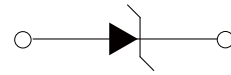


## FEATURES

- | Low power loss high efficiency
- | Ideal for automated placement
- | Guard ring for over-voltage protection
- | High surge current capability
- | Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE2002/96/EC
- | Halogen-free according to IEC 61249-2-21



DO-214AC(SMA)



Schematic Symbol

## APPLICATIONS

- | Case: DO-214AC (SMA)
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any

## APPROVALS

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

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

Parameter	Symbol	SS32TA	SS33TA	SS34TA	SS35TA	SS36TA	SS39TA	SS310TA	SS315TA	SS320TA	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	90	100	150	200	V
Reverse voltage,total RMS Value	V <sub>RMS</sub>	14	21	28	35	42	63	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	90	100	150	200	V
Maximum average forward rectified current at T <sub>L</sub> =100°C	I <sub>F(AV)</sub>	3.0									A
Surge Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	70									A
Forward voltage per diode <sup>(1)</sup> T <sub>F</sub> =3A,T <sub>J</sub> =25°C	V <sub>F</sub>	0.55		0.72		0.85		0.95			V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25°C	0.5									mA
	T <sub>A</sub> =100°C	20									mA
Critical rate of rise of off-state voltage	dV/dt	10,000									V/μs
Operating junction temperature range	T <sub>J</sub>	-55 to +150									°C
Storage temperature range	T <sub>STG</sub>	-55 to +150									°C

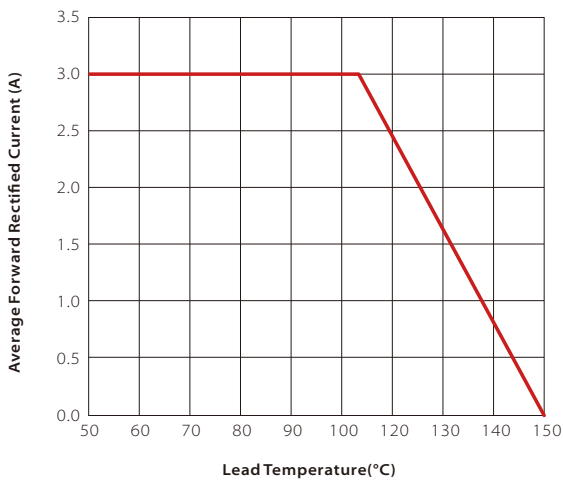
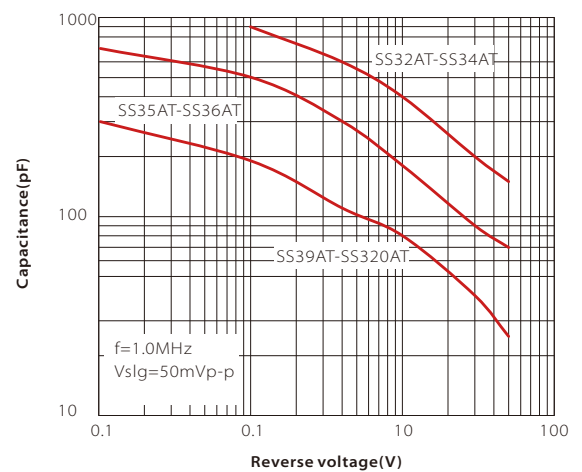
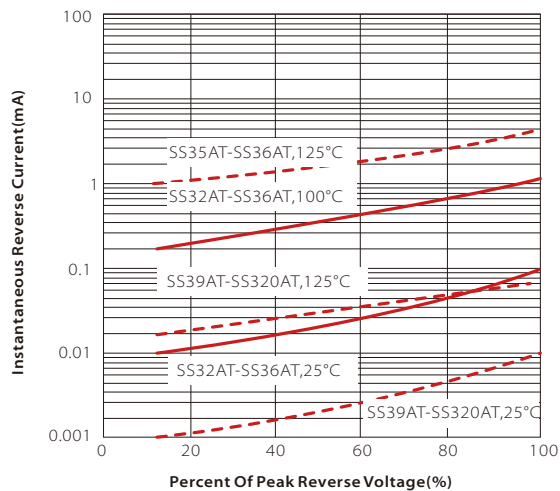
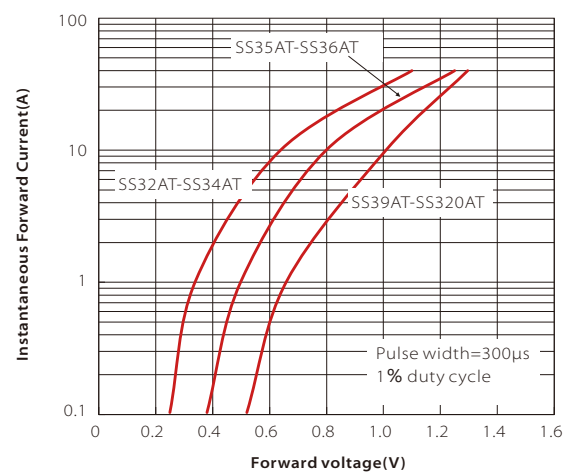
**Notes:**

