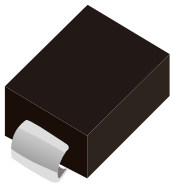
STB80B120

Thyristor Surge Suppressor

FEATURES

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



SMB(DO-214AA)

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)
STB80B120	120.0	160.0	4.0	5.0	800.0	2.2	120.0	55.0

SURGE RATINGS

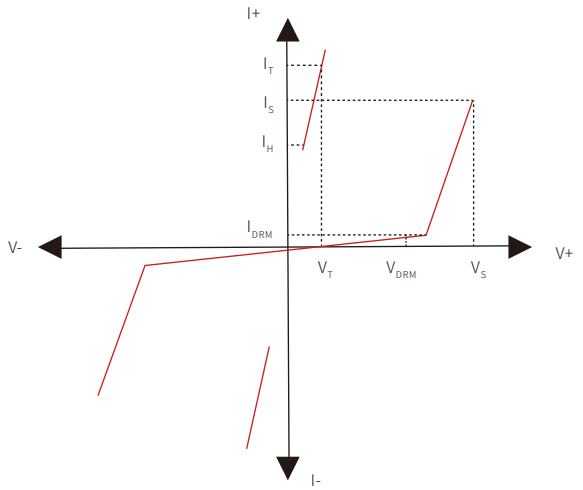
Part Number	I_{PP} 2x10us	I_{PP} 8x20us	I_{PP} 10x560us	I_{PP} 10x1000us	V_{PP} 10x700us	I_{TSM} 50/60Hz	d_i/d_t
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
STB80B120	250	250	100	80	4000	25	500

THERMAL CONSIDERATIONS

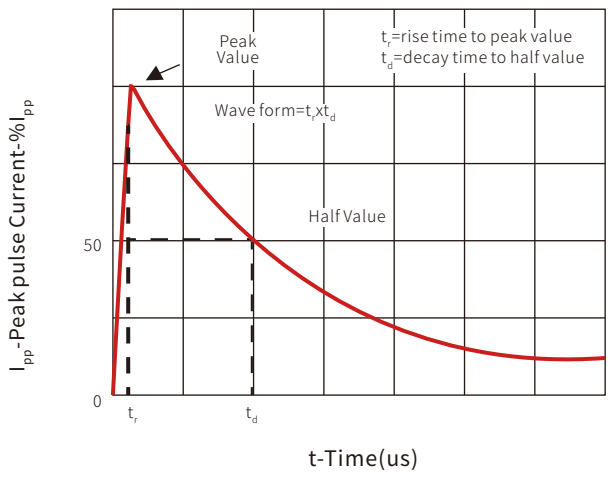
Symbol	Parameter	Value	Unit
$R_{\theta JA}$	Junction to Ambient on printed circuit	90	°C/W
T_J	Operating Junction Temperature	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

RATINGS AND CHARACTERISTIC CURVES (T_A=25°C)

