

## Surface Mount Rectifiers

## P120JCF--P120KCF

### Features

- Planar passivated chips
- Ultra low leakage reverse current
- High temperature performance
- High surge current capability
- RoHS Compliant



### Mechanical Data

- Case: SMCF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

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

Characteristic		Symbol	P120JCF	P120KCF	Units
Peak repetitive reverse voltage		V <sub>RRM</sub>	600	800	V
RMS reverse voltage		V <sub>RMS</sub>	420	560	V
DC blocking voltage		V <sub>DC</sub>	600	800	V
Maximum average forward output current		I <sub>F(AV)</sub>	12		A
Peak forward surge current, 8.3ms single half-sine-wave	@T <sub>J</sub> = 25°C	I <sub>FSM</sub>	240		A

### Thermal Characteristics

Parameter	Symbol	P120JCF	P120KCF	Units
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	27		°C /W
	R <sub>θJC</sub>	10		
	R <sub>θJL</sub>	4		
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 PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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

Parameter	Symbol	Test conditions	Typ.	Max.	Units	
Maximum instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =12A	0.98	1.05	V	
Maximum Reverse current	I <sub>R</sub>	Rated V <sub>R</sub> ,	@T <sub>A</sub> =25°C	0.5	2.0	μA
			@T <sub>A</sub> =150°C	50	150	

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

Fig.1-Forward Current Derating Curve

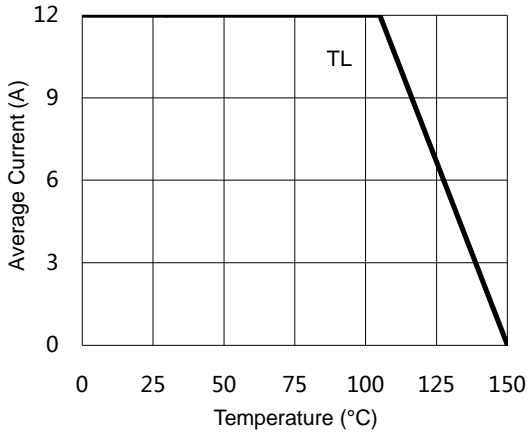


Fig.2- Surge Current Derating Curve

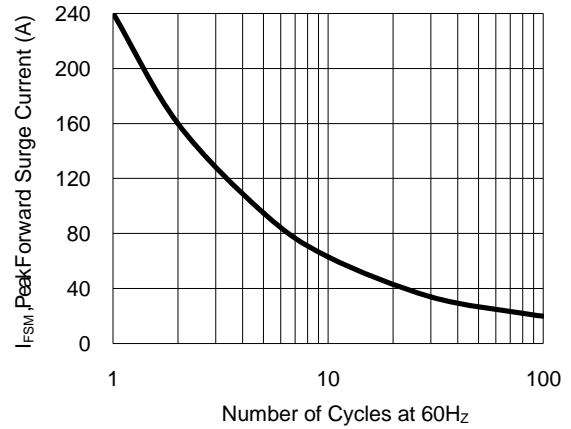


Fig.3- Typical Forward Voltage Characteristic

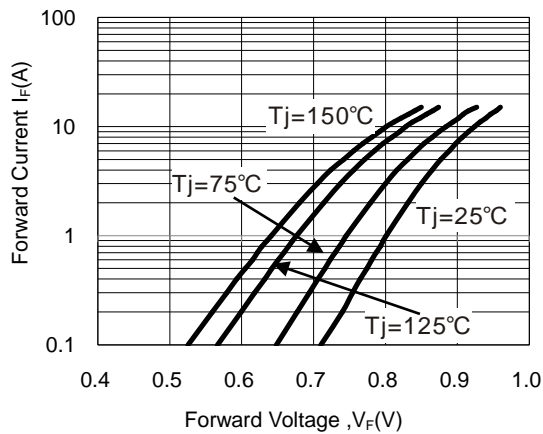
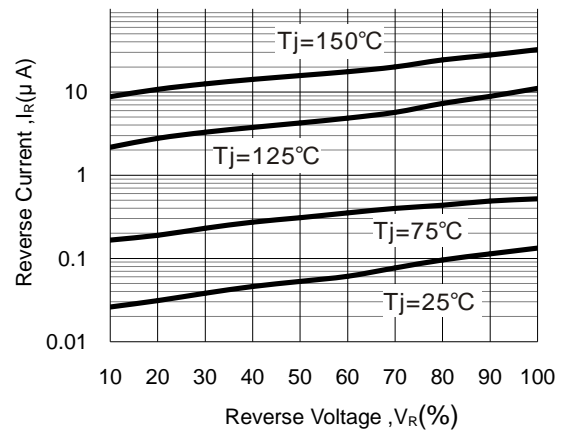