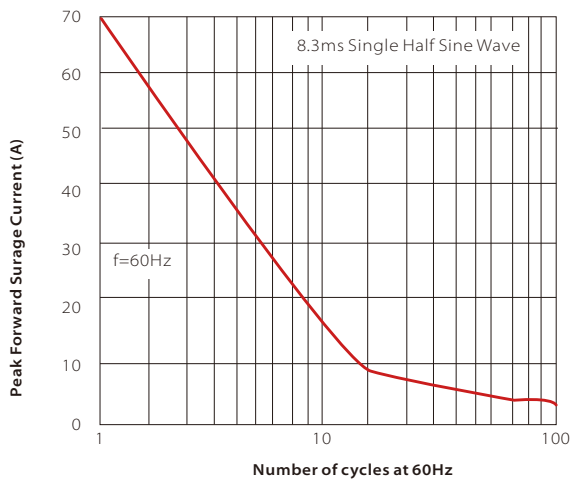
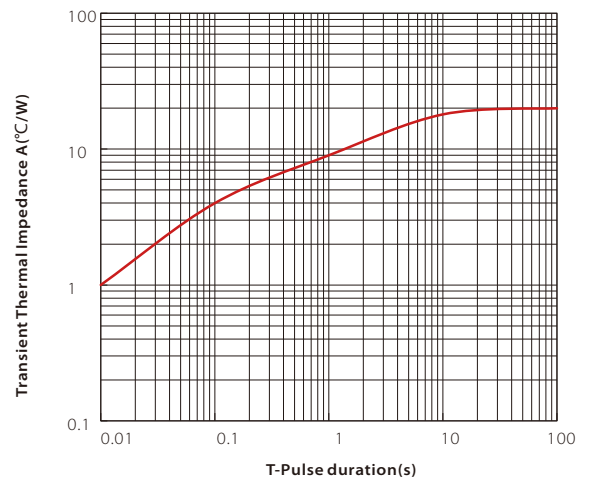
- 1.pulse test with PW=0.3ms
- 2.pulse test with PW=30ms

## THERMAL PERFORMANCE

Parameter	Symbol	TYP.	Unit
Junction to Ambient Thermal Resistance	$R_{\theta JA}$	66	$^{\circ}\text{C}/\text{W}$
Junction to Ambient Thermal Resistance	$R_{\theta JL}$	25	$^{\circ}\text{C}/\text{W}$

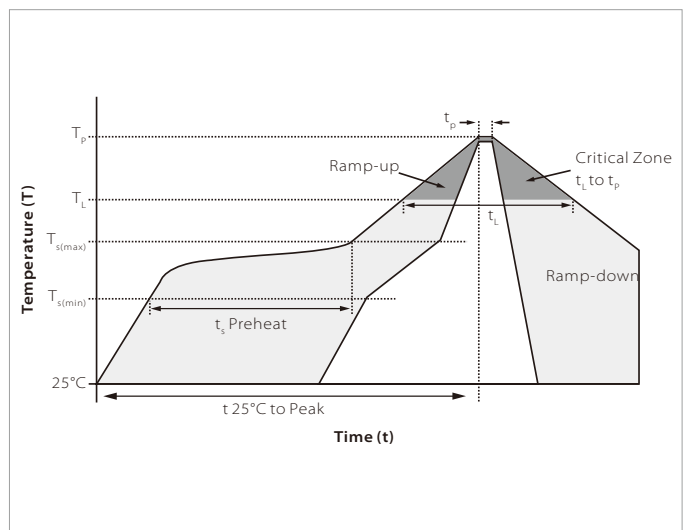
## CHARACTERISTIC CURVES

**Fig. 1- Derating Curve Output Rectified Current**

**Fig. 2-Typical Junction Capacitance**

**Fig. 3-Typical Reverse Characteristics**

**Fig. 4-Typical Forward Characteristics**


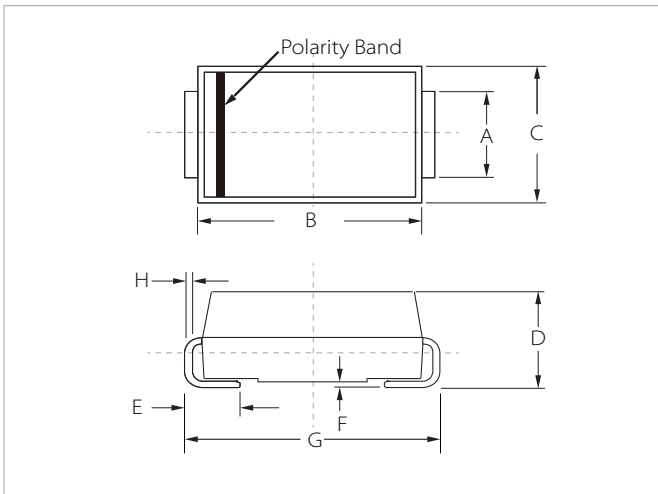
**Fig. 5-Maximum Non-repetitive Forward Surge Current**

**Fig. 6-Typical Transient Thermal 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) ( $t_r$ )	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

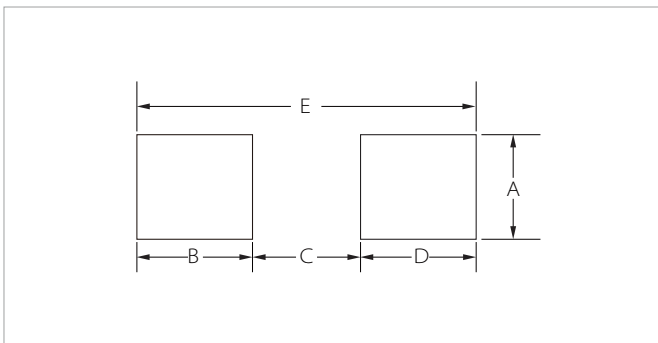


## DO-214AC(SMA) PACKAGE INFORMATION



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	Size	QTY/Reel	Reel Size
SS32TA-320TA	DO-214AC(SMA)	5000PCS	13"

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