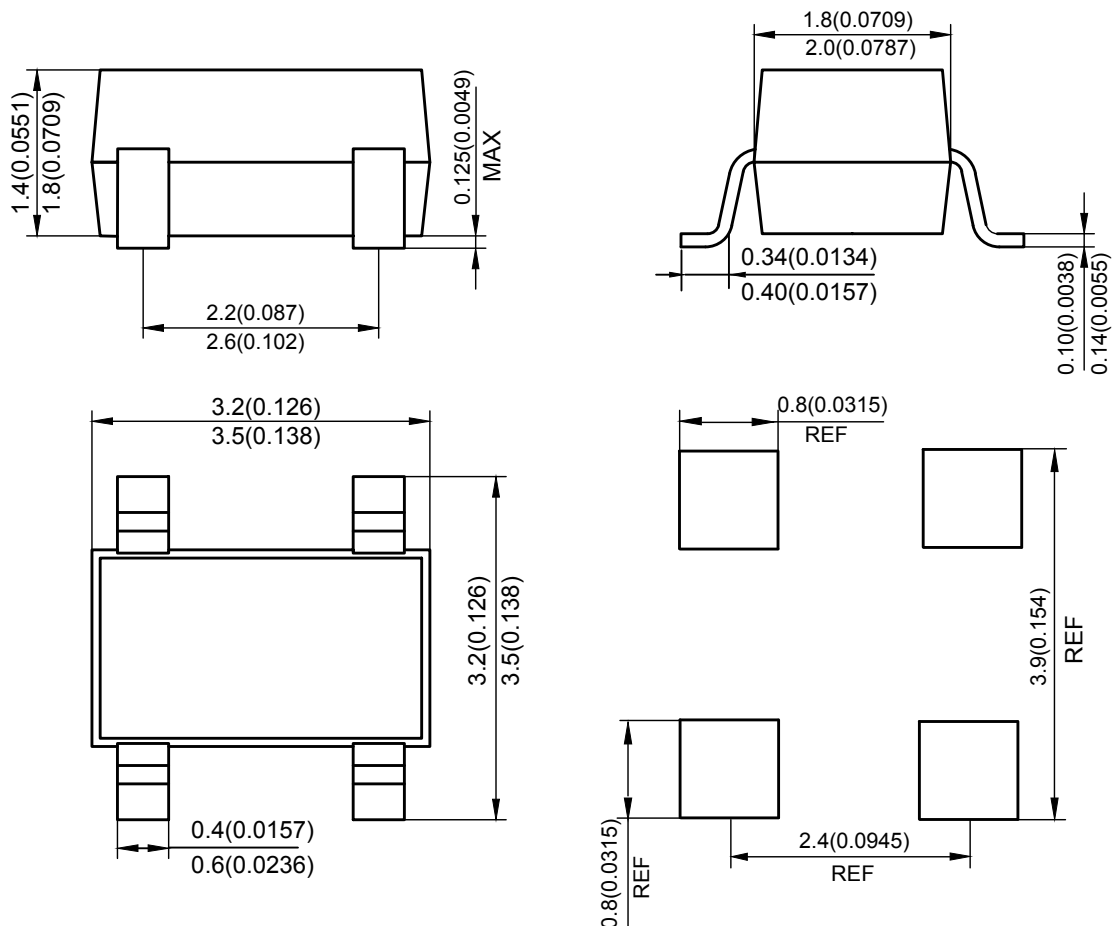
Characteristics Curves

Fig.5 Junction temperature vs. conduction angle



Package Outline

IBS



Dimensions in millimeters(inches)

