Surface Mount Rectifiers

S3DCF--S3MCF

Features



- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- 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_A = 25°C unless otherwise specified)

Characteristic		Symbol	S3DCF	S3GF	S3JCF	S3KCF	S3MCF	Units
Peak repetitive reverse voltage		V_{RRM}	200	400	600	800	1000	V
RMS reverse voltage		V_{RMS}	140	280	420	560	700	V
DC blocking voltage		V_{DC}	200	400	600	800	1000	V
Maximum average forward output current		$I_{F(AV)}$	3.0					A
Peak forward surge current, 8.3ms single half-sine-wave	@T_J= 25°C	I_{FSM}	100					A

Thermal Characteristics

Parameter	Symbol	S3DCF	S3GF	S3JCF	S3KCF	S3MCF	Units
Typical thermal resistance (Note 1)	$R_{\Theta JA}$	27					°C /W
	$R_{\Theta JC}$	10					
	$R_{\Theta JL}$	4					
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=3.0A		--	1.15	V
Maximum Reverse current	I_R	Rated V_R	@T_A=25°C	--	10	μ A
			@T_A=125°C	--	200	

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

Fig.1-Forward Current Derating Curve

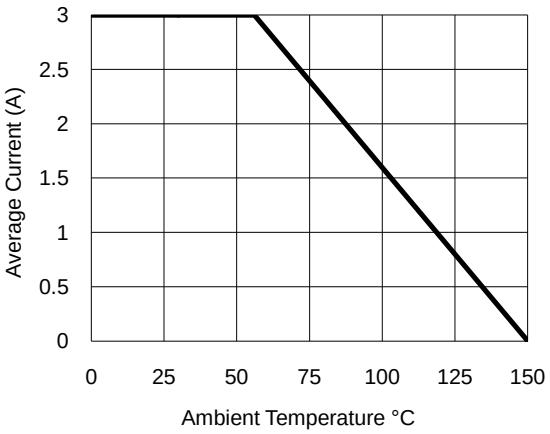


Fig.2- Surge Current Derating Curve

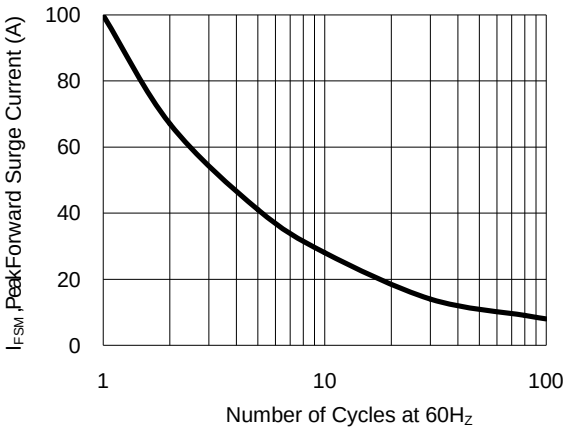


Fig.3- Typical Forward Voltage Characteristic

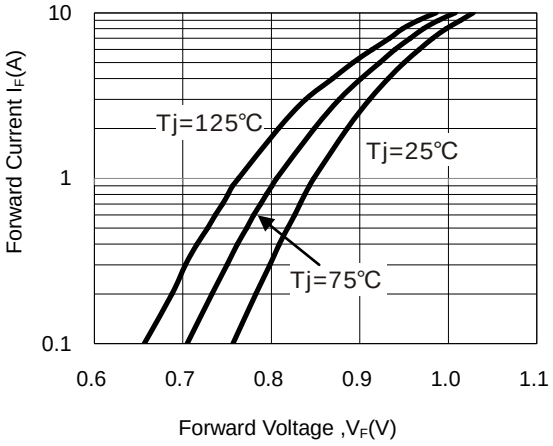
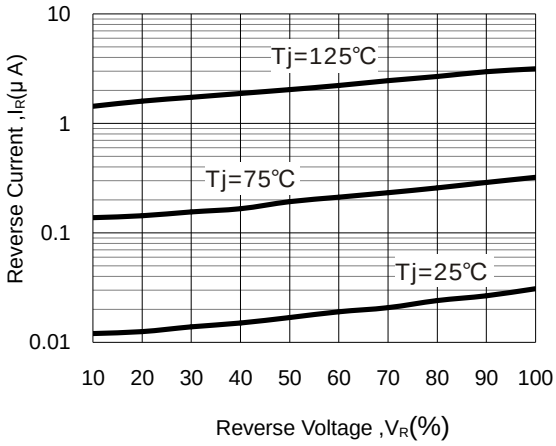
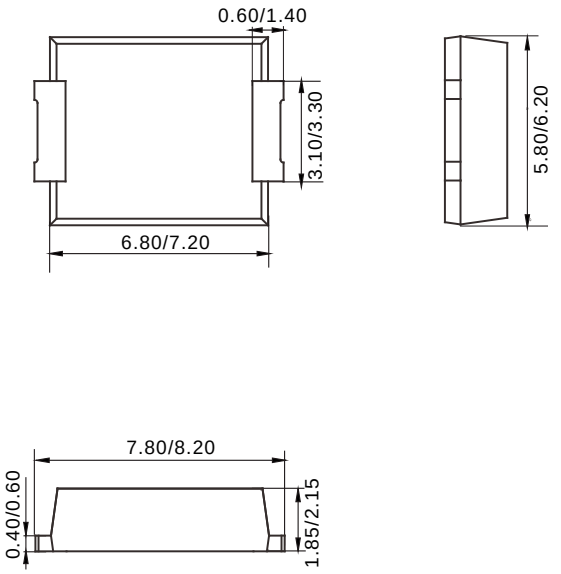


Fig.4- Typical Reverse Characteristic

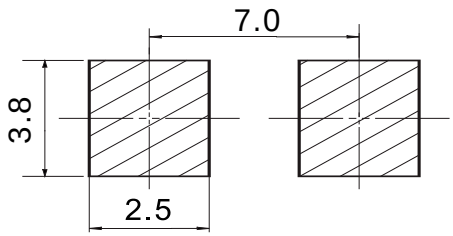


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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
S3DCF	S3DCF	SMCF	3000 /Tape&Reel
S3GCF	S3GCF	SMCF	3000 /Tape&Reel
S3JCF	S3JCF	SMCF	3000 /Tape&Reel
S3KCF	S3KCF	SMCF	3000 /Tape&Reel
S3MCF	S3MCF	SMCF	3000 /Tape&Reel