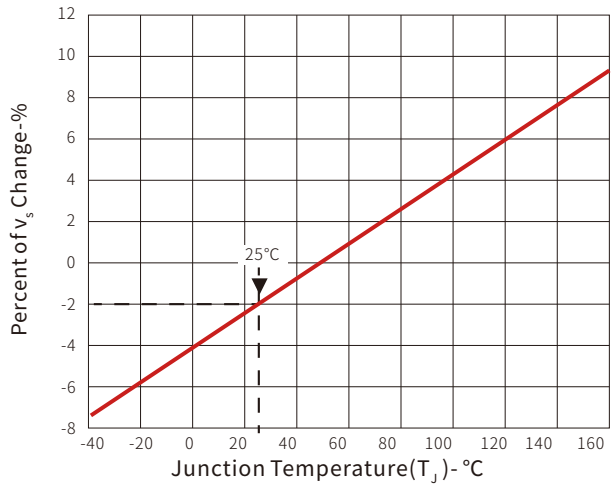
V-I Characteris



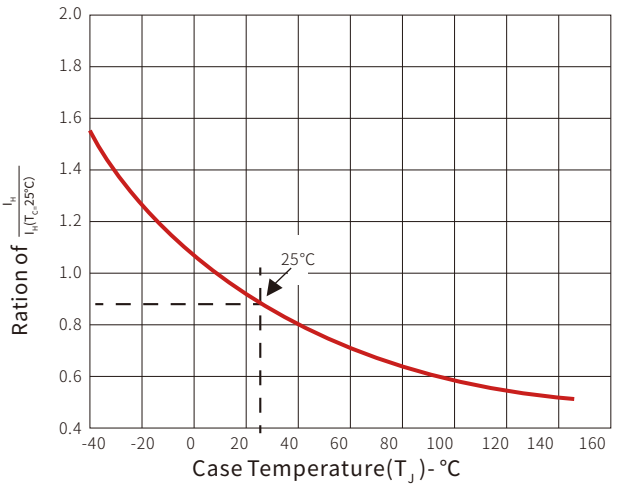
t_rxt_dPulse Waveform



Normalized VSChange vs. Junction Temperature

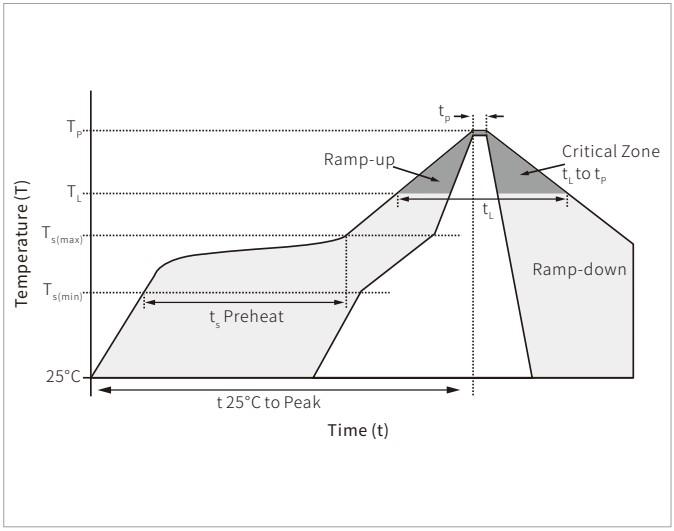


Normalized DC Holding Current vs. Case Temperature

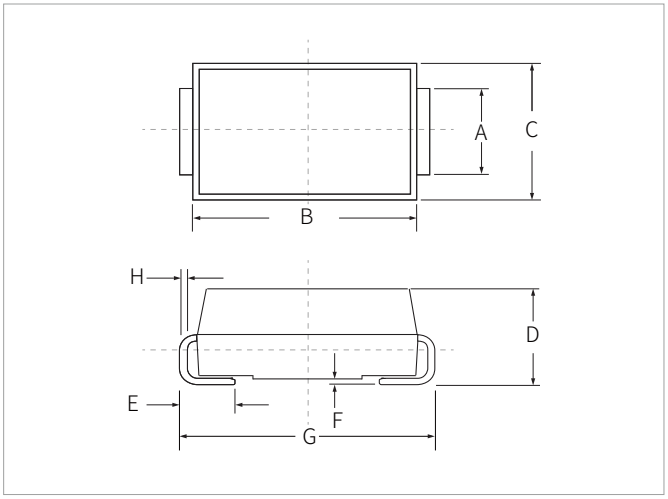


SOLDERING PARAMETERS

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

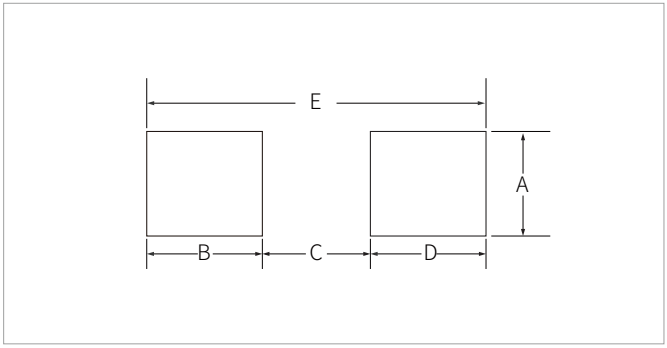


DO-214AA(SMB) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	1.96	2.20	0.077	0.087
B	5.10	5.50	0.201	0.216
C	3.40	3.90	0.134	0.153
D	2.15	2.75	0.085	0.108
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.010
D	1.45	-	0.057	-
E	5.60REF		0.220REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
STB80B120	DO-214AA(SMB)	3000PCS	13”

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