

FEATURES

- Low Power Loss High Efficiency
- Ideal For Automated Placement
- Guard Ring For Over-voltage Protection
- High Surge Current Capability



DO-214AC(SMA)



Schematic Symbol

MECHANICAL DATA

- 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	SS52A	SS53A	SS54A	SS55A	SS56A	SS58A	SS510A	SS515A	SS520A	Unit
Marking			SS52	SS53	SS54	SS55	SS56	SS58	SS510	SS515	SS520	
Repetitive Peak Reverse Voltage		V _{RRM}	20	30	40	50	60	80	100	150	200	V
Reverse Voltage,total RMS Value		V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage		V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Rectified Current		I _{F(AV)} ¹⁾	5.0									A
Surge Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load Per Diode		I _{FSM}	100									A
Maximum Instantaneous Forward Voltage I _F =5A,T _a =25°C		V _F	0.55			0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.5					0.1				mA
	T _A =100°C		10					5				mA
Typical Thermal Resistance Note 1		R _{θJA}	60 ¹⁾									°C/W
Typical Thermal Resistance Note 1		R _{θJL}	22 ¹⁾									°C/W
Operating Junction Temperature Range		T _J	-55 to +150					-55 to +175				°C
Storage Temperature Range		T _{STG}	-55 to +150									°C

Note1): Mounted on PCB with 5.0x5.0mm copper pads.

