

## FEATURES

- | Glass Passivated Die Construction
- | Fast Recovery Time for High Efficiency
- | Low reverse leakage
- | Ideally Suited for Automatic Assembly
- | Meet AEC-Q101 Requirements



DO-214AC(SMA)



Schematic Symbol

## MECHANICAL DATA

- | Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- | Moisture Sensitivity: Level 1 per J-STD-020

## APPROVALS

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

## MAXIMUM RATINGS AND CHARACTERISTICS (T<sub>A</sub>=25°C)

Symbol	Parameter		RS 2AAQ	RS 2BAQ	RS 2DAQ	RS 2GAQ	RS 2JAQ	RS 2KAQ	RS 2MAQ	Unit
	Marking		RS2AA	RS2BA	RS2DA	RS2GA	RS2JA	RS2KA	RS2MA	
V <sub>RRM</sub>	Maximum repetitive peak reverse voltage		50	100	200	400	600	800	1000	V
V <sub>RMS</sub>	Maximum RMS voltage		35	70	140	280	420	560	700	
V <sub>DC</sub>	Maximum DC blocking voltage		50	100	200	400	600	800	1000	
I <sub>F(AV)</sub>	Maximum average forward rectified current		2.0							A
I <sub>FSM</sub>	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave		50							
R <sub>θJA</sub>	Typical thermal resistance (Note 1)		86							°C/W
R <sub>θJL</sub>	Typical thermal resistance (Note 1)		14							
I <sub>R</sub>	Maximum reverse current @rated V <sub>R</sub> per diode (Note2)	T <sub>J</sub> =25°C	5							μA
		T <sub>J</sub> =125°C	100							
V <sub>F</sub>	Maximum forward voltage I <sub>F</sub> =2A, T <sub>J</sub> =25°C(Note1)		1.3							V
t <sub>rr</sub>	Maximum reverse recovery time @I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A,I <sub>RR</sub> =0.25A		150				250	500		μs
T <sub>J</sub>	Operating junction temperature rang		-55~+150							°C
T <sub>STG</sub>	Storage temperature rang		-55~+150							°C

