

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50V~1000V

Forward Current - 1 A

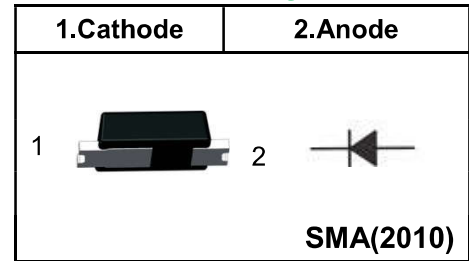
### FEATURES

- ◆ 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(2010)
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 30mg /0.0010oz

### Pinning



### Marking Code

<b>M1</b>	<b>M1</b>
<b>M2</b>	<b>M2</b>
<b>M3</b>	<b>M3</b>
<b>M4</b>	<b>M4</b>
<b>M5</b>	<b>M5</b>
<b>M6</b>	<b>M6</b>
<b>M7</b>	<b>M7</b>

#### Absolute Maximum Ratings and Electrical characteristics

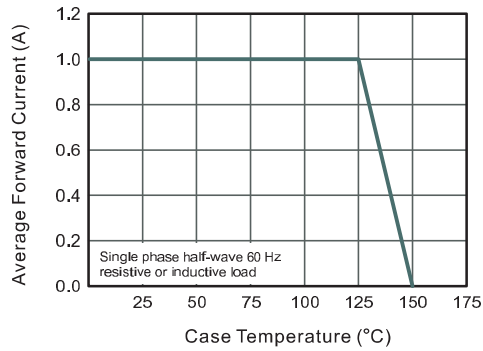
Ratings at 25 ° ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	M1	M2	M3	M4	M5	M6	M7	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 $T_C = 125^{\circ}C$	$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3ms 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 Instantaneous Reverse Current $T_A = 25^{\circ}C$ at Rated DC Reverse Voltage $T_A = 125^{\circ}C$	$I_R$	5 100							uA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	10							pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$	90 25							°C/W
Storage Temperature Range	$T_J, T_{stg}$	-55 ~ +150							°C

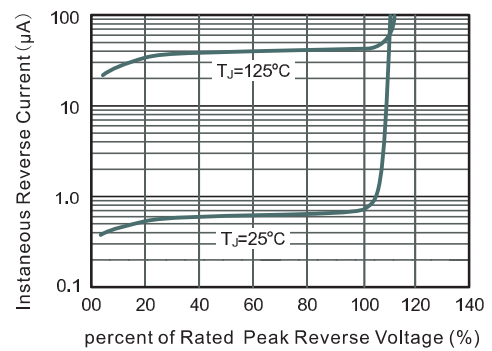
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

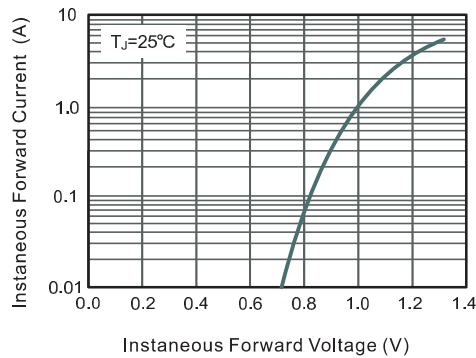
**Fig.1 Forward Current Derating Curve**



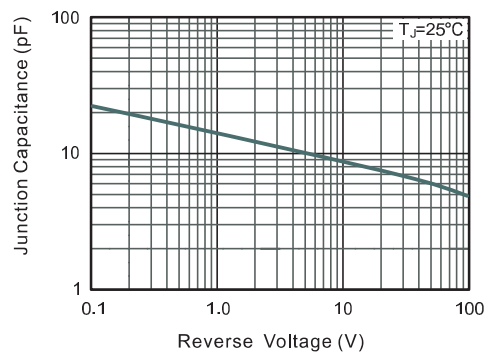
**Fig.2 Typical Reverse Characteristics**



