

FEATURES

- Low Reverse Leakage
- High Forward Surge Capability
- High Reliability



SMA-W



Schematic Symbol

MECHANICAL DATA

- Case: SMA-W
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	EM530S	Unit
Marking		EM530S	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	3000	V
Maximum RMS Voltage	V_{RMS}	2100	V
Maximum DC Blocking Voltage	V_{DC}	3000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	0.5	A
Non-repetitive Peak Forward Surge Current 8.3 ms Singlehalf Sine-Wave	I_{FSM}	20	A
Maximum Forward Voltage@ $I_F=0.5A$	V_F	2.2	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}\text{C}$ I_R	5	μA
	$T_A=125^{\circ}\text{C}$	300	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	65	$^{\circ}\text{C/W}$
Type Junction Capacitance $V_R=4.0V, f=1\text{MHz}$	C_J	35	pF
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	

Notes:

1) Thermal resistance from junction to ambient , PCB mounted

CHARACTERISTIC CURVES

Fig. 1- Typical Forward Characteristic

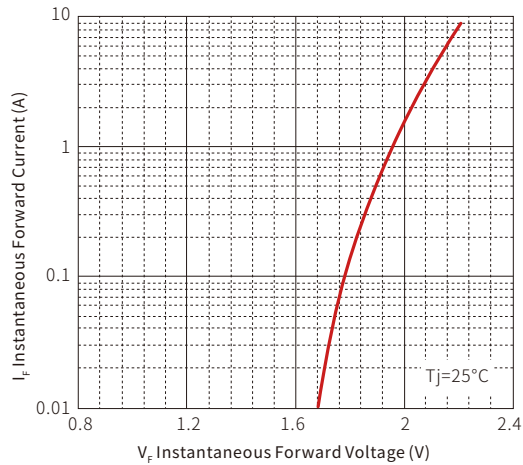


Fig. 2-Forward Current Derating Curve