Note 1: Pulse test with PW=0.3mS

Note 2: Pulse test with PW=30mS

# CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

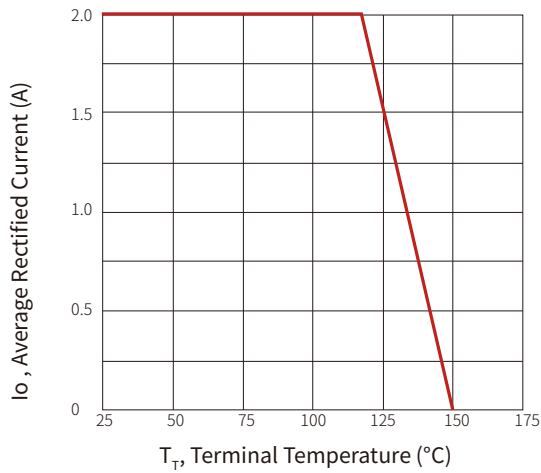


Fig.2 Typical Forward Characteristics

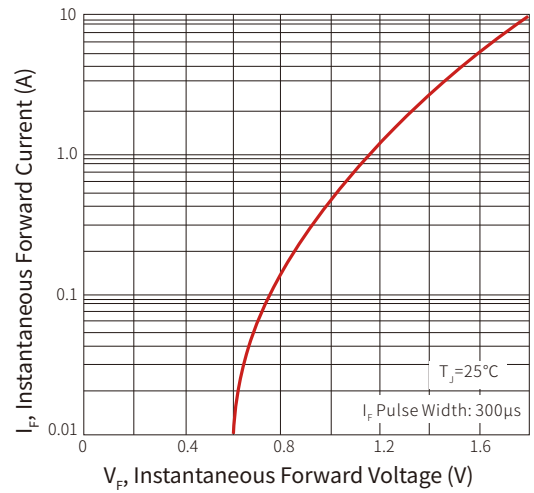


Fig.3 Forward Surge Current Derating Curve

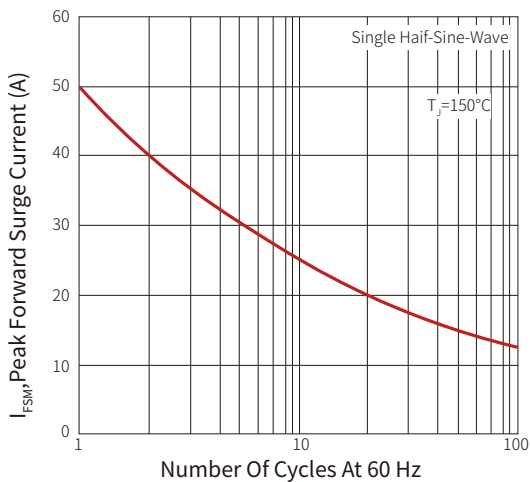
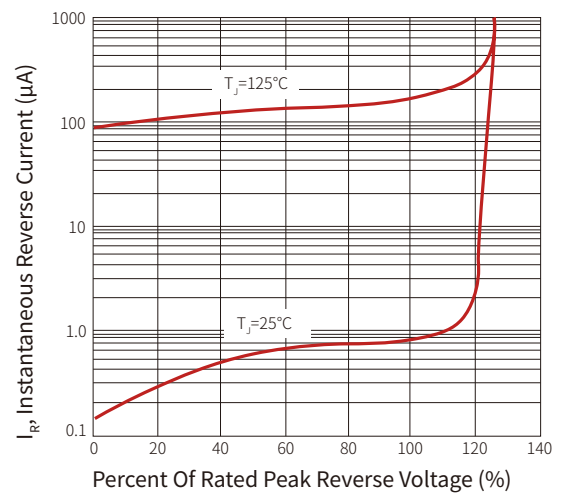
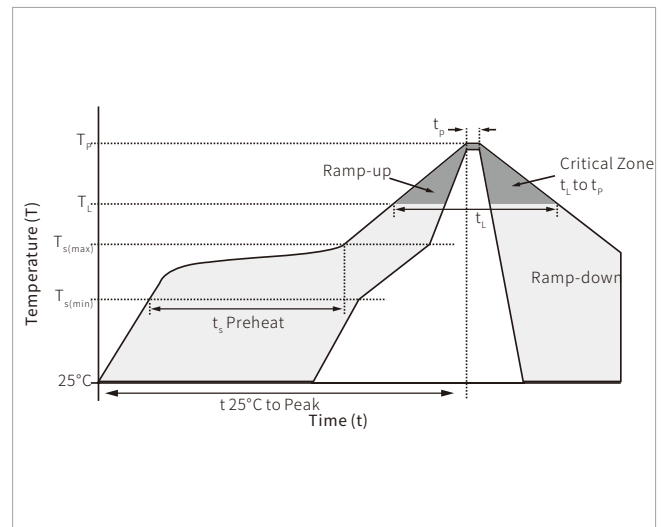


Fig.4 Typical Reverse Characteristics

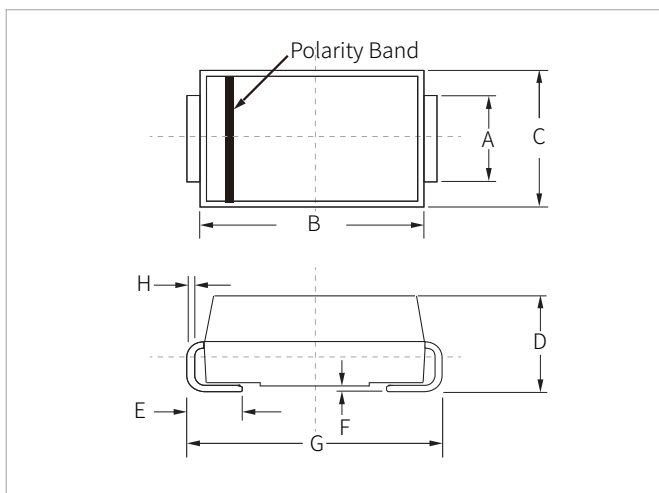


## SOLDERING PARAMETERS

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

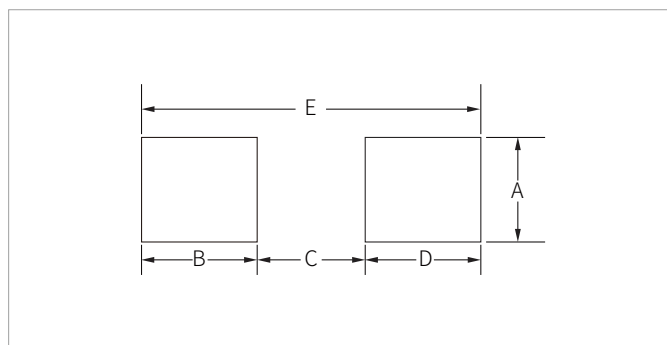


## DO-214AC(SMA) PACKAGE INFORMATION



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	Component Package	QTY/Reel	Reel Size
RS2AAQ-RS2MAQ	DO-214AC(SMA)	5000PCS	13"

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