SuperPlanar™ Bridge Rectifiers 3SPB40J--3SPB40K

Features



- Planar passivated chips
- Ultra low leakage reverse current
- High temperature performance
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS Compliant

Mechanical Data

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

Maximum Ratings (@T_A = 25°C unless otherwise specified)

Characteristic		Symbol	3SPB40J	3SPB40K	Units
Peak repetitive reverse voltage		V_{RRM}	600	800	V
RMS reverse voltage		V_{RMS}	420	560	V
DC blocking voltage		V_{DC}	600	800	V
Maximum average forward output current		$I_{F(AV)}$	4.0		A
Peak forward surge current, 8.3ms single half-sine-wave	@T_J= 25°C	I_{FSM}	135		A
I^2t Rating for fusing	@T_J= 25°C	I^2t	76		A^2s

Thermal Characteristics

Parameter	Symbol	3SPB40J	3SPB40K	Units
Typical thermal resistance per leg (Note 1)	$R_{\Theta JA}$	38		°C /W
	$R_{\Theta JC}$	10.4		
	$R_{\Theta JL}$	7.5		
Operating junction temperature range	T_J	- 55 ---- + 150		°C
Storage temperature range	T_{STG}	- 55 ---- + 150		°C

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage	V_F	I_F=2.0A Per Diode		0.91	0.95	V
		I_F=4.0A Per Diode		0.95	1.0	
Maximum Reverse current	I_R	Rated V_R, Per Diode	@T_A=25°C	0.5	1.0	μ A
			@T_A=150°C	40	100	

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Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

