

FEATURES

- Excellent capability of absorbing transient surge
- Quick response to surge voltage
- Eliminates over voltage caused by fast rising transients
- Solid-state silicon technology, non degenerate



SMA(DO-214AC)



Marking



Schematic Symbol

APPLICATIONS

- Audio/Video line
- Network and telecom
- Data lines and security systems
- Serial ports

APPROVALS

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

ELECTRICAL CHARACTERISTICS

Part Number	V_{DRM}	V_S	V_T	I_{DRM}	I_S	I_T	I_H	C_o
	Min. (V)	Max. (V)	Max. (V)	Max. (μA)	mA	Max. (A)	Min. (mA)	Typ.(pF)
STA45B90	90.0	130.0	4.0	5.0	800.0	2.2	120.0	45.0

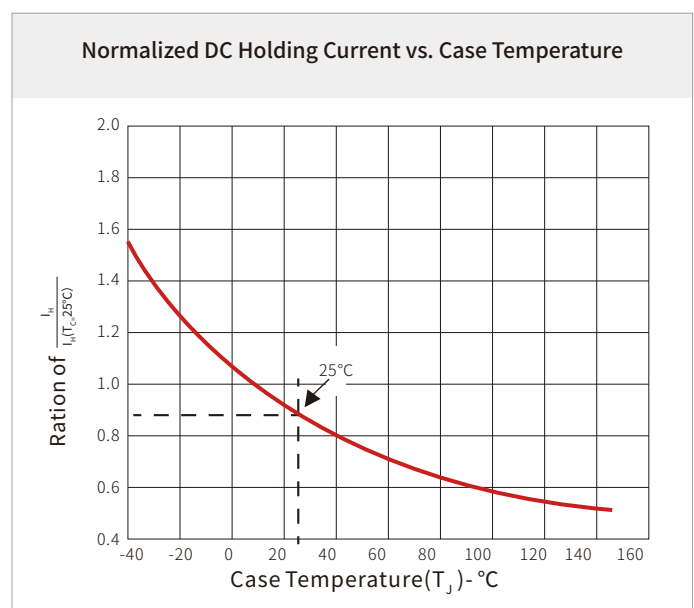
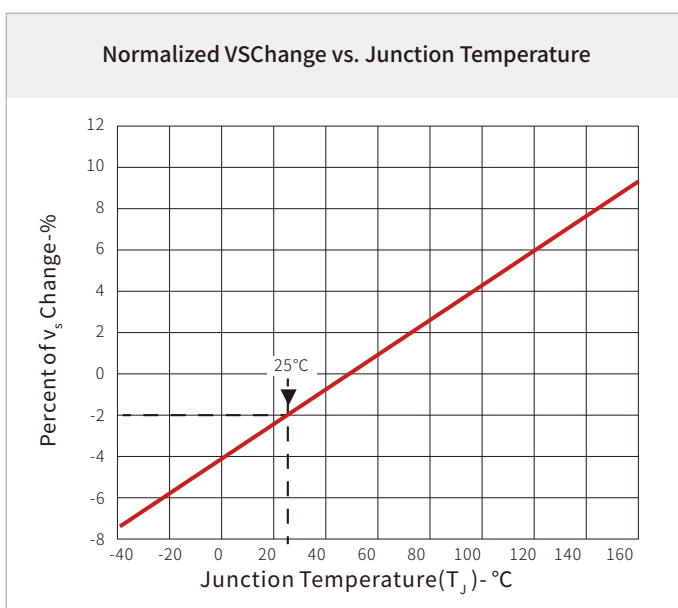
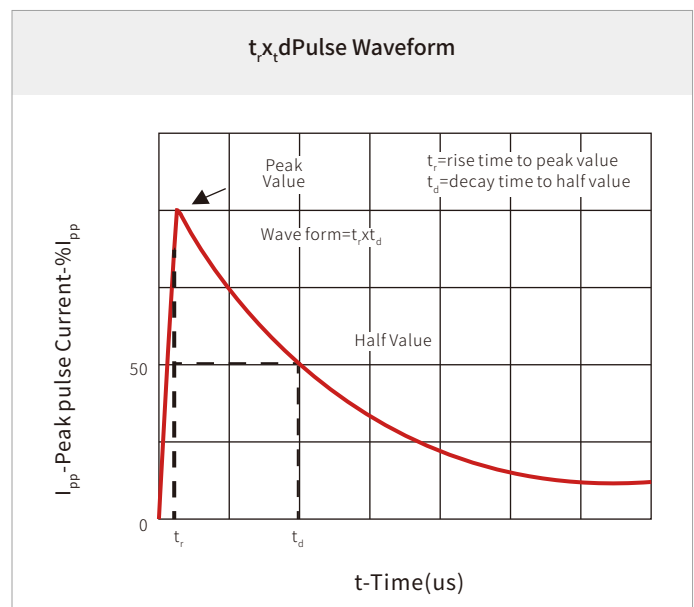
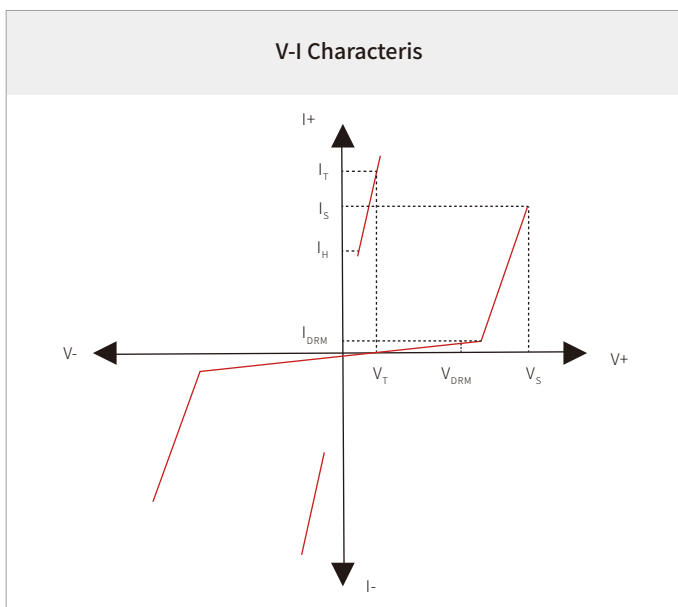
SURGE RATINGS

