



**Surface Mount General Purpose Silicon Rectifiers**

**Reverse Voltage - 1600 & 2000 V**

**Forward Current - 1.5 A**

**FEATURES**

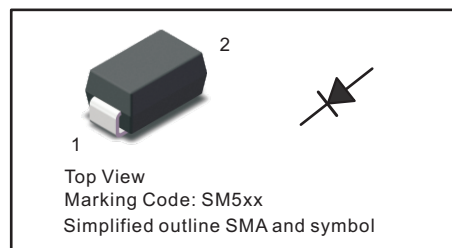
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode



**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	SM516	SM520	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	1600	2000	V
Maximum RMS voltage	$V_{RMS}$	1120	1400	V
Maximum DC blocking voltage	$V_{DC}$	1600	2000	V
Maximum Average Forward Rectified Current at $T_c = 100\text{ }^\circ\text{C}$	$I_{F(AV)}$	1.5		A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	50		A
Maximum Instantaneous Forward Voltage at 1.5 A	$V_F$	1.15		V
Maximum Reverse Current $T_J = 25\text{ }^\circ\text{C}$ $T_J = 125\text{ }^\circ\text{C}$	$I_R$	5 50		$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_j$	20		pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	95		$^\circ\text{C/W}$
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 0.2 X 0.2" (5 X 5 mm) copper pad areas.



Fig.1 Forward Current Derating Curve

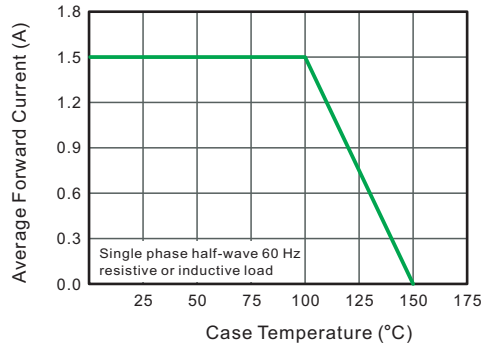


Fig.2 Typical Reverse Characteristics

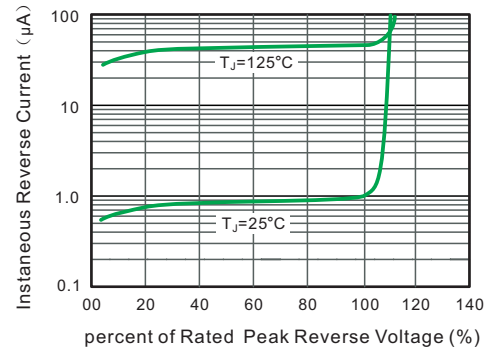


Fig.3 Typical Instantaneous Forward Characteristics

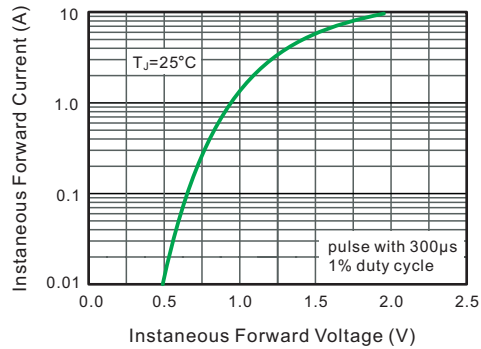


Fig.4 Typical Junction Capacitance

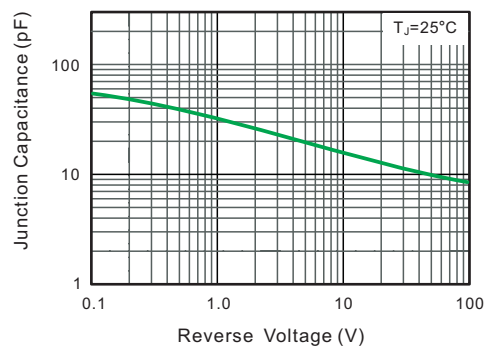
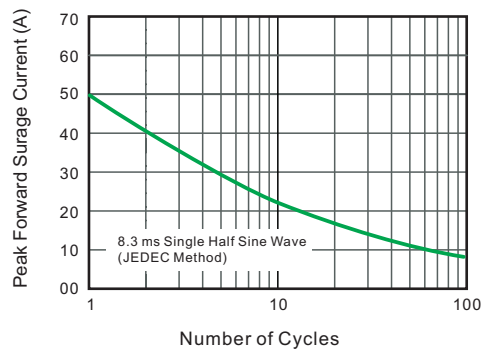


