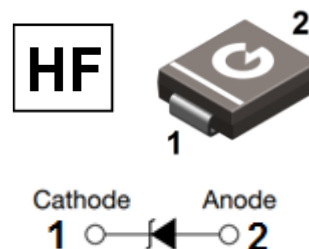


Fast Recovery Rectifier

TRS3K - TRS3M

Features

- Low forward voltage drop
- High forward surge current capability
- Low-profile SMD ideal for automated manufacturing
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



Mechanical Data

- Case: SMC 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	TRS3K	TRS3M	Unit
Peak repetitive reverse voltage	V _{RRM}	800	1000	V
RMS reverse voltage	V _{RMS}	560	700	V
DC blocking voltage	V _{DC}	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	TRS3K	TRS3M	Unit
Typical thermal resistance *1	R _{θJA}	44		°C/W
	R _{θJC}	18		
	R _{θJL}	13		
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

Fast Recovery Rectifier

TRS3K - TRS3M

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

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 2\mu\text{A}$, TRS3K		800	-	-	V
		$I_R = 2\mu\text{A}$, TRS3M		1000	-	-	V
Maximum Instantaneous Forward Voltage	V_F	$I_F = 3.0\text{A}$		-	-	1.3	V
Maximum Reverse Current	I_R	Rated	@ $T_A = 25^\circ\text{C}$	-	-	1	μA
		V_R	@ $T_A = 125^\circ\text{C}$	-	-	200	
Maximum Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_{rr} = 0.25\text{A}$, $I_R = 1\text{A}$		-	-	500	ns

Fast Recovery Rectifier

TRS3K - TRS3M

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

Fig.1 Forward Current Derating Curve

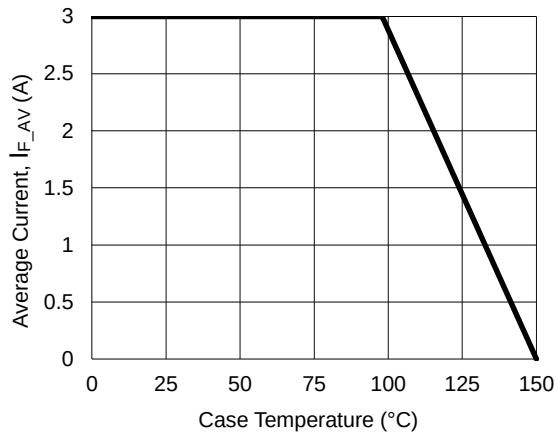


Fig.2 Surge Current Derating Curve

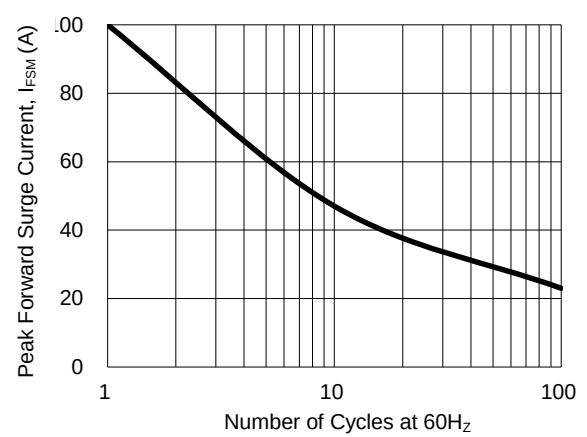


Fig.3 Typical Forward Voltage Characteristics

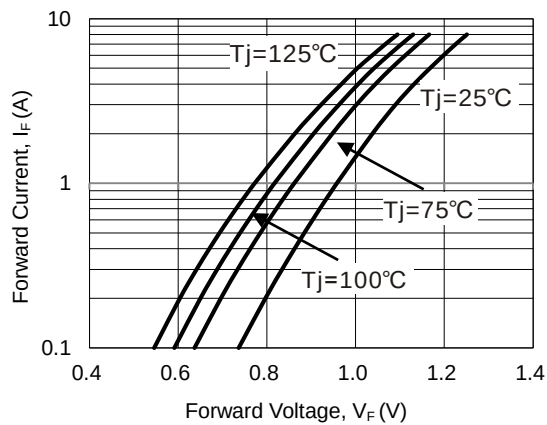
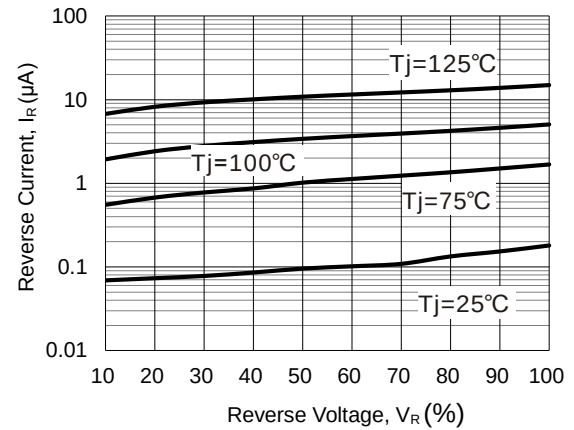