CHARACTERISTIC CURVES

Fig. 1- I_o - T_L Curve

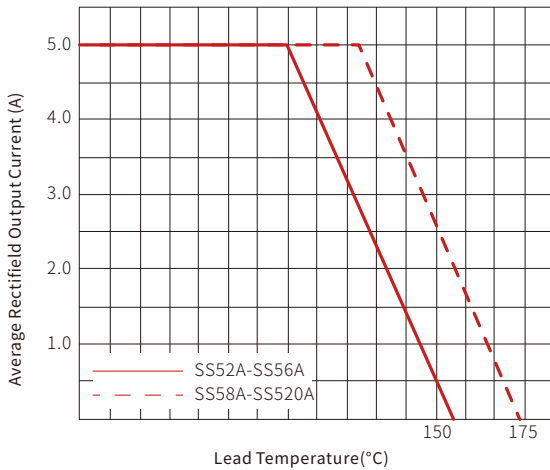


Fig. 2-Surge Forward Current Capability

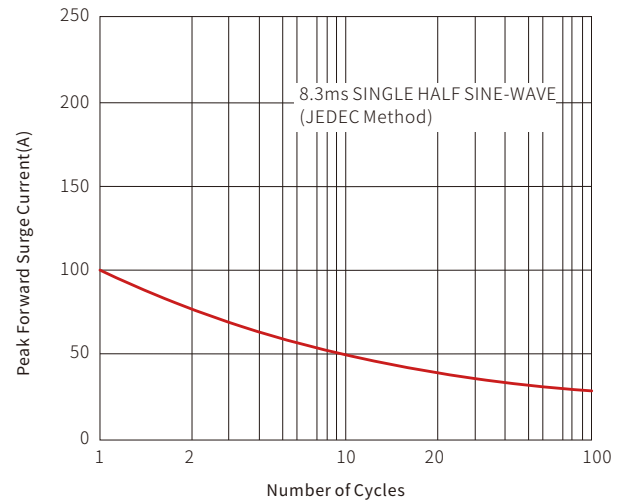


Fig. 3-Typical Forward Characteristics

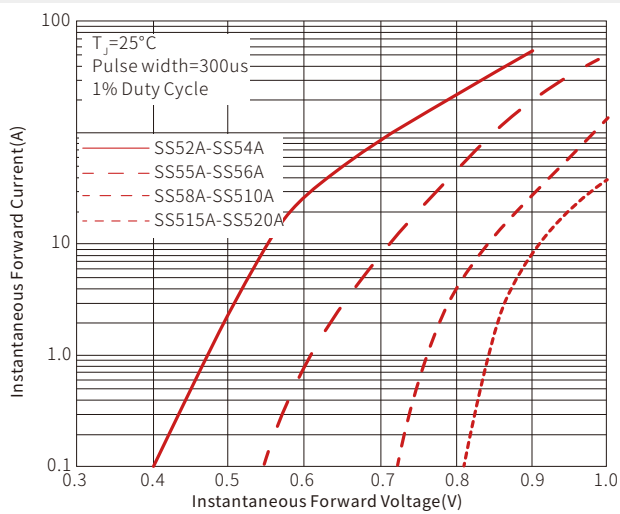
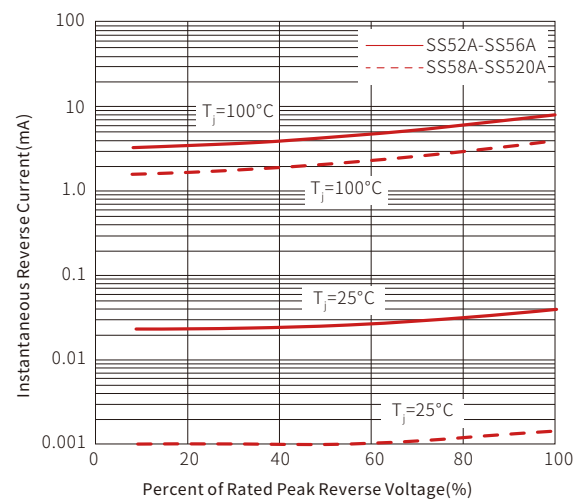
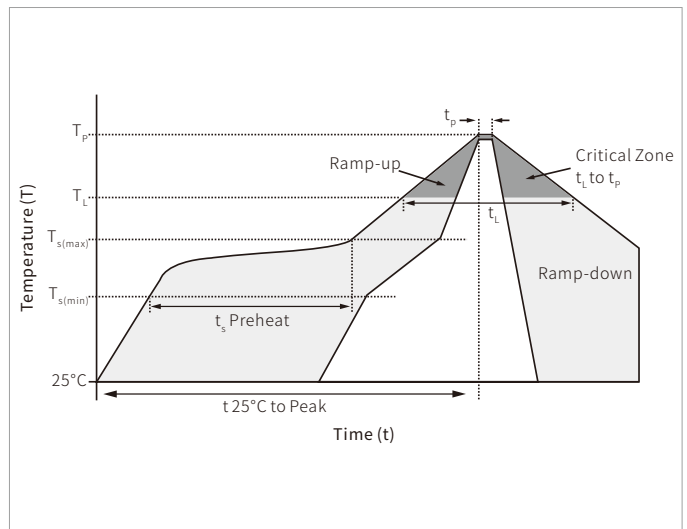


Fig. 4-Typical Reverse Characteristics

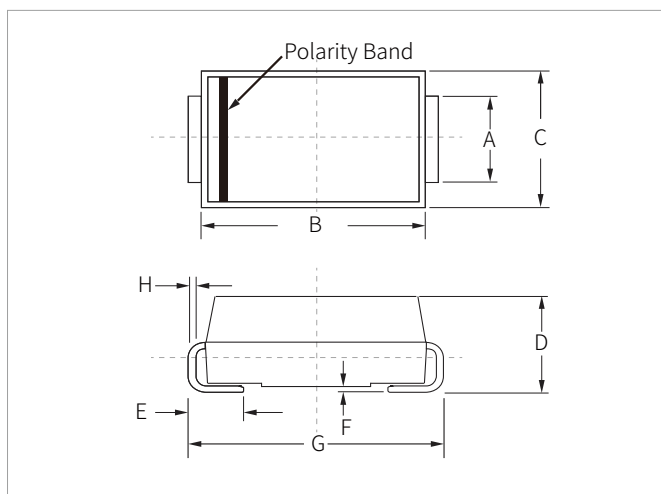


SOLDERING PARAMETERS

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

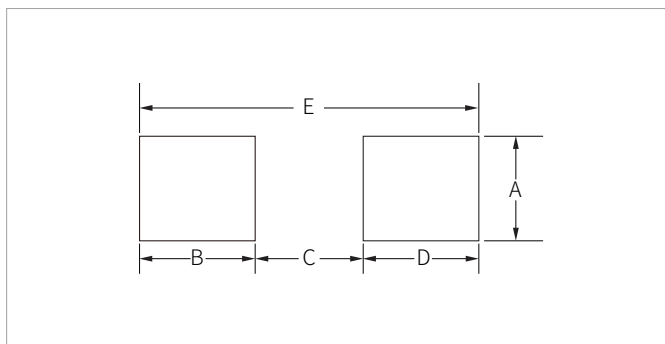


DO-214AC(SMA) PACKAGE INFORMATION



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	2.40	2.80	0.094	0.110
D	2.00	2.40	0.079	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

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
SS52A-SS520A	DO-214AC(SMA)	5000PCS	13"

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