

FS1A THRU FS1M

SURFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

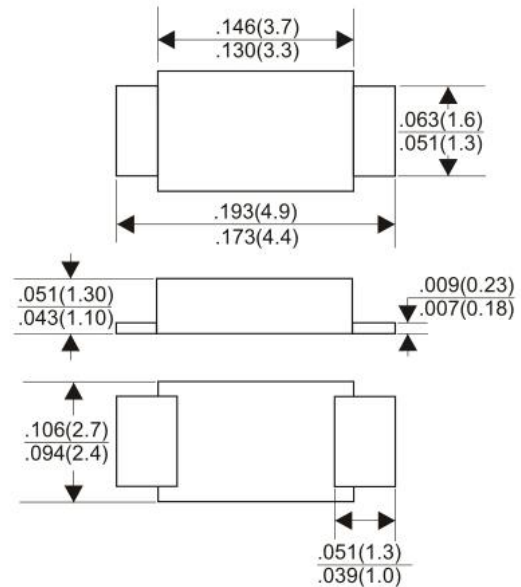
FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- ◆ Case: SMAF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 27mg / 0.00095oz

SMAF



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	FS1A	FS1B	FS1D	FS1G	FS1J	FS1K	FS1M	UNIT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS	
Maximum Average Forward Rectified Current At $T_C = 125^\circ C$	$I_{(AV)}$	1.0							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							Amps	
Maximum instantaneous forward voltage per at 1.0A	V_F	1.3							VOLTS	
Maximum DC Reverse Current at Rated DC blocking voltage	I_R	$T_A = 25^\circ C$	5.0							uA
		$T_A = 125^\circ C$	50							
Maximum Reverse Recovery Time Test conditions $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$	t_{rr}	150				250	500		nS	
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	15							pF	
Typical Thermal Resistance	$R_{\theta JA}$	80							$^\circ C/W$	
Operating Junction Temperature	T_J	-55 to +150							$^\circ C$	
Storage Temperature Rang	T_{STG}	-55 to +150							$^\circ C$	

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with $2.0 \times 2.0''$ ($5.0 \times 5.0cm$) copper pad areas.

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RATING AND CHARACTERISTIC CURVES FS1A THRU FS1M

Fig.1 Forward Current Derating Curve

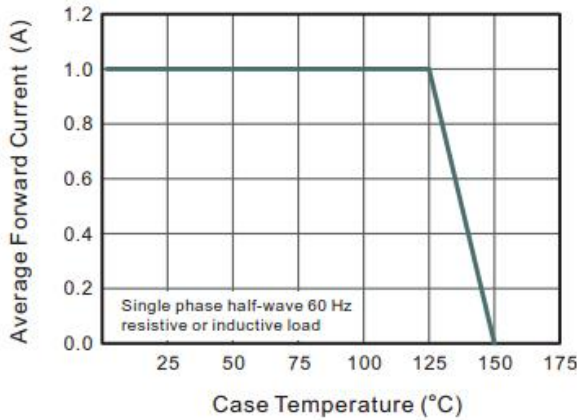


Fig.2 Typical Reverse Characteristics

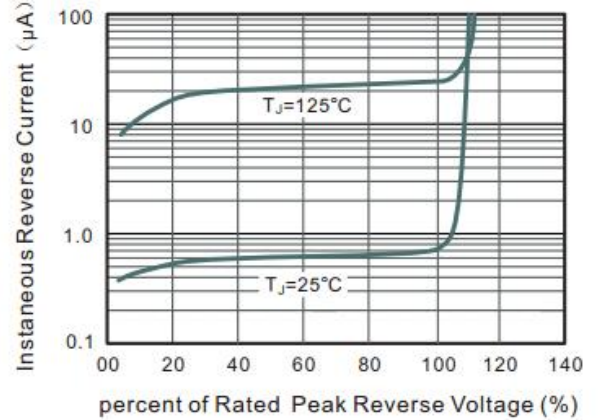


Fig.3 Typical Instantaneous Forward Characteristics

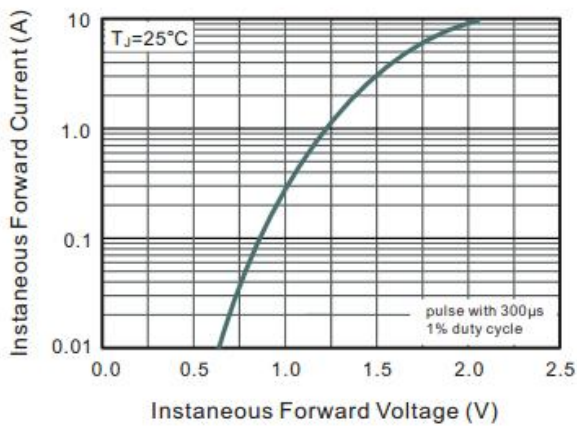


Fig.4 Typical Junction Capacitance

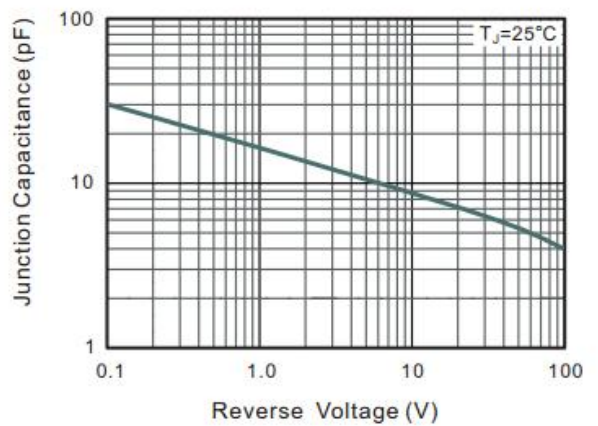
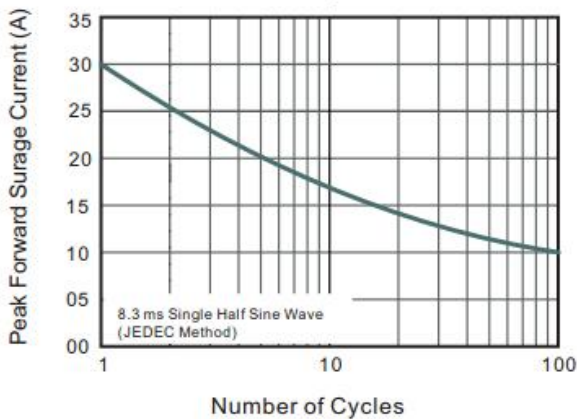


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.