Part Number	I_{PP} 2x10 μs	I_{PP} 8x20 μs	I_{PP} 10x560 μs	I_{PP} 10x1000 μs	V_{PP} 10x700 μs	I_{TSM} 60Hz	d_i/d_t
	(A)	(A)	(A)	(A)	(V)	(A)	(A/ μs)
STA45B90	150	150	50	45	3000	20	500

THERMAL CONSIDERATIONS

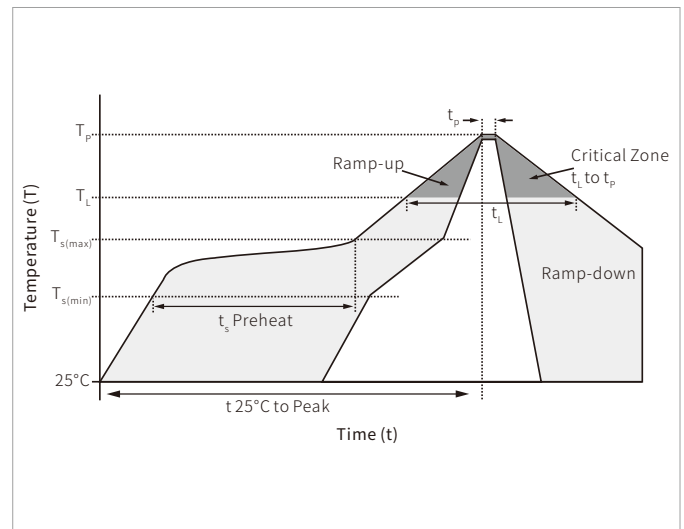
Symbol	Parameter	Value	Unit
$R_{\theta JA}$	Junction to Ambient on printed circuit	120	°C/W
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$)

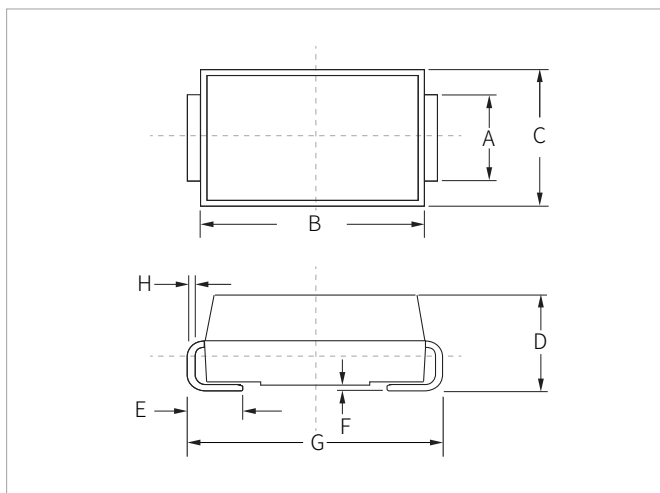


SOLDERING PARAMETERS

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

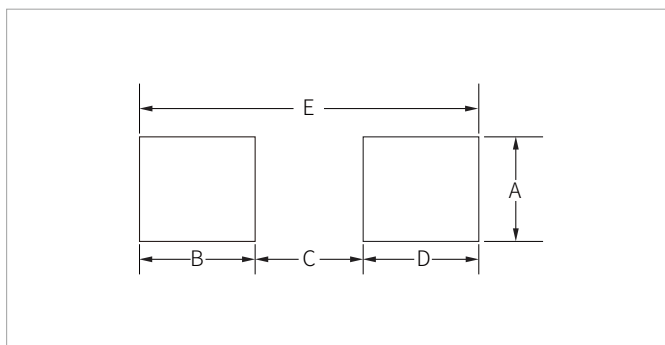


DO-214AC(SMA) PACKAGE INFORMATION



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
STA45B90	DO-214AC(SMA)	5000PCS	13"

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