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

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=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_{RRM}	Maximum repetitive peak reverse voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS voltage	35	70	140	280	420	560	700	
V_{DC}	Maximum DC blocking voltage	50	100	200	400	600	800	1000	
$I_{F(AV)}$	Maximum average forward rectified current	2.0							A
I_{FSM}	Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave	50							
$R_{\theta JA}$	Typical thermal resistance (Note 1)	86							°C/W
$R_{\theta JL}$	Typical thermal resistance (Note 1)	14							
I_R	Maximum reverse current @rated V_R per diode (Note2) T_J=25°C	5							μA
	T_J=125°C	100							
V_F	Maximum forward voltage I_F=2A, T_J=25°C(Note1)	1.3							V
t_{rr}	Maximum reverse recovery time @I_F=0.5A,I_R=1.0A,I_{RR}=0.25A	150				250	500		μs
T_J	Operating junction temperature rang	-55~+150							°C
T_{STG}	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

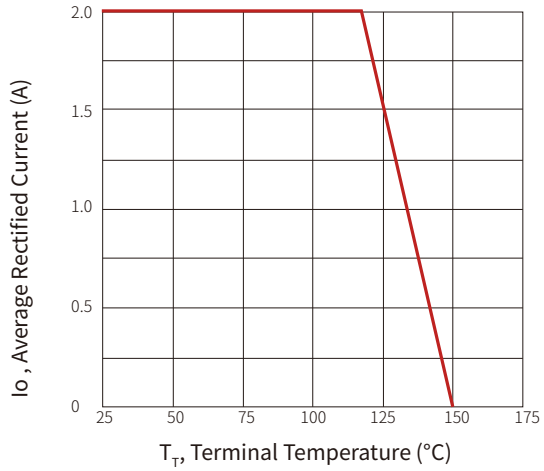


Fig.2 Typical Forward Characteristics

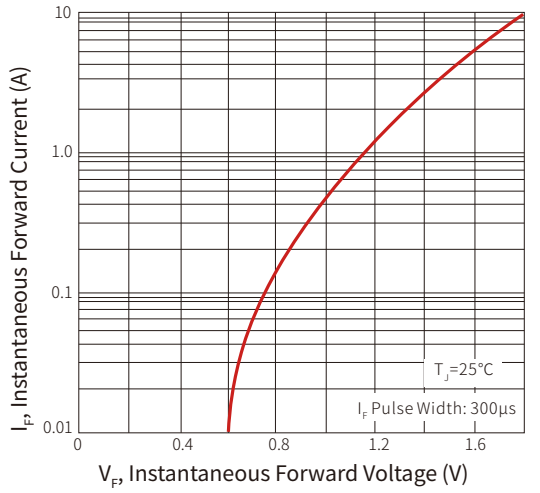


Fig.3 Forward Surge Current Derating Curve

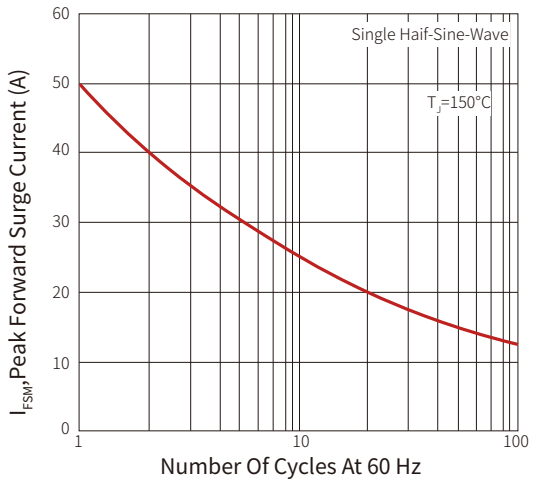
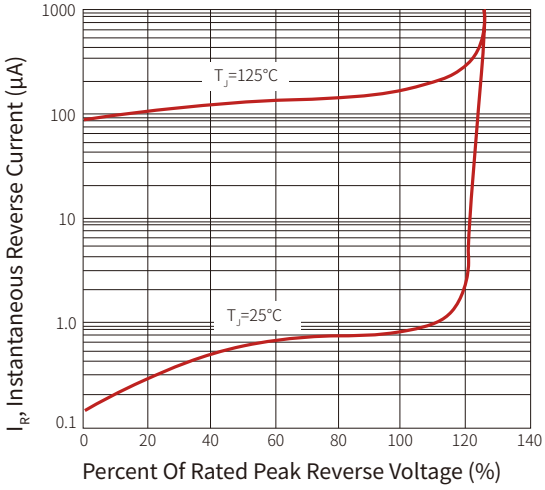
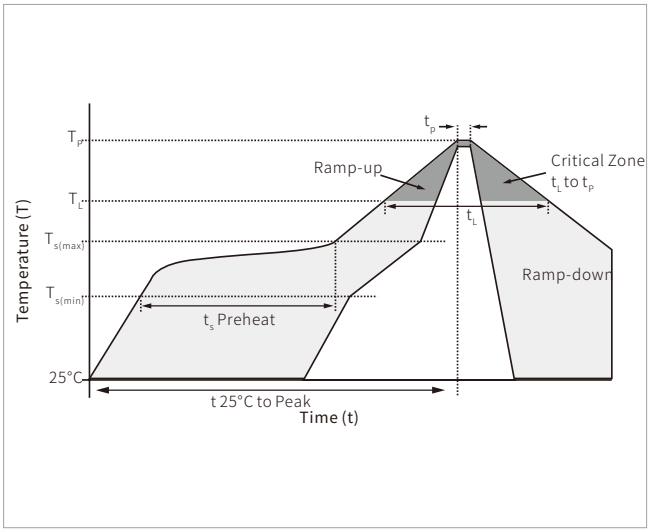


Fig.4 Typical Reverse Characteristics

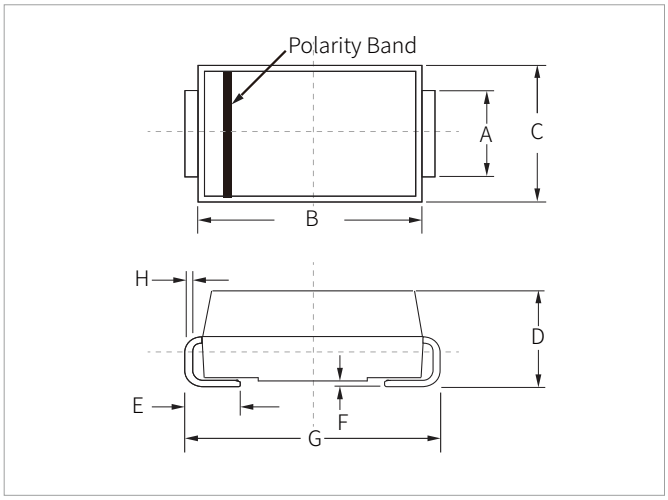


SOLDERING PARAMETERS

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

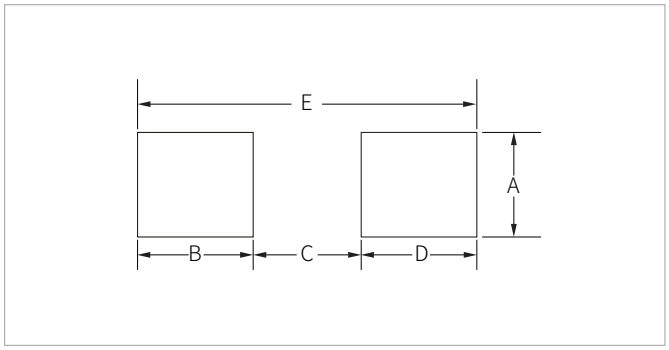


DO-214AC(SMA) PACKAGE INFORMATION



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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