

## Silicon Bridge Rectifiers

**3SPB40M**

### Features

- Glass passivated junction
- Low forward voltage drop
- High forward surge current capability
- High-temp soldering guaranteed: 260°C @ 10s.
- RoHS compliant with Halogen-free



### Mechanical Data

- Case: 3SPB molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Leads solderable per MIL-STD-750

### Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	3SPB40M	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	1000	V
RMS Reverse Voltage	V <sub>RMS</sub>	700	V
DC Blocking Voltage	V <sub>DC</sub>	1000	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	4.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	@T <sub>J</sub> = 25°C I <sub>FSM</sub>	150	A

### Thermal Characteristics

Parameter	Symbol	3SPB40M	Unit
Typical Thermal Resistance *1	R <sub>θJA</sub>	37	°C/W
	R <sub>θJC</sub>	10.4	
	R <sub>θJL</sub>	7.5	
Operating Junction Temperature Range	T <sub>J</sub>	-55 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C

Note \*1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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## 3SPB40M

### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

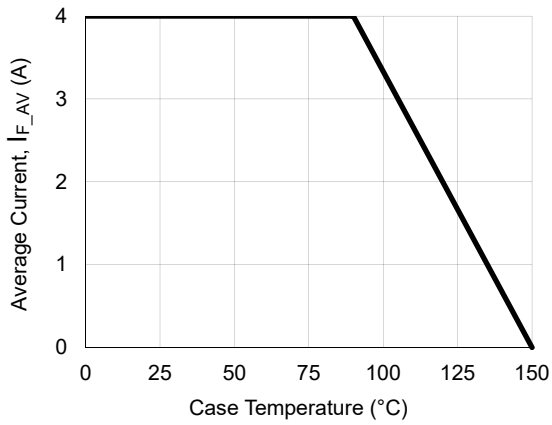
Parameter	Symbol	Test Condition	Typ.	Max.	Unit	
Maximum Instantaneous Forward Voltage	$V_F$	$I_F = 4.0\text{A}$	-	1.15	V	
Maximum Reverse Current	$I_R$	Rated	@ $T_A = 25^\circ\text{C}$	-	10	$\mu\text{A}$
		$V_R$	@ $T_A = 125^\circ\text{C}$	-	300	

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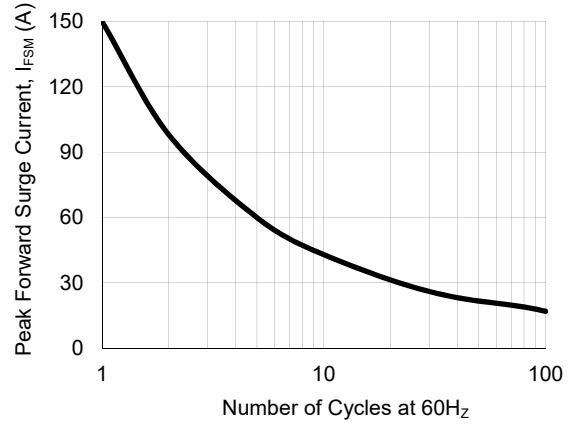
## 3SPB40M

### Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise noted)

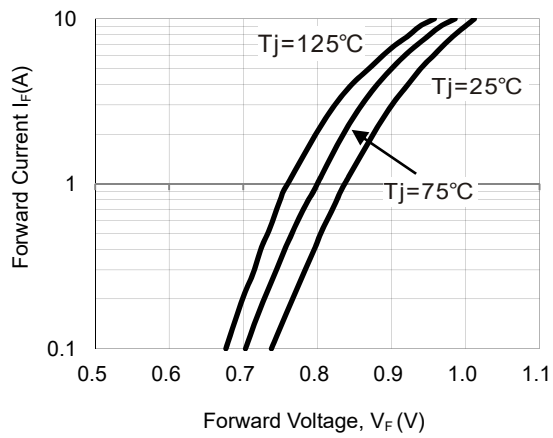
**Fig.1 Forward Current Derating Curve**



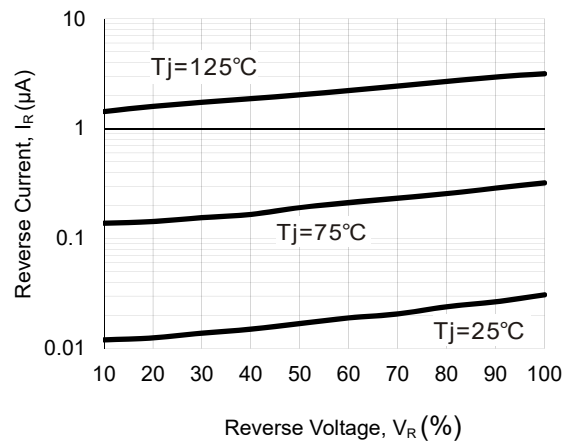
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristic**