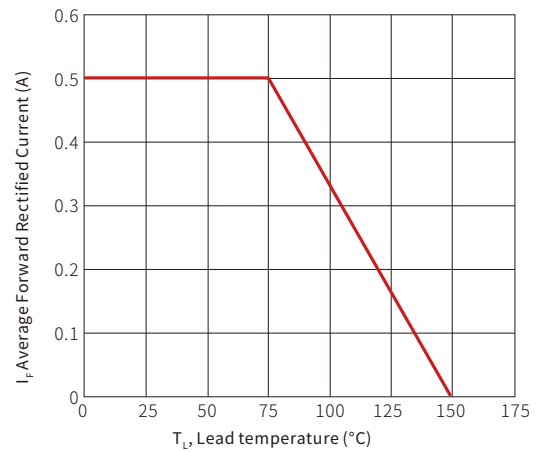


Fig. 3-Maximum Non Repetitive Peak Forward Surge Current

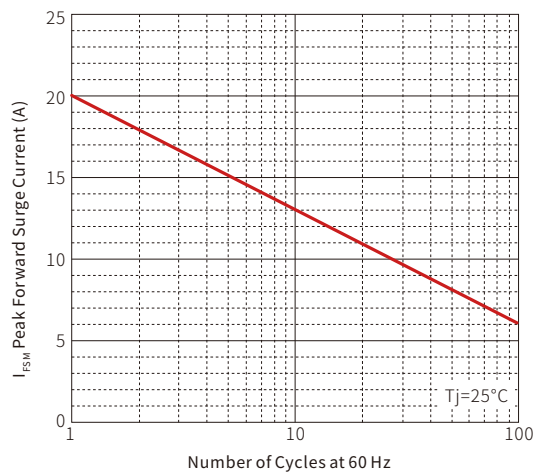
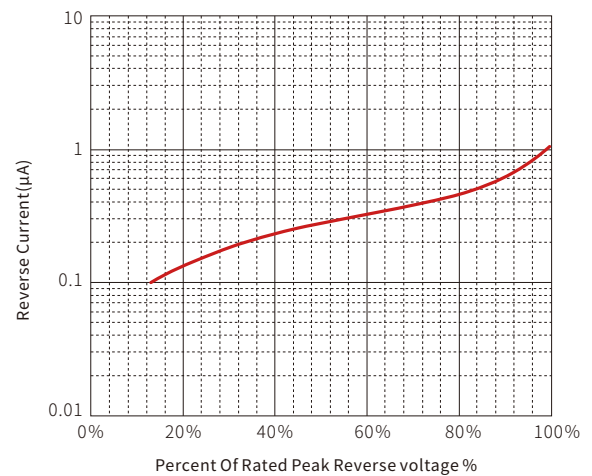
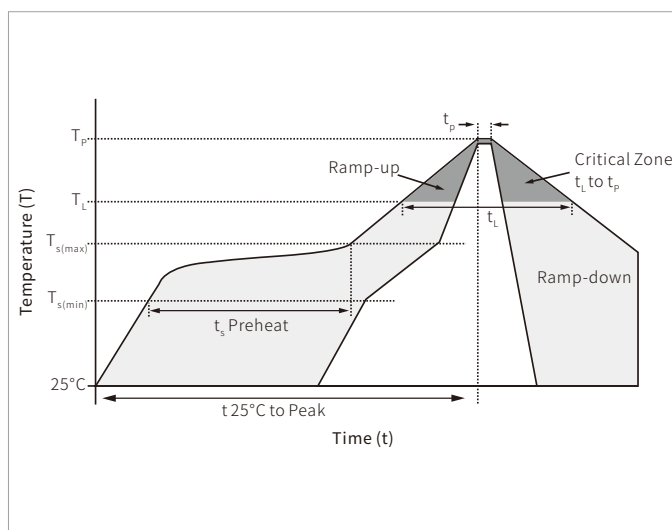


Fig. 4-Typical Reverse Characteristics

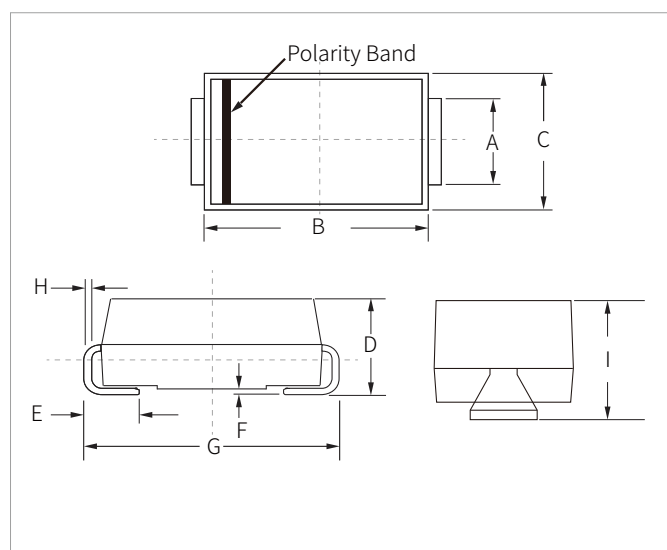


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

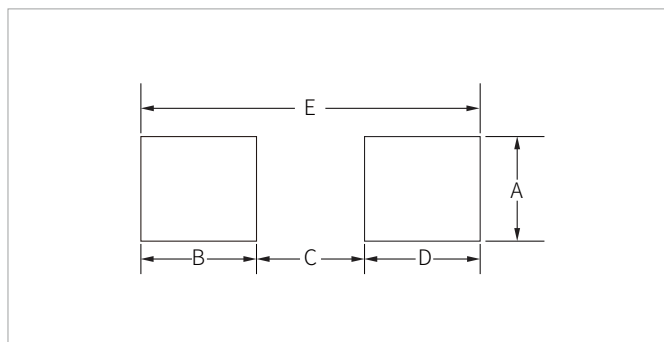


SMA-W PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.20	1.60	0.047	0.063
B	4.20	4.60	0.165	0.181
C	2.60	2.80	0.102	0.110
D	2.10	2.40	0.083	0.094
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	4.85	5.25	0.191	0.207
H	0.15	0.30	0.006	0.012
I	1.90	2.40	0.075	0.094

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.63	-	0.064	-
B	1.45	-	0.057	-
C	-	2.80	-	0.090
D	1.45	-	0.057	-
E	5.28REF		0.208REF	

ORDERING INFORMATION

Part Number	Size	QTY/Reel	Reel Size
EM530S	SMA-W	5000PCS	13"

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By QR Code

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