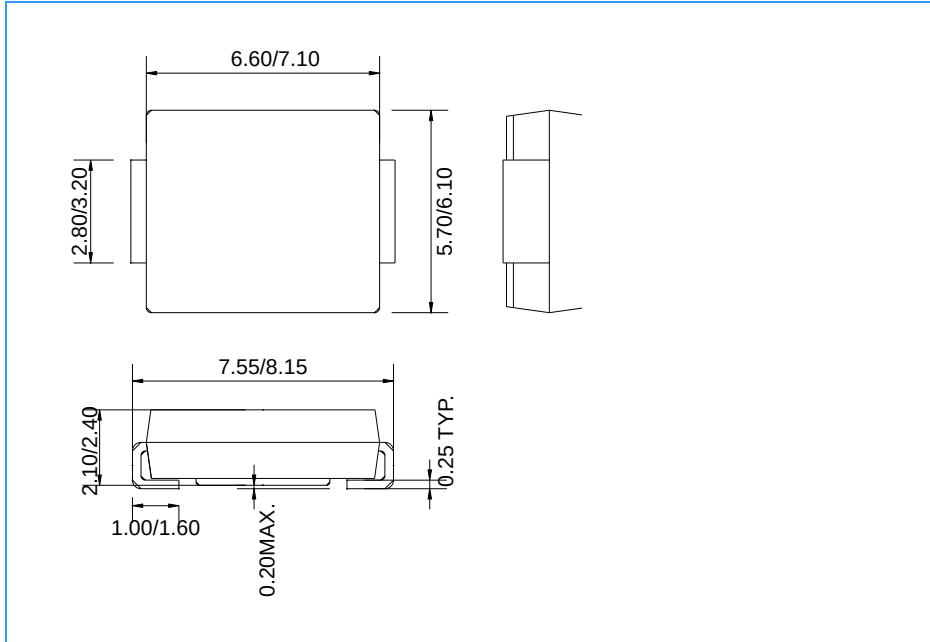
Fig.4 Typical Reverse Characteristics



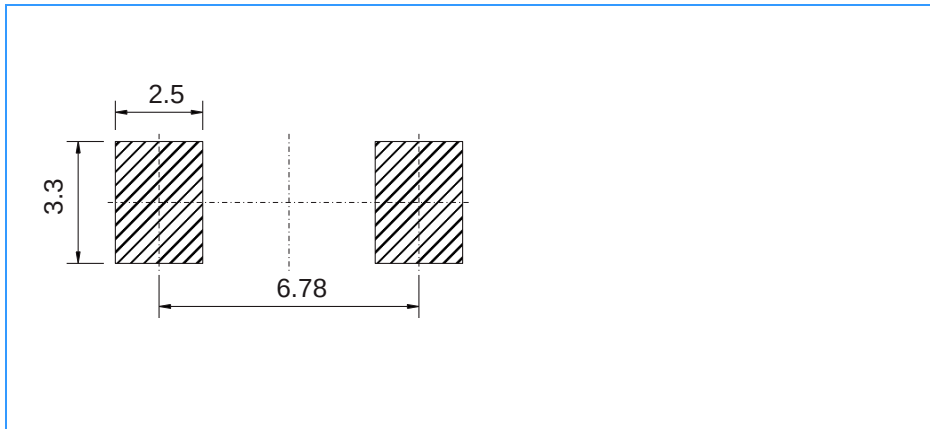
Fast Recovery Rectifier

TRS3K - TRS3M

Package Outline Dimensions (unit: mm)



Mounting Pad Layout (unit:mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
TRS3K	RS3K	SMC	3000 pcs / Tape & Reel
TRS3M	RS3M	SMC	3000 pcs / Tape & Reel