

Surface Mount General Purpose Silicon Rectifiers
Reverse Voltage - 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: SMA
- Terminals: Solderable per MIL-STD-750 , Method 2026
- Approx . Weight: 0 .055g / 0 .002oz

Maximum Ratings and Electrical characteristics

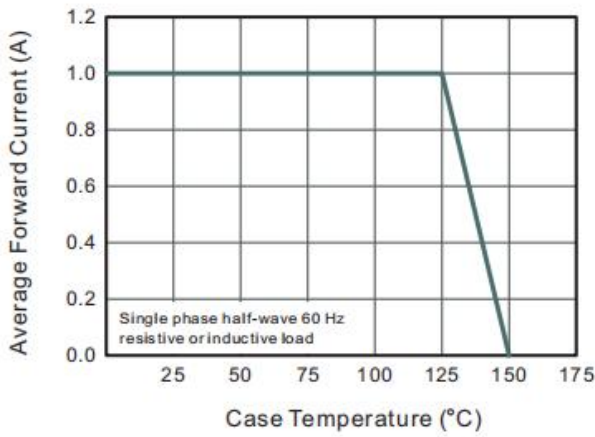
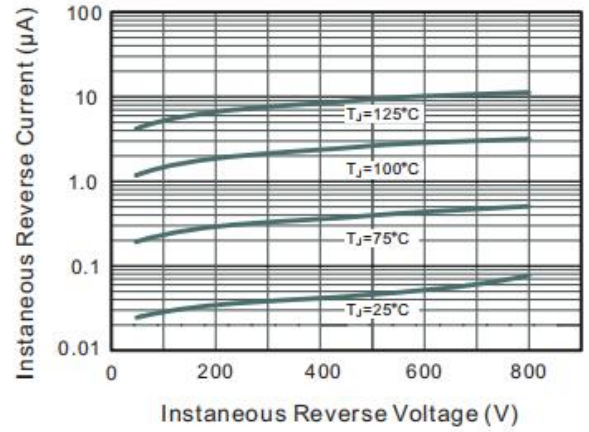
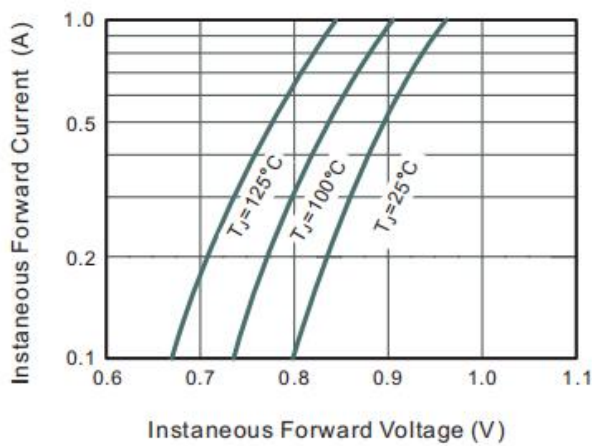
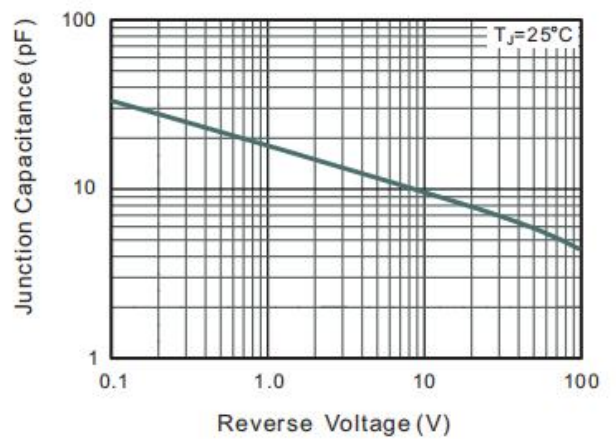
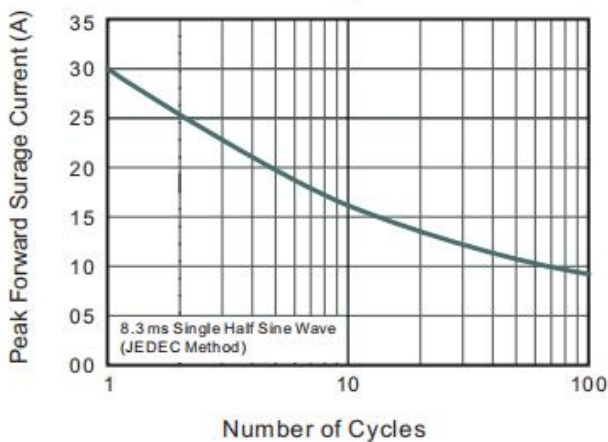
Ratings at 25 °C ambient temperature unless otherwise specified .