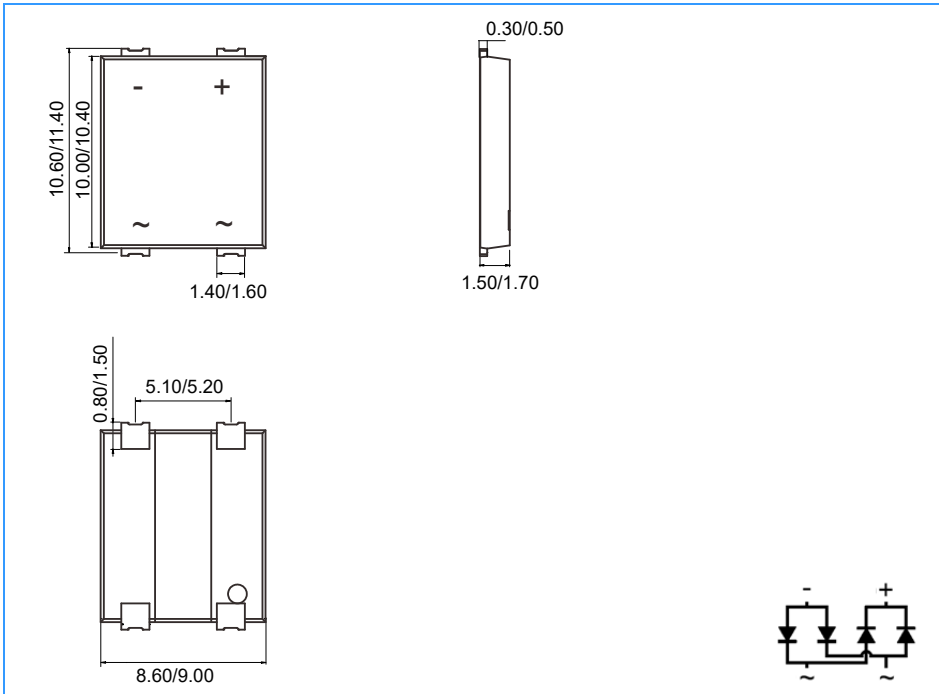
**Fig.4 Typical Reverse Characteristic**



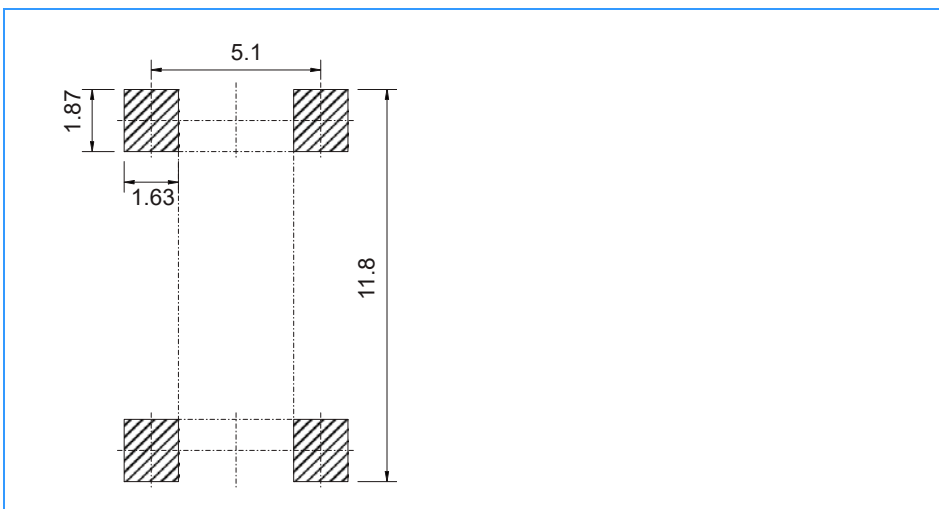
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## Package Outline Dimensions (unit: mm)



## Mounting Pad Layout (unit: mm)



## Ordering Information

Part Number	Marking	Package	Shipping Quantity
3SPB40M	3SPB40M	3SPB	1500 / Tape & Reel