

Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V Forward Current - 1 A

FEATURES

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

MECHANICAL DATA

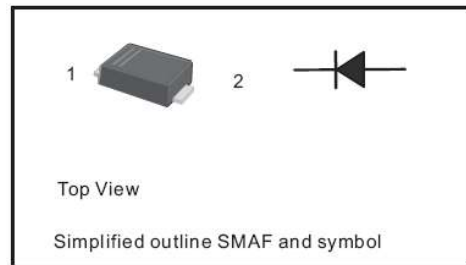
- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0.00086oz

Maximum Ratings and Electrical characteristics

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	Symbols	1N4001F	1N4002F	1N4003F	1N4004F	1N4005F	1N4006F	1N4007F	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 at $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 50							μA
Typical Junction Capacitance ¹⁾	C_j	9							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	115							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

1) Measured at 1 MHz and applied reverse voltage of 4 V D.C 2) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

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Fig.1 Forward Current Derating Curve

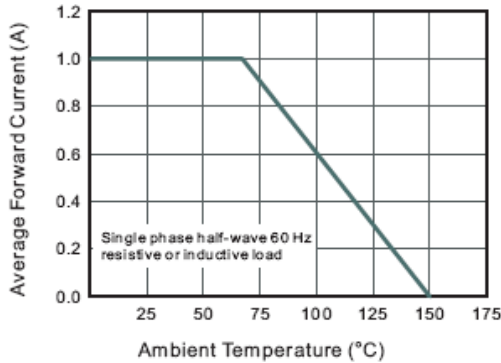


Fig.2 Typical Instantaneous Reverse Characteristics

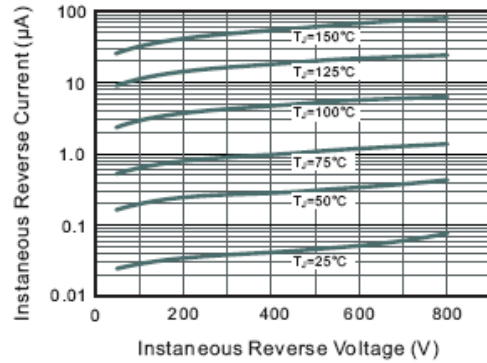


Fig.3 Typical Forward Characteristic

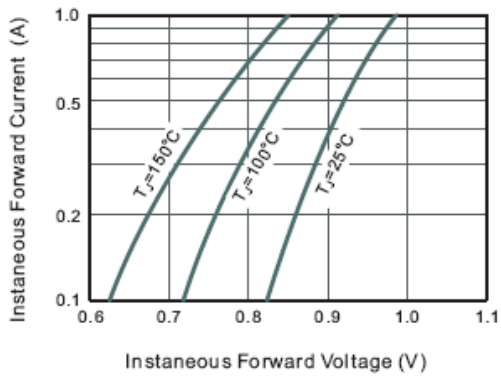
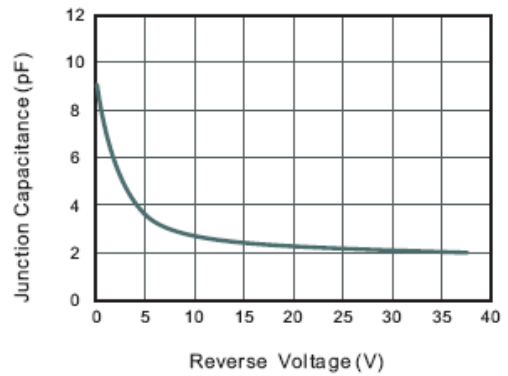
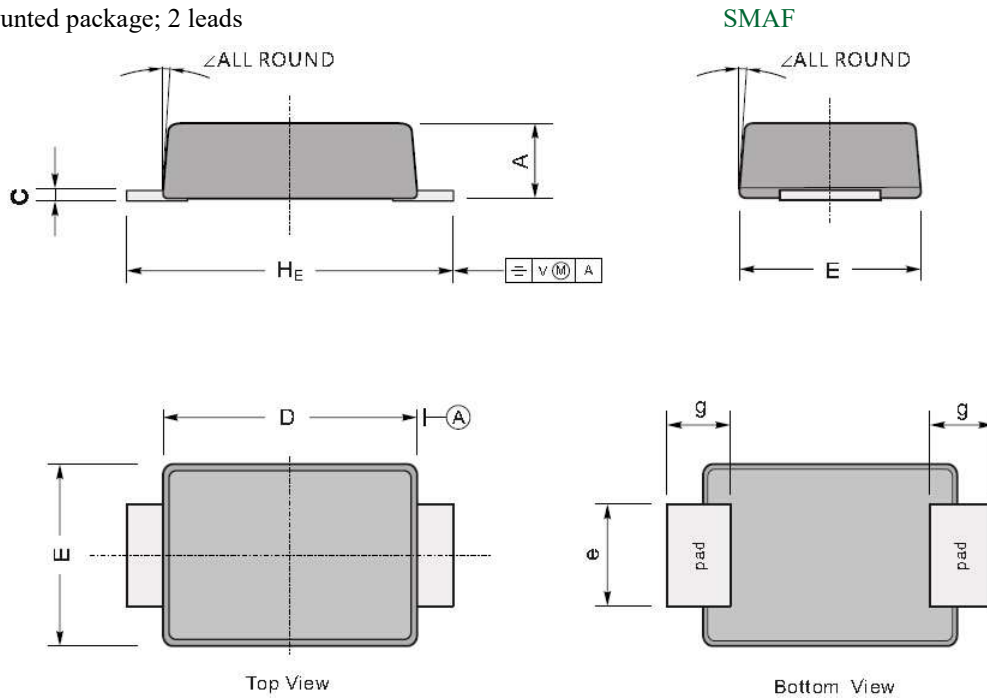


Fig.4 Typical Junction Capacitance



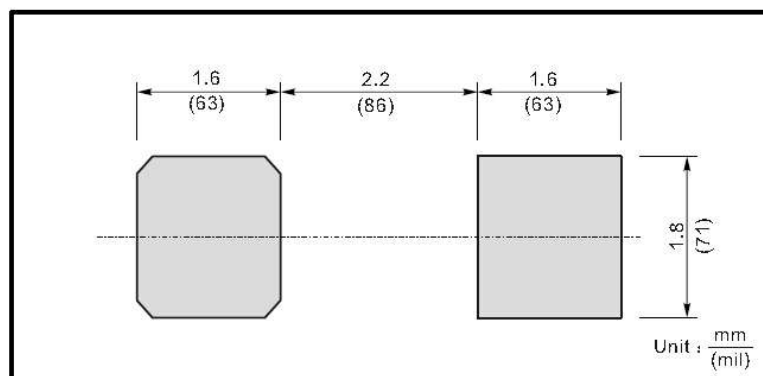
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H_E	\angle
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



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