

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50V~1000V

Forward Current - 2 A

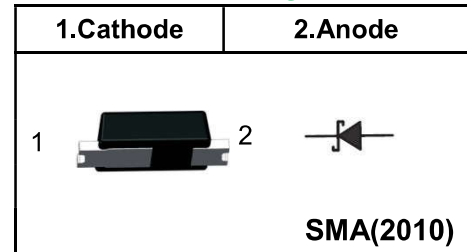
FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ Fast reverse recovery time
- ◆ Leadfree 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

RS2A	RS2A
RS2B	RS2B
RS2D	RS2D
RS2G	RS2G
RS2J	RS2J
RS2K	RS2K
RS2M	RS2M

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	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	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 $T_C = 125^{\circ}C$	$I_{F(AV)}$	2							A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	50							A	
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.3							V	
Maximum DC Reverse Current $T_A = 25^{\circ}C$ at Rated DC Blocking Voltage $T_A = 125^{\circ}C$	I_R	5 100							μA	
Typical Junction Capacitance at $V_R = 4V, f = 1MHz$	C_j	22							pF	
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150				250		500		nS
Typical Thermal Resistance ⁽²⁾	$R_{\theta ja}$ $R_{\theta jc}$	70 25							$^{\circ}C/W$	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^{\circ}C$	

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

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

Fig.1 Forward Current Derating Curve

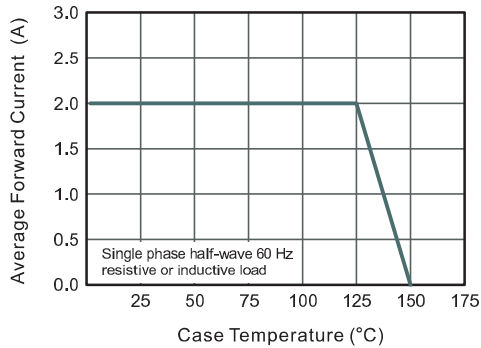


Fig.2 Typical Reverse Characteristics

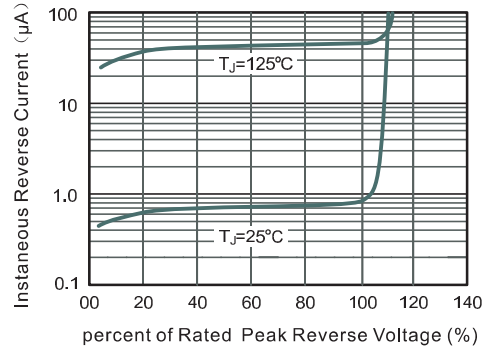


Fig.3 Typical Instantaneous Forward Characteristics

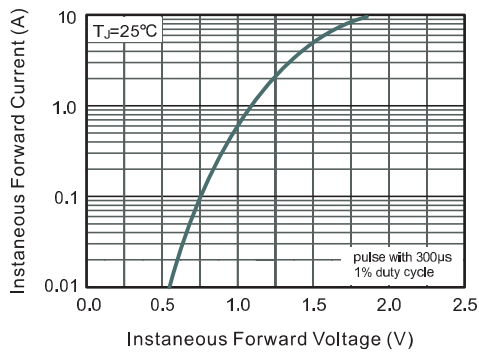


Fig.4 Typical Junction Capacitance

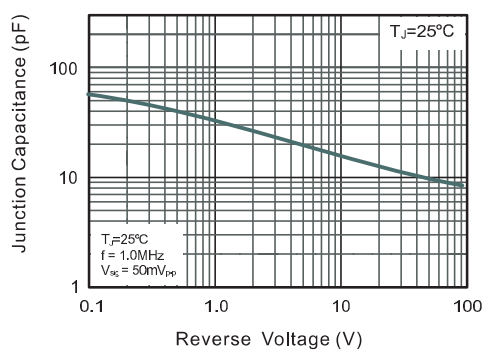


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

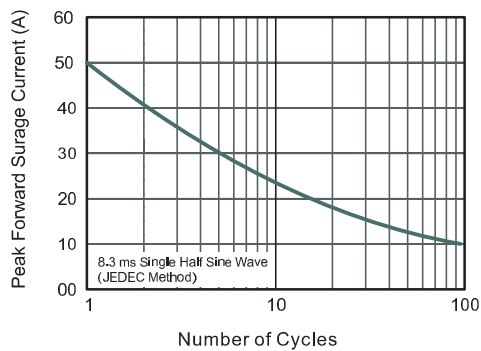
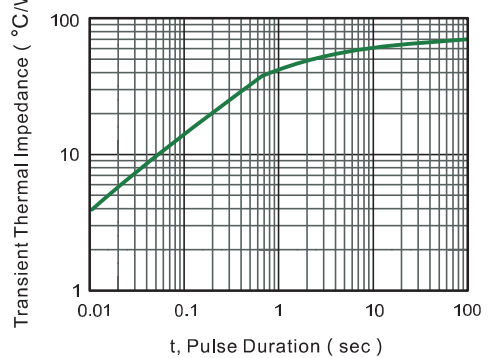
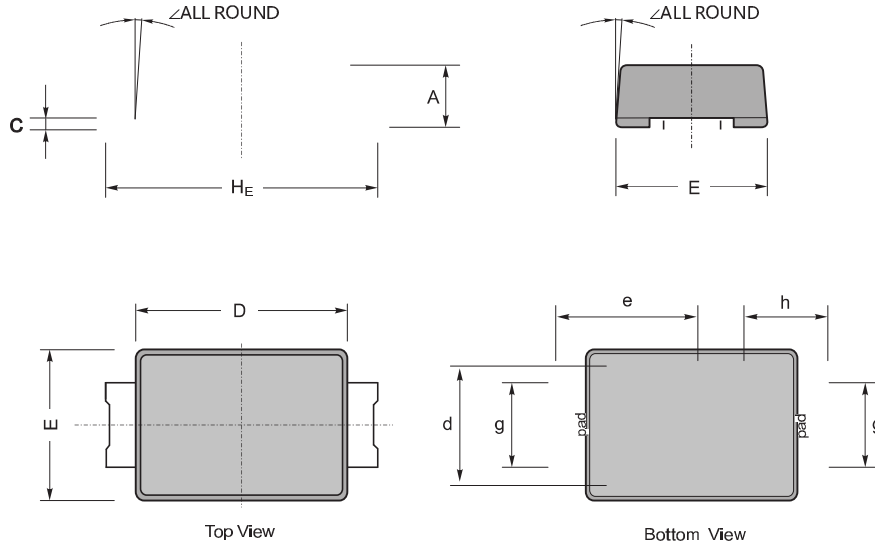


Fig.6- Typical Transient Thermal Impedance



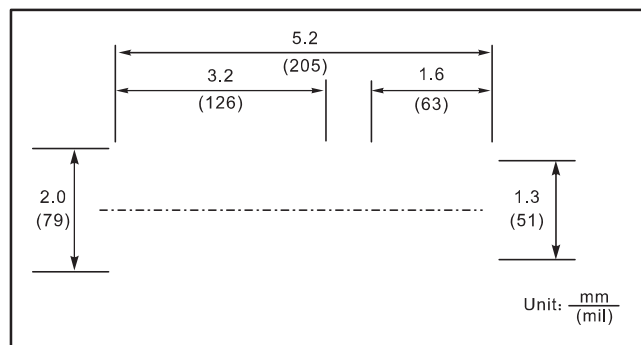
Package Outline SMA(2010)

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	H_E	d	e	g	h	\angle
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