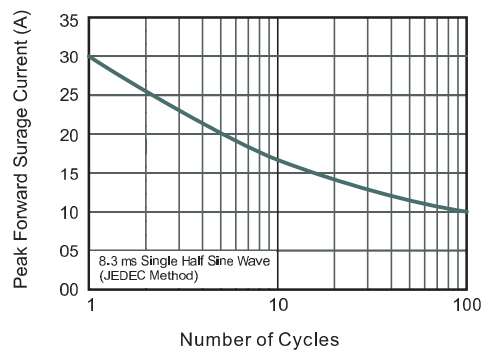
**Fig.3 Typical Forward Characteristic**



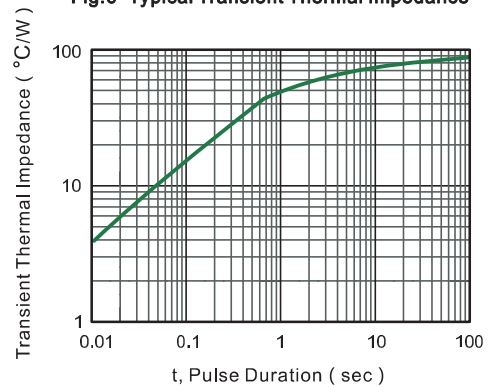
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

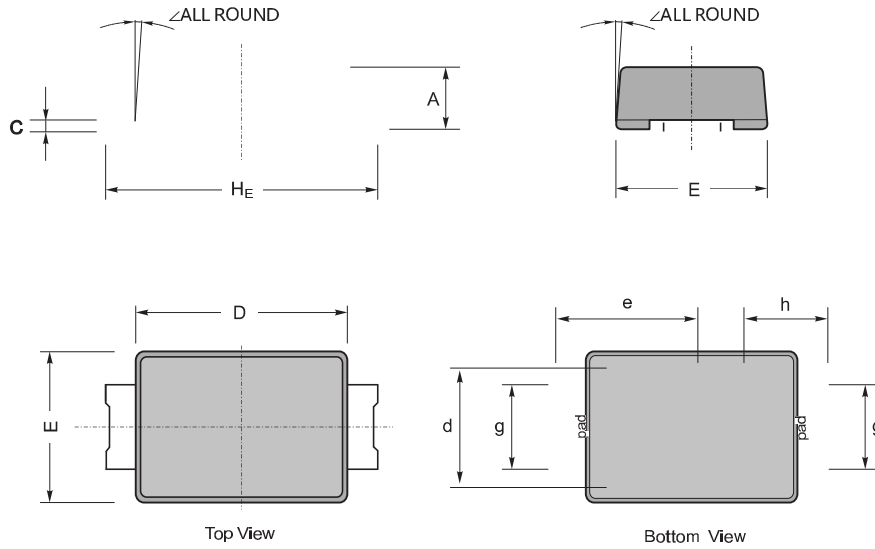


**Fig.6- Typical Transient Thermal Impedance**



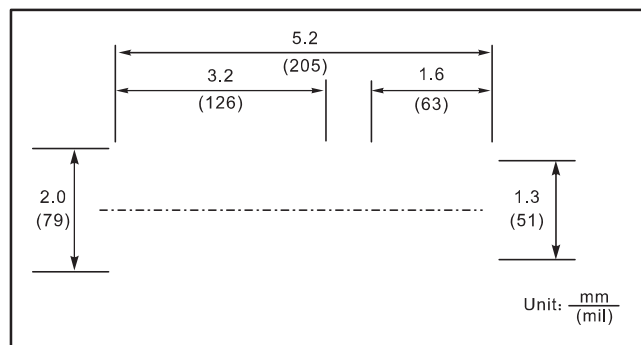
**Package Outline SMA(2010)**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	HE	d	e	g	h	∠
mm	max	1.20	0.35	4.10	2.70	5.20	1.90	3.05	1.50	1.2	12°
	min	0.90	0.20	3.70	2.30	4.80	1.70	2.85	1.30	1.0	
mil	max	47	13.8	161	106	205	75	120	59	47	
	min	35	7.9	145	90	189	67	112	51	39	

**The recommended mounting pad size**



**Summary of Packing Options**

Package	Package Description	Packing Quantity	Industry Standard
SMA(2010)	Tape/Reel, 7" reel	3000	EIA-481-1