

Descriptions

This are Surface Mount Fast Recovery Rectifiers, Reverse Voltage: 50 to 1000V, Forward Current:1.0A , SMAF Plastic Package.

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: 27 mg / 0.00095 oz

Equivalent Circuit & Pinning



Top View

Simplified outline SMAF and symbol

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings(Ta=25°C)

Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	RS1A F-J	RS1BF -J	RS1DF -J	RS1GF -J	RS1JF- J	RS1KF -J	RS1MF -J	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ Fig.1	I _{F(AV)}	1							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30							A
Max Instantaneous Forward Voltage at 1 A	V _F	1.3							V
Maximum DC Reverse Current at Rated DC Reverse Voltage T _a = 25°C T _a =125°C	I _R	5 50							μA
Typical Junction Capacitance ⁽¹⁾	C _j	15							pF
Maximum Reverse Recovery Time ⁽²⁾	t _{rr}	150				250	500		ns
Typical Thermal Resistance ⁽³⁾	R _{θJA} R _{θJL}	80 30							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

(3) P.C.B. mounted with 0.2" X 0.2" (5 X 5 cm) copper pad areas.

Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

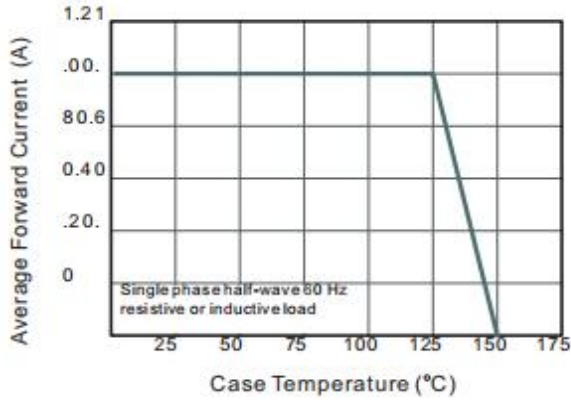


Fig.2 Typical Reverse Characteristics

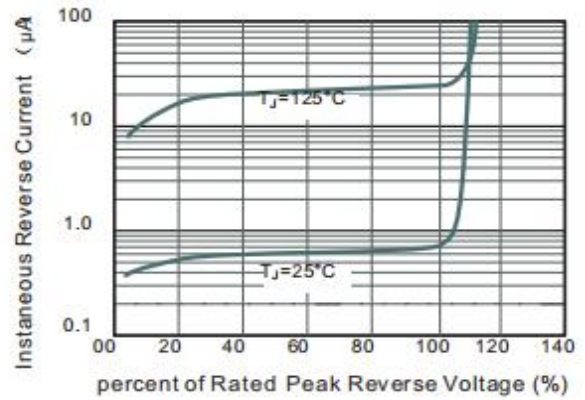


Fig.3 Typical Instantaneous Forward Characteristics

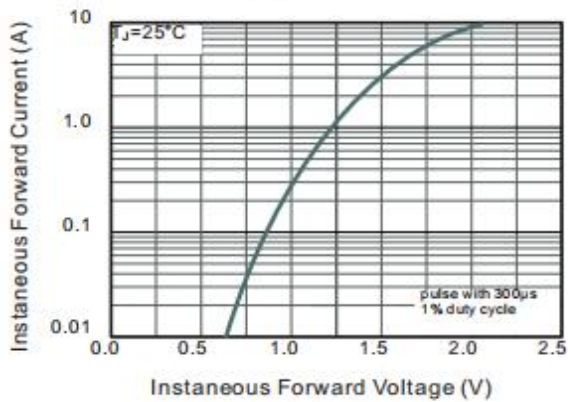


Fig.4 Typical Junction Capacitance

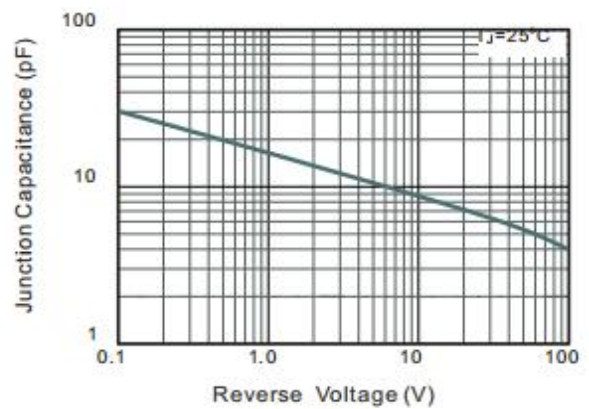
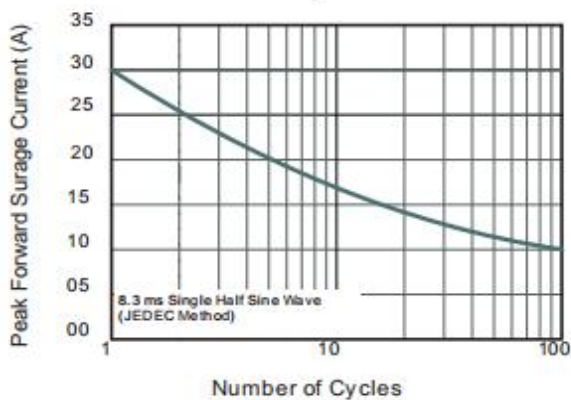
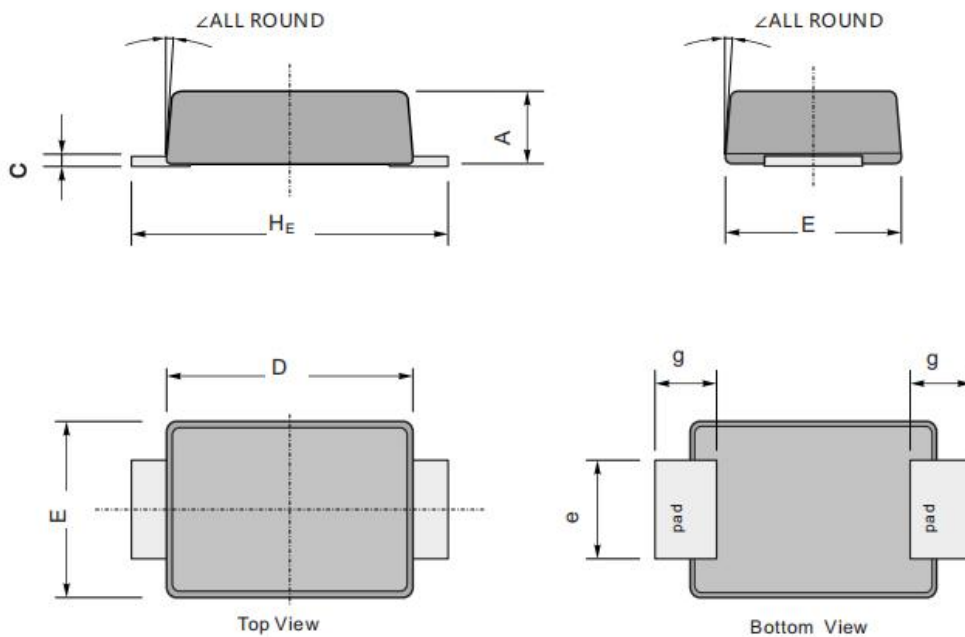


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline Dimensions



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	5°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size

