

Surface Mount Rectifier

TS3DCF - TS3MCF

Features

- For surface mounted applications
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



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)

Parameter	Symbol	TS3DCF	TS3GCF	TS3JCF	TS3KCF	TS3MCF	Unit
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	I _{FSM}	100					A

Thermal Characteristics

Parameter	Symbol	TS3DCF	TS3GCF	TS3JCF	TS3KCF	TS3MCF	Unit
Typical thermal resistance *1	R _{θJA}	27					°C/W
	R _{θJC}	10					
	R _{θJL}	4					
Operating junction temperature range	T _J	-55 ~ +150					°C
Storage temperature range	T _{STG}	-55 ~ +150					°C

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

Surface Mount Rectifier**TS3DCF - TS3MCF****Electrical Characteristics** (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions		Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage	V_F	$I_F = 3.0\text{A}$		-	1.15	V
Maximum Reverse Current	I_R	Rated V_R	@ $T_A = 25^\circ\text{C}$	-	10	μA
			@ $T_A = 125^\circ\text{C}$	-	200	

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

Fig.1 Forward Current Derating Curve

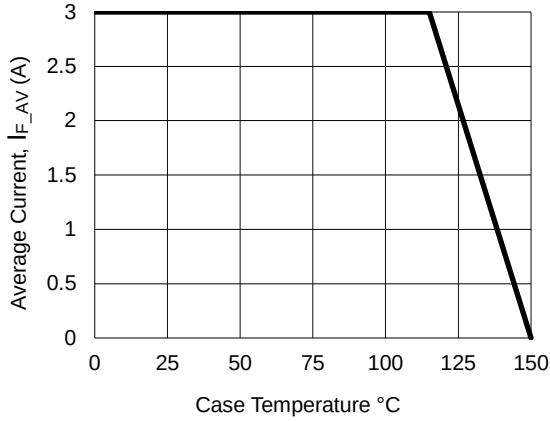


Fig.2 Surge Current Derating Curve

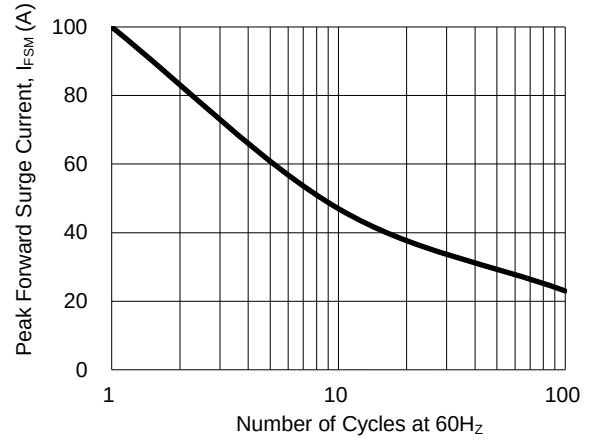


Fig.3 Typical Forward Voltage Characteristics

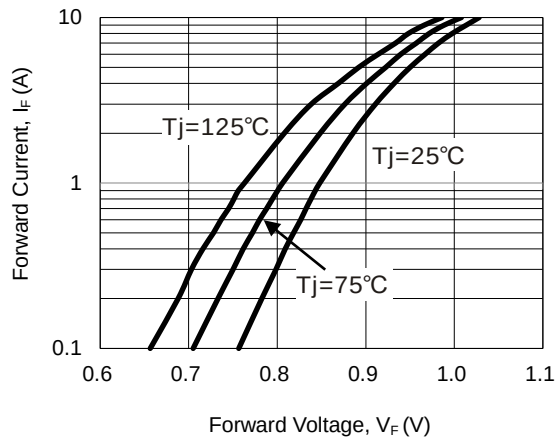
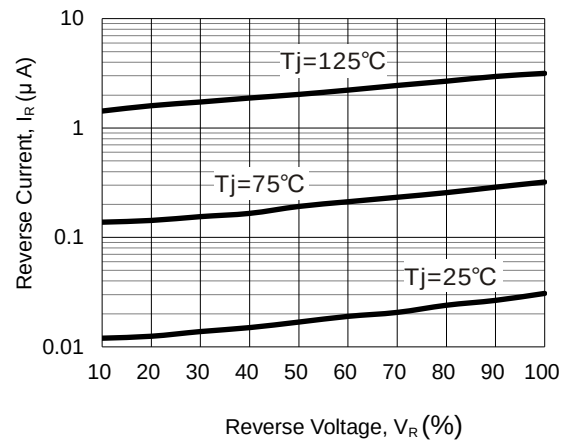