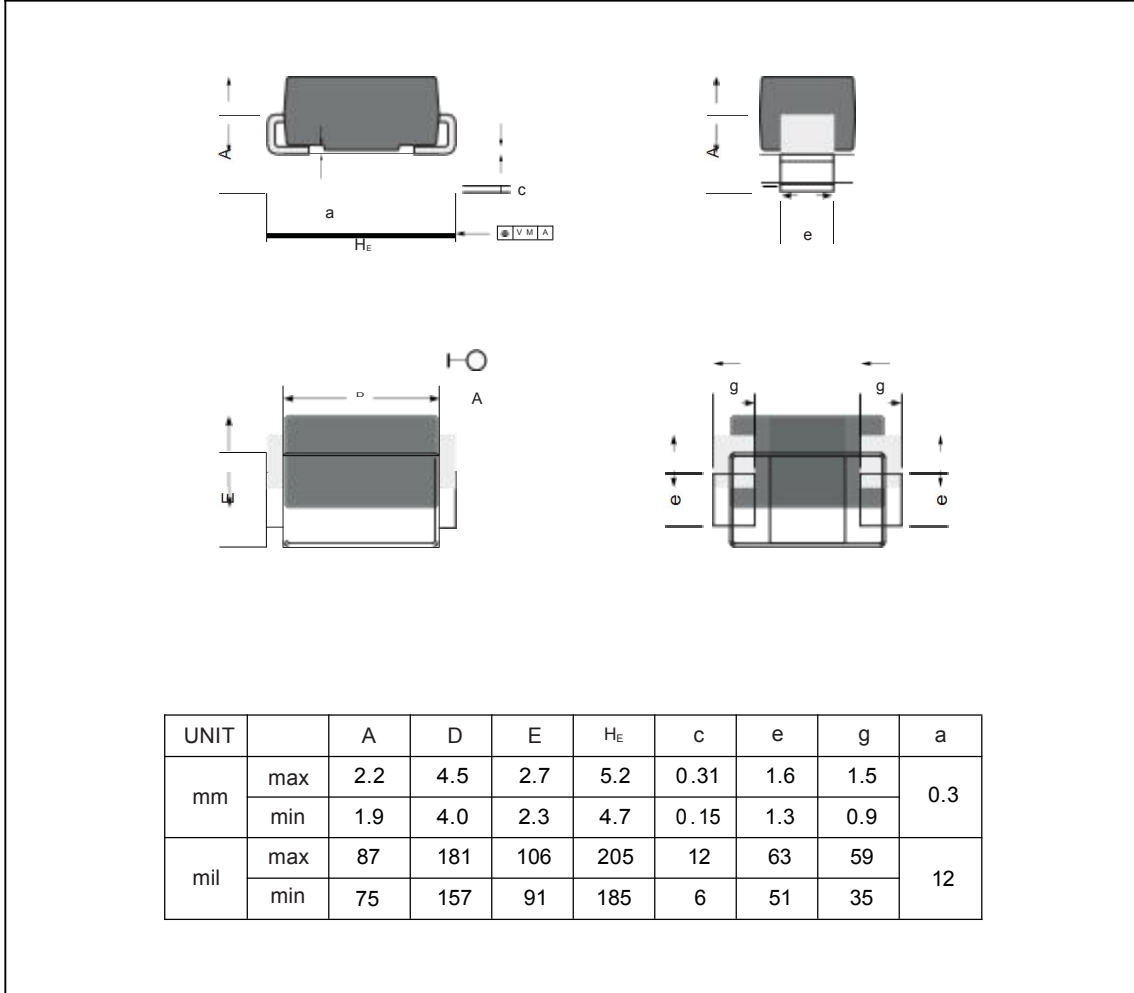
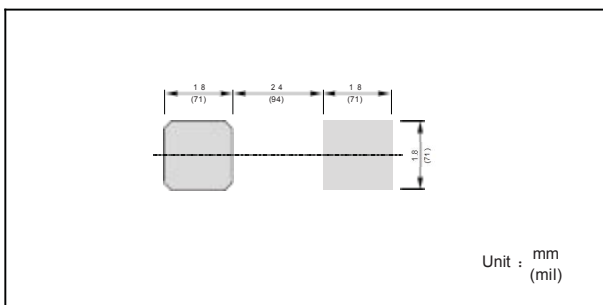
Single phase half-wave 60 Hz , resistive or inductive load , for capacitive load current derate by 20 % .

Parameter	Symbols	1N4007(M7)SMA	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	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	I_R	$T_a = 25\text{ }^{\circ}\text{C}$ 5	μA
		$T_a = 125\text{ }^{\circ}\text{C}$ 50	
Typical Junction Capacitance ⁽¹⁾	C_j	15	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	75	$^{\circ}\text{C/W}$
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) P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas .

Fig.1 Forward Current Derating Curve

Fig.2 Typical Instantaneous Reverse Characteristics

Fig.3 Typical Forward Characteristic

Fig.4 Typical Junction Capacitance

Fig.5 Maximum Non-Repetitive Peak Forward Surge Current


PACKAGE OUTLINE
Plastic surface mounted package; 2 leads

The recommended mounting pad size

Marking

Type number	Marking code
1N4007(M7)SMA	M7

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