

FEATURES

- Ideal For Printed Circuit Board
- Glass Passivated Junction Chip
- Low Reverse Leakage
- High Forward Surge Current Capability



DO-214AC(SMA)



Schematic Symbol

MECHANICAL DATA

- Case : Molded plastic body
- Polarity : Polarity symbol marking on body
- Mounting Position : Any

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter		Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Marking			US1A	US1B	US1D	US1G	US1J	US1K	US1M	
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	
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Current at T _L =100°C		I _{F(AV)}	1.0							A
Surge Peak Forward Current,8.3ms Single Half Sine-Wave Superimposed On Rated Load		I _{FSM}	30.0							
Maximum Instantaneous Forward Voltage at 1.0A		V _F	1.0			1.4	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	2.0							μA
	T _A =125°C		200							
Maximum Reverse Recovery Time(Note 1)		T _{rr}	50				75			ns
Typical Junction Capacitance (Note2)		C _J	20.0							pF
Typical Thermal Resistance		R _{θJA}	80.0							°C/W
Operating Junction And Storage Temperature Range		T _J ,T _{STG}	-55 to +175							°C

Note :

- Reverse recovery time test condition: I_F=0.5A I_R=1.0A I_{rr}=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

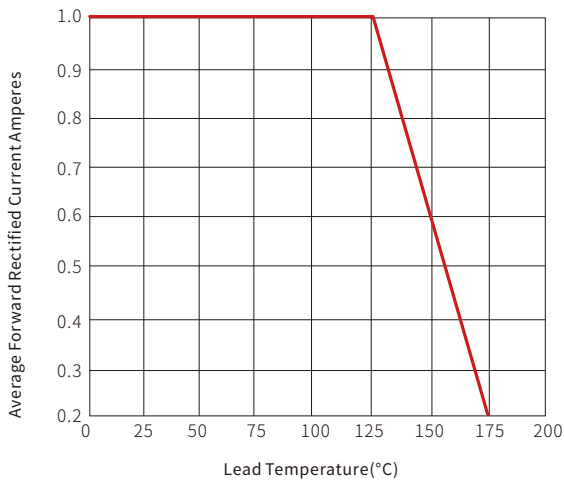


Fig. 2- Maximum Non-repetitive Peak Forward Surge Current Perleg

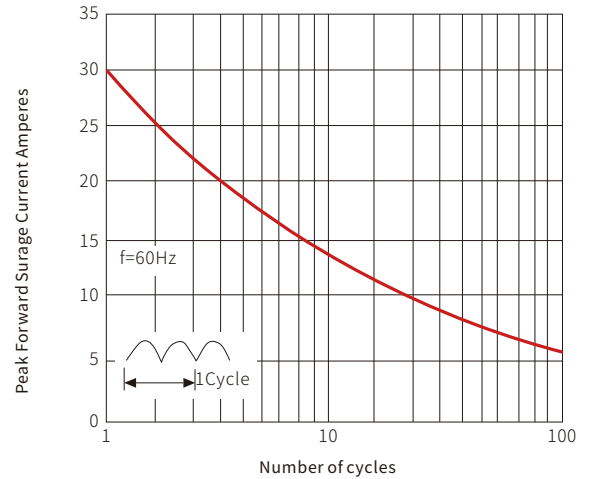


Fig. 3- Typical Forward Voltage Characteristics

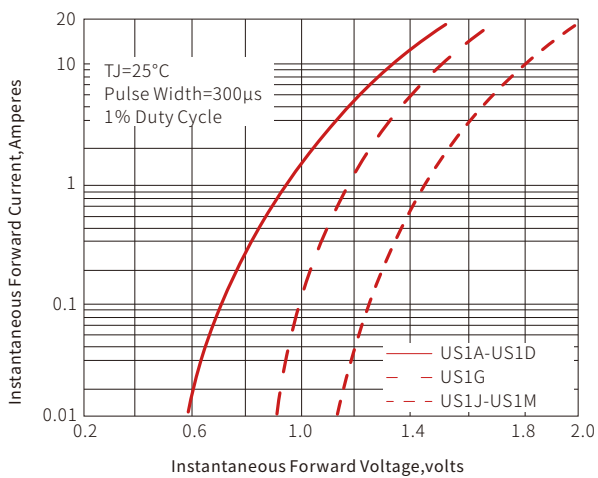
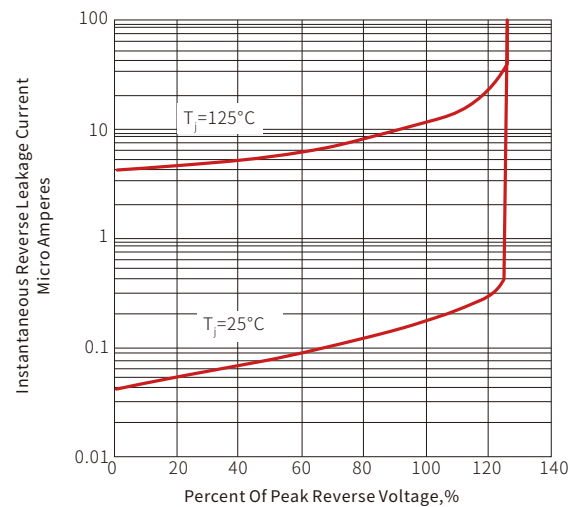
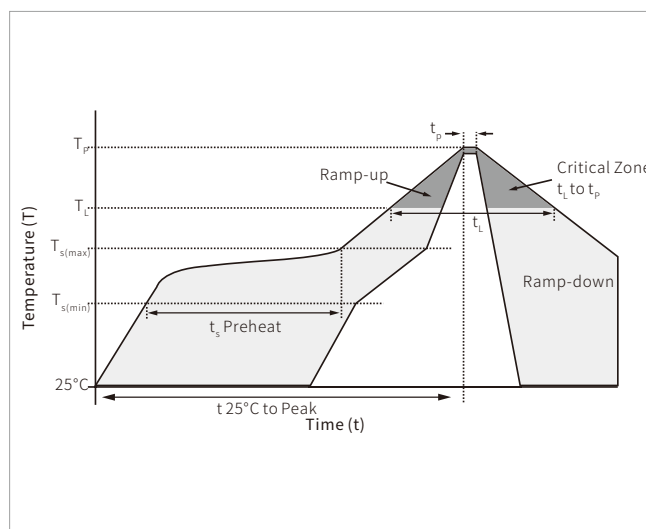


Fig. 4- Typical Reverse Leakage Characteristics

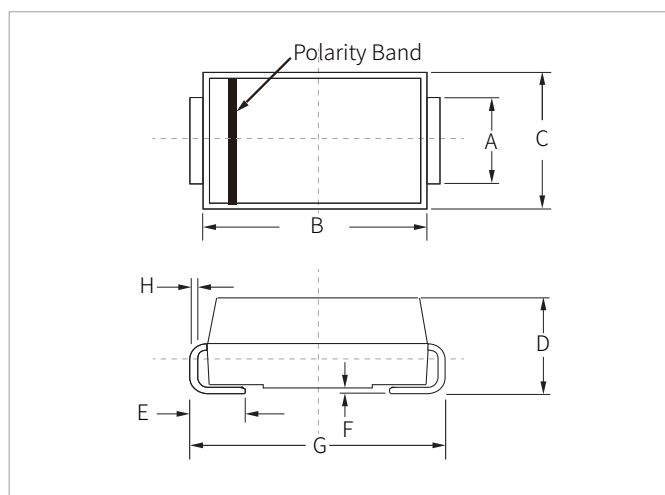


SOLDERING PARAMETERS

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

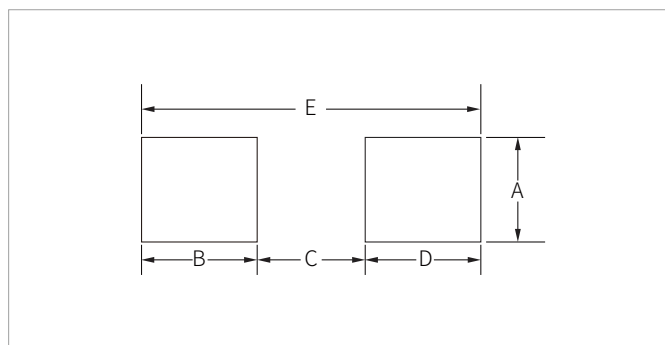


DO-214AC(SMA) PACKAGE INFORMATION



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
US1A-US1M	DO-214AC(SMA)	5000PCS	13"

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