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

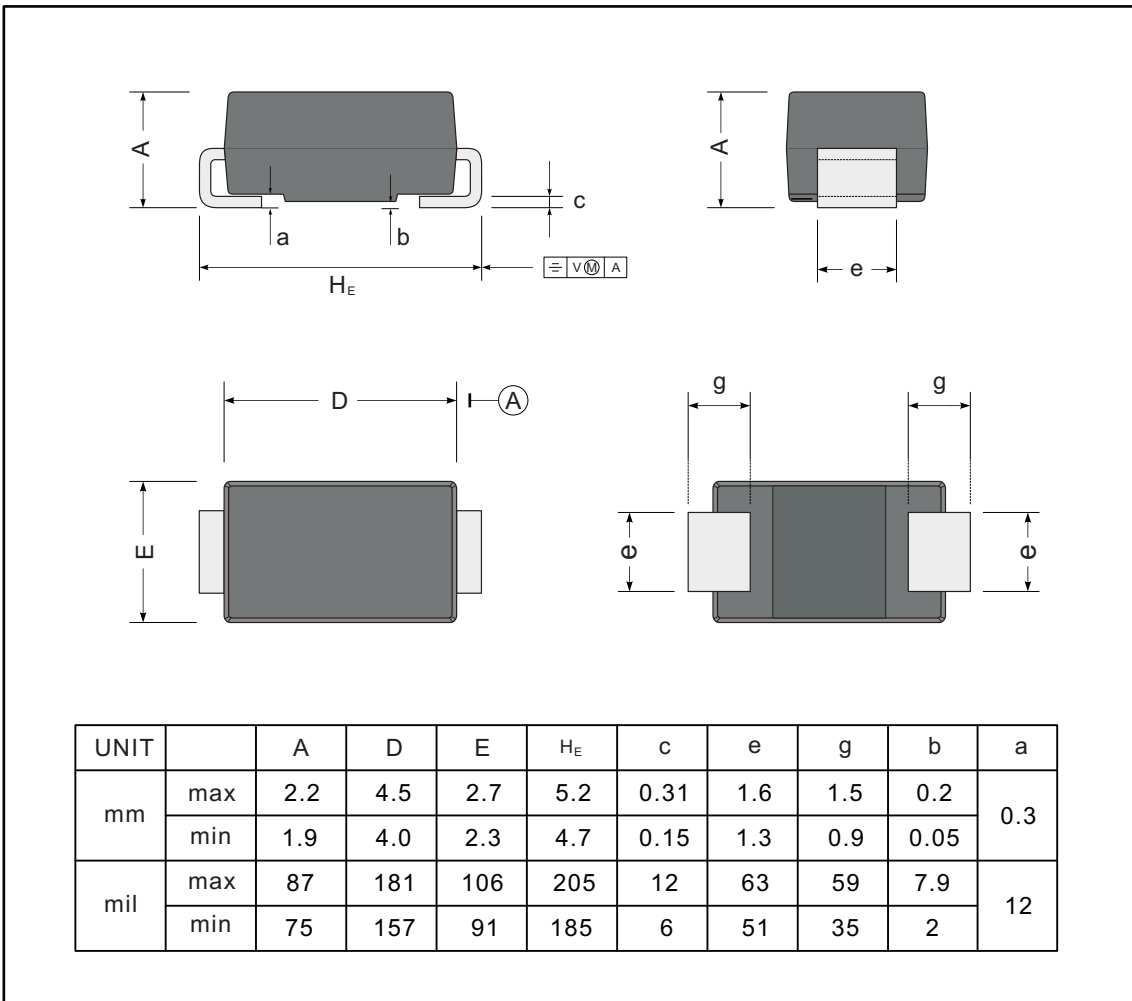




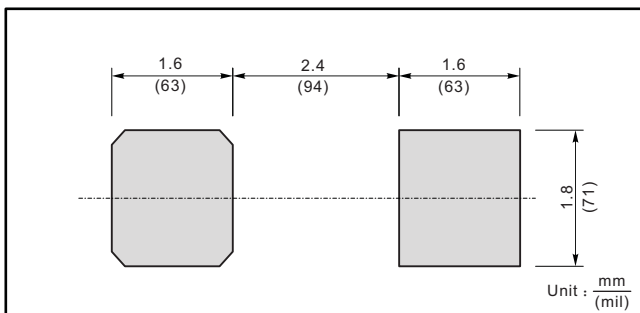
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SMA



**The recommended mounting pad size**



**Marking**

Type number	Marking code
SM516	SM516
SM520	SM520