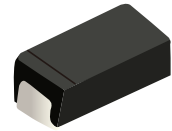


FEATURES

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



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
- | Polarity: Cathode line denotes the cathode end

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	Unit	
Marking		GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M		
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	I _{F(AV)}					1.0				A
Surge(non-repetitive)forward current@60Hz Half-sine wave,1 cycle,Ta=25°C	I _{FSM}					30				
Typical reverse recovery time(Note 1)	t _{rr}					1.5				us
Typical Junction capacitance(Note 2)	C _j					12				pF
Non-repetitive peak reverse avalanche energy at 25°C,I _{AS} =1A,L=10mH	E _{RSM}					5				mJ
Operating junction temperature rang	T _J					-55~+150			°C	
Storage temperature rang	T _{STG}					-55~+150				
Typical Thermal Resistance	R _{θJA}					75	85		°C/W	
Typical Thermal Resistance	R _{θJL}					27	30			

Note 1: Reverse recovery test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A

Note 2: Measured at 1MHz and applied reverse voltage of 4.0V D.C.

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	Unit
Maximum instantaneous forward voltage drop per diode(Note 3)@1A	V _F				1.1				V
Maximum reverse current @rated V _R	T _J =25°C				1				uA
	T _J =125°C				50				

Note 3: Pulse test with P_w=300uS,1% duty Cycle

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

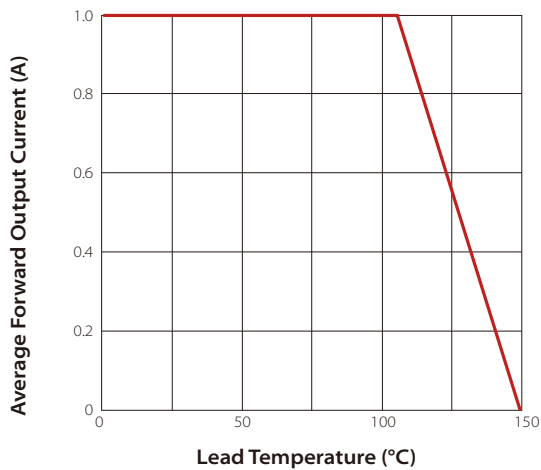


Fig.2 Forward Surge Current Capability

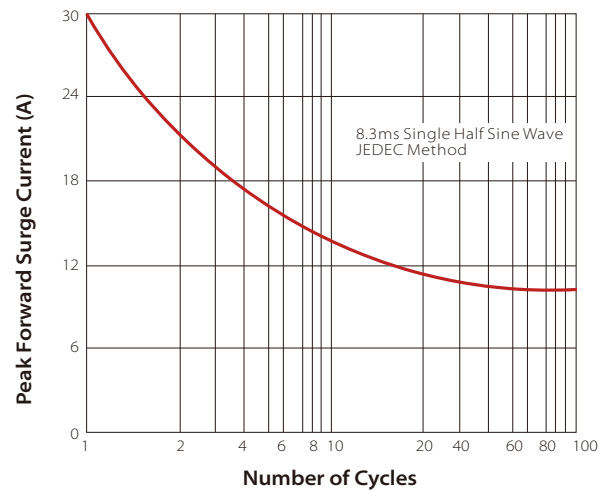


Fig.3 Typical Forward Voltage

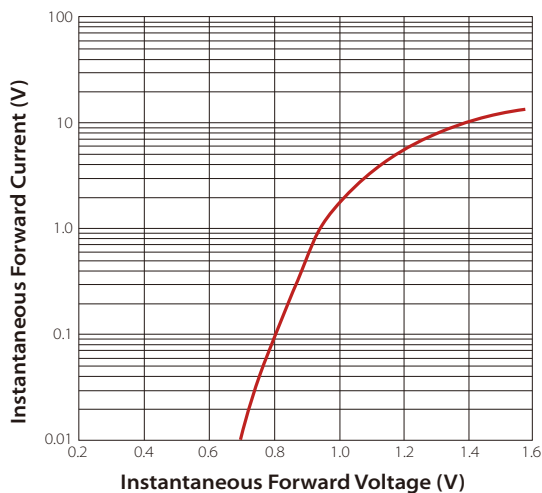
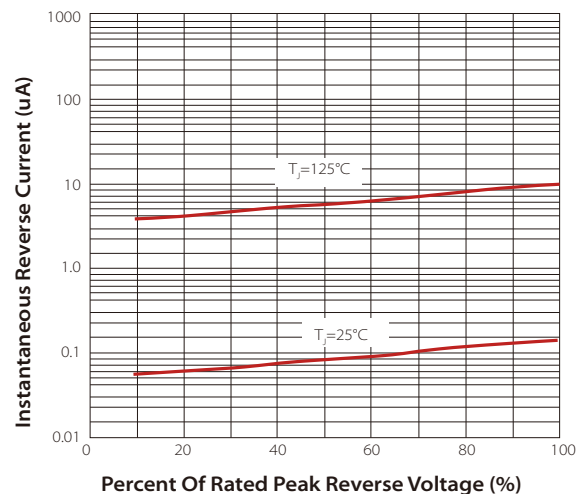
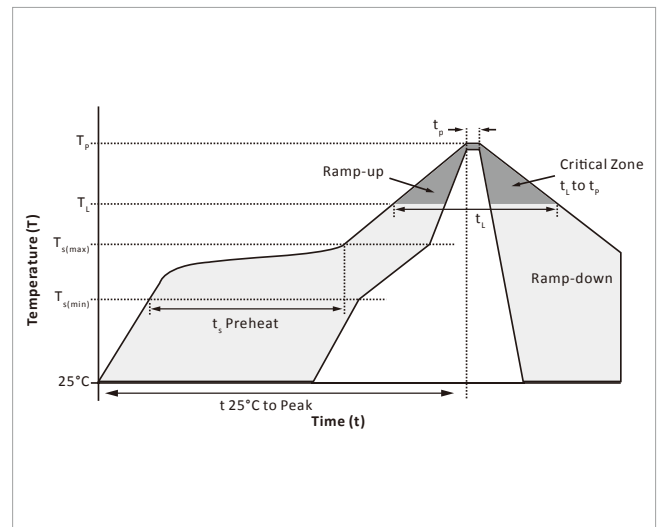


Fig.4 Typical Reverse Characteristics

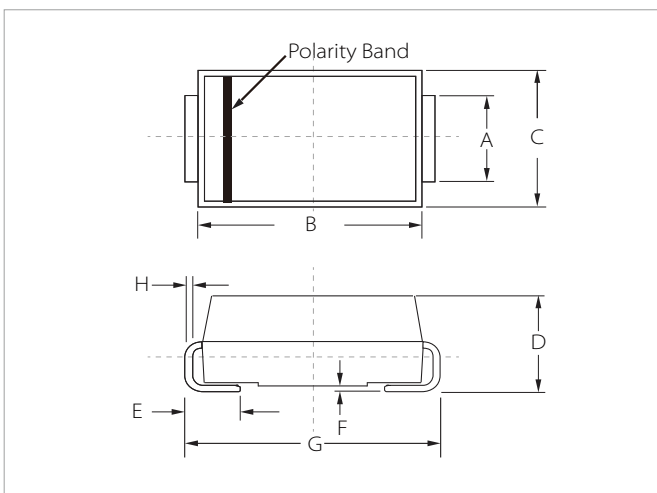


SOLDERING PARAMETERS

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_p)	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

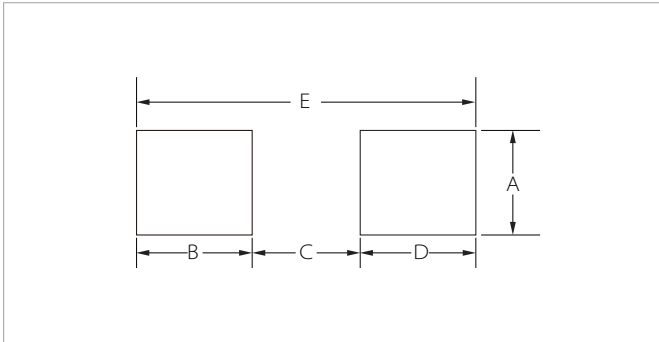


DO-214AC(SMA) PACKAGE INFORMATION



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	2.60	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

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
GS1A-GS1M	DO-214AC(SMA)	5000PCS	13"

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