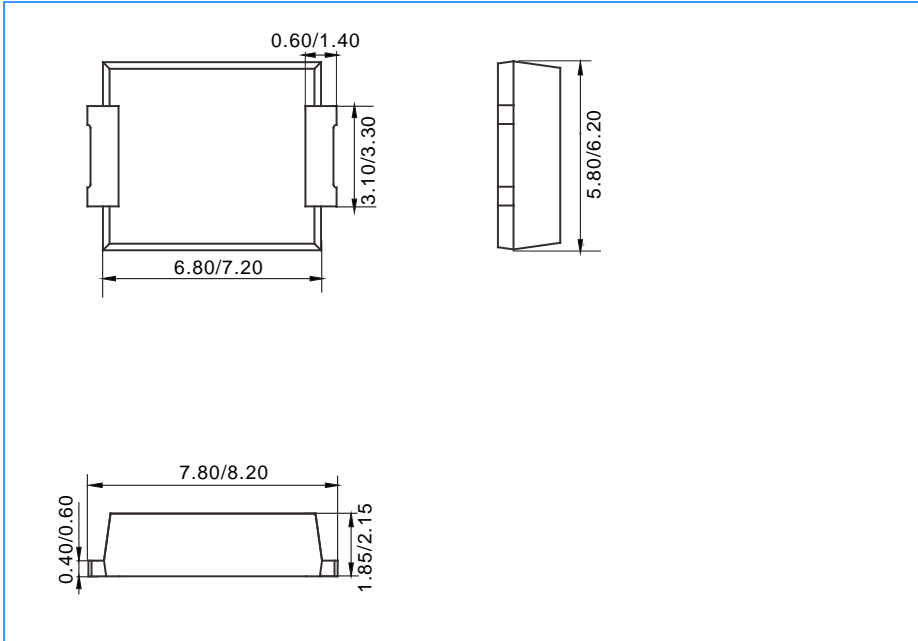
Fig.4- Typical Reverse Characteristic



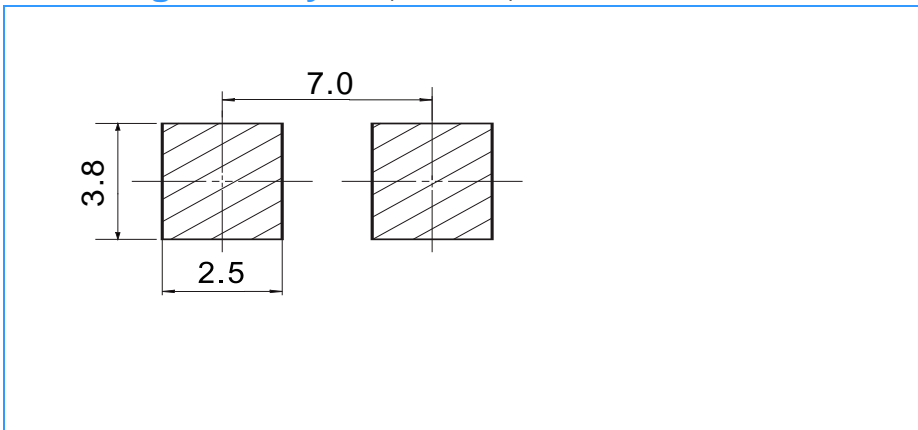
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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

Part No.	Marking	Package	Shipping
P120JCF	P120JCF	SMCF	3000 /Tape&Reel
P120KCF	P120KCF	SMCF	3000 /Tape&Reel