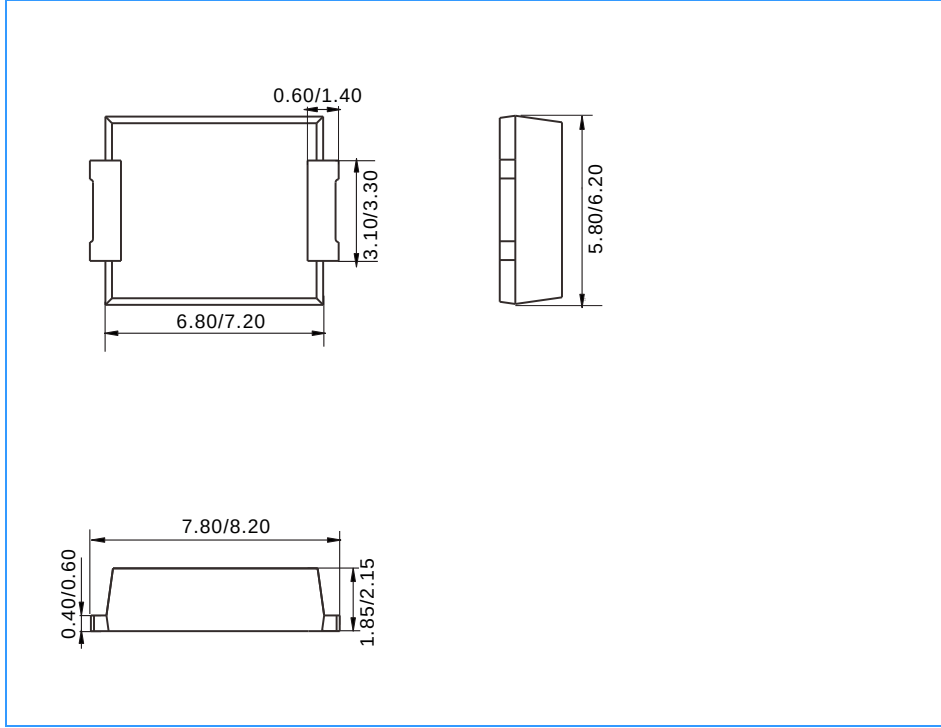
Fig.4 Typical Reverse Characteristics



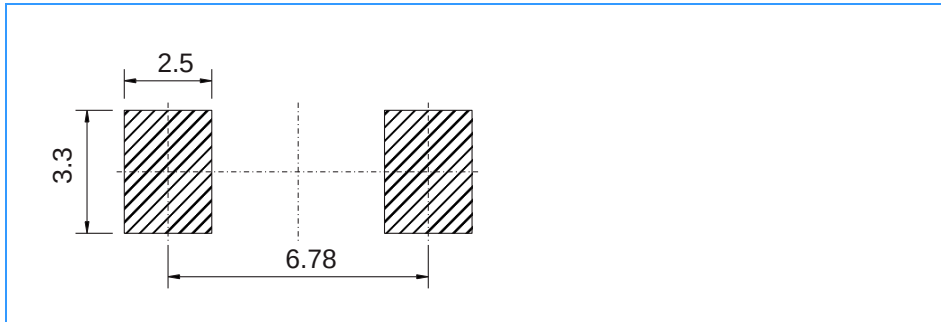
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Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
TS3DCF	S3DCF	SMCF	3000 / Tape & Reel
TS3GCF	S3GCF	SMCF	3000 / Tape & Reel
TS3JCF	S3JCF	SMCF	3000 / Tape & Reel
TS3KCF	S3KCF	SMCF	3000 / Tape & Reel
TS3MCF	S3MCF	SMCF	3000 / Tape & Reel