

FEATURES

- | Low profile package
- | Ideal for automated placement
- | Glass passivated Junction chip
- | High forward surge current capability



DO-214AC(SMA)



Schematic Symbol

MECHANICAL DATA

- | Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- | Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- | 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	EMA520	Unit	
Marking		EMA520		
Maximum repetitive peak reverse voltage	V _{RRM}	2000	V	
Maximum RMS voltage	V _{RMS}	1400		
Maximum DC blocking voltage	V _{DC}	2000		
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I _o	2.0	A	
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _J =25°C	I _{FSM}	30		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _J =25°C		60		
Maximum instantaneous forward voltage I _{FM} =2.0A	V _F	1.3	V	
Maximum DC reverse current at rated DC blocking voltage	I _R	T _J =25°C	5	μA
		T _J =125°C	100	
Typical junction capacitance Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _J	7	pF	
Current squared time @1ms ≤ t ≤ 8.3ms T _J =25°C	I ² t	3.735	A ² s	
Typical Thermal Resistance ⁽¹⁾	R _{θJ-A}	70	°C/W	
	R _{θJ-L}	25		
	R _{θJ-C}	15		
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C	

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

CHARACTERISTIC CURVES

Fig. 1- I_o-TL Curve

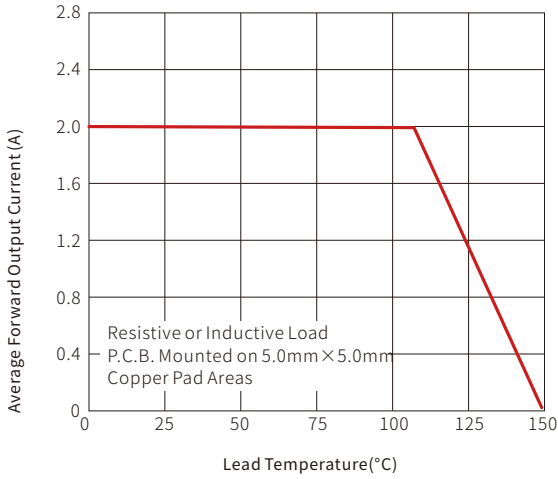


Fig. 2-Forward Surge Current Capability

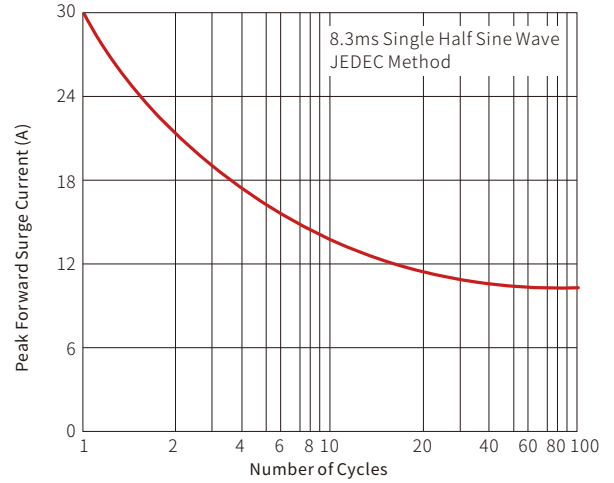


Fig. 3-Typical Forward Voltage

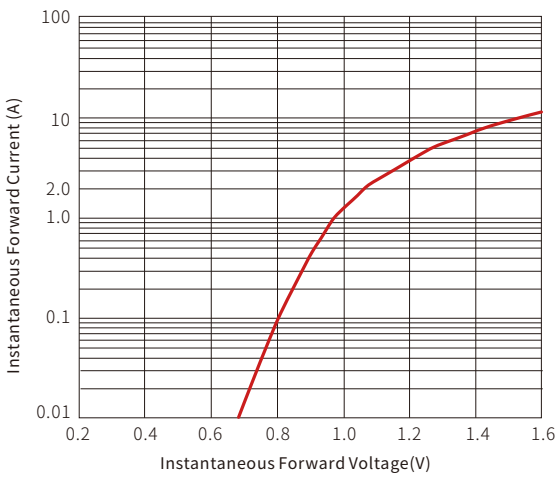
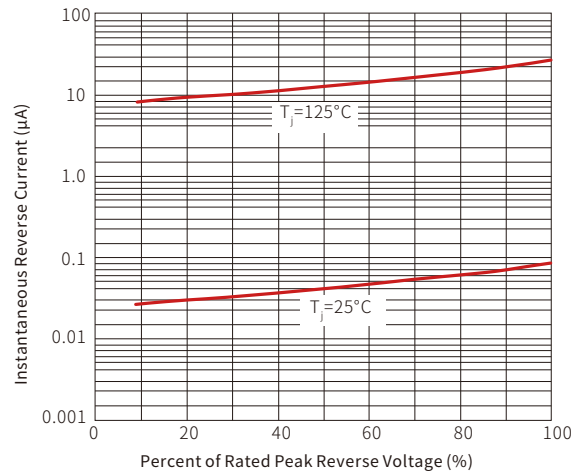
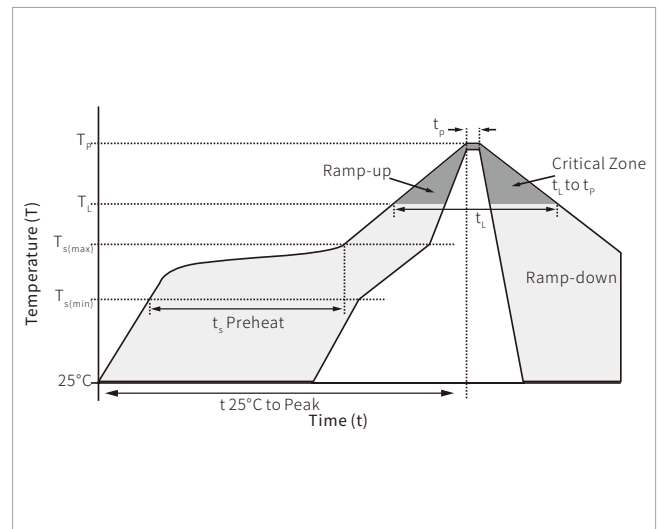


Fig. 4-Typical Reverse Characteristics

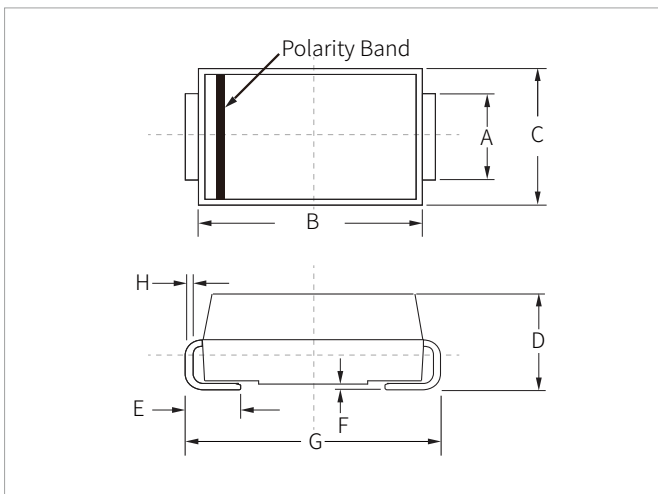


SOLDERING PARAMETERS

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_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

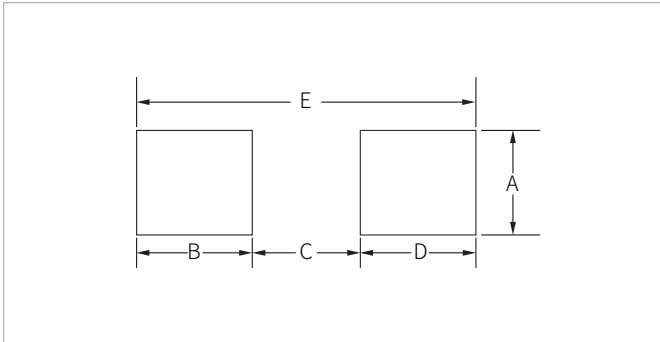


DO-214AC(SMA) PACKAGE INFORMATION



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
EMA520	DO-214AC(SMA)	5000PCS	13"

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