Fig.1-Forward Current Derating Curve

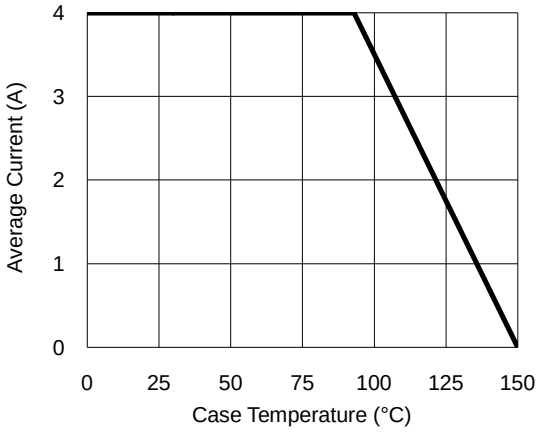


Fig.2- Surge Current Derating Curve

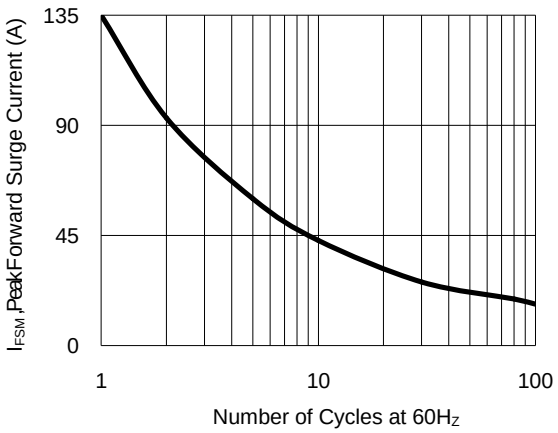


Fig.3- Typical Forward Voltage Characteristic

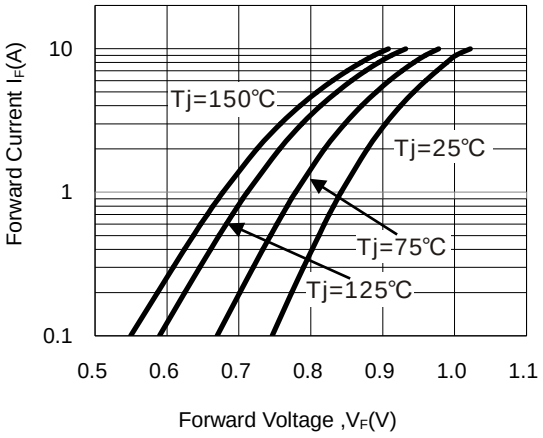
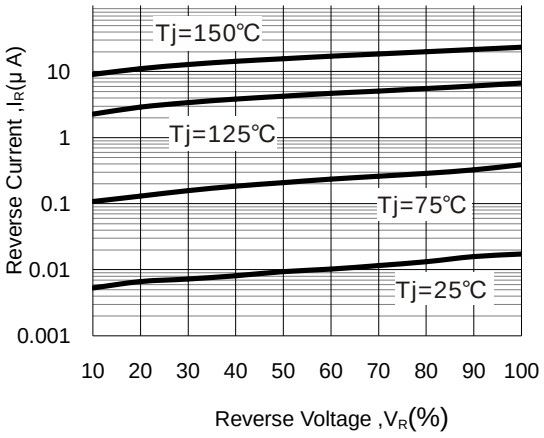
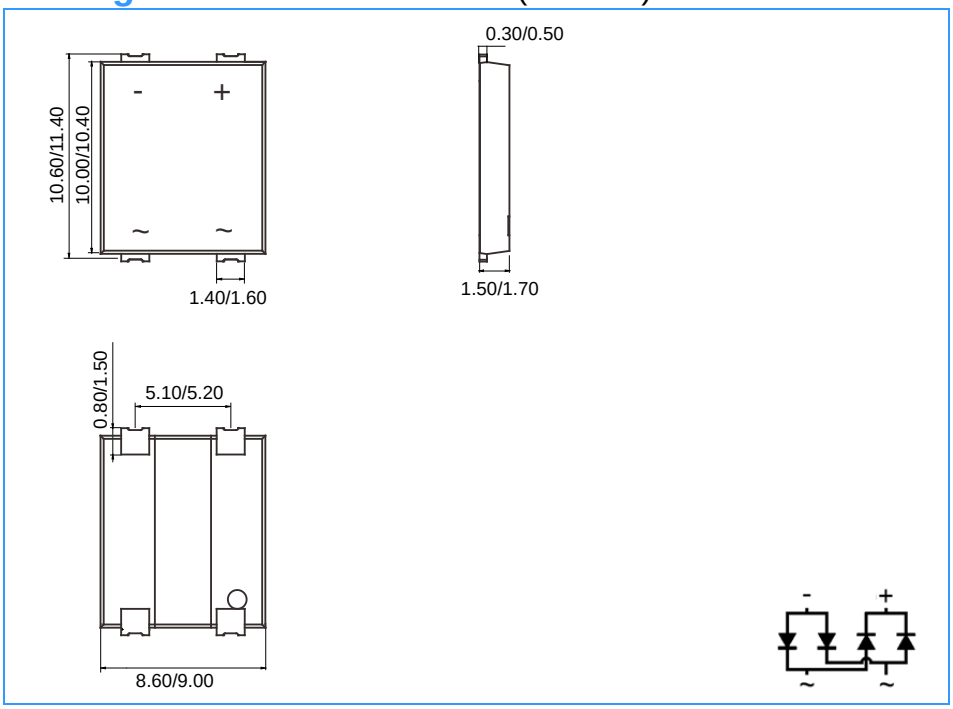


Fig.4- Typical Reverse Characteristic

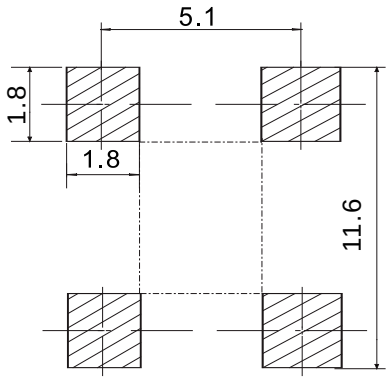


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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
3SPB40J	3SPB40J	3SPB	1500 /Tape&Reel
3SPB40K	3SPB40K	3SPB	1500 /Tape&Reel