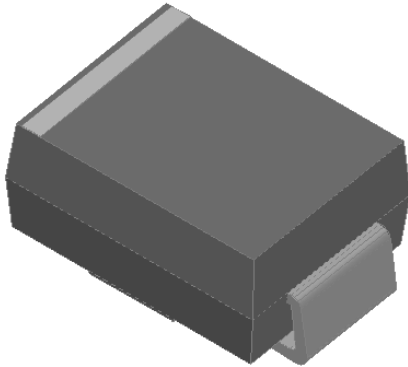




SMBJ TSS SERIES

Thyristor Surge Suppressors

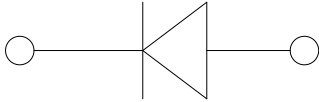


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Available in uni-directional 600 W peak pulse power capability with a 10/1000 μ s waveform
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.



Mechanical Data

- **Package:** DO-214AA (SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Storage temperature	T_{stg}	$^\circ\text{C}$	-55~+150
Junction temperature	T_j	$^\circ\text{C}$	-55~+150
Thermal resistance(Typical)	$R_{\theta JA}$	$^\circ\text{C/W}$	80

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Part Number	V _{drm} (V)	V _s (V)	V _t (V)	I _{drm} (μ A)	I _s (mA)	I _t (A)	I _h (mA)	C _o (pF)
P0080S_	6	25	4	5	800	2.2	50	100
P0300S_	25	40	4	5	800	2.2	50	110
P0640S_	58	77	4	5	800	2.2	150	50
P0720S_	65	88	4	5	800	2.2	150	50
P0900S_	75	98	4	5	800	2.2	150	50
P1100S_	90	130	4	5	800	2.2	150	40
P1300S_	120	160	4	5	800	2.2	150	40
P1500S_	140	180	4	5	800	2.2	150	40
P1800S_	170	220	4	5	800	2.2	150	30



SMBJ TSS SERIES

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

P2300S_	190	260	4	5	800	2.2	150	30
P2600S_	220	300	4	5	800	2.2	150	30
P3100S_	275	350	4	5	800	2.2	150	30
P3500S_	320	400	4	5	800	2.2	150	30

For individual "SA", "SB", and "SC" surge ratings, see table below.

Series	Ipp 2*10us (A)	Ipp 8*20us (A)	Ipp 10*160us (A)	Ipp 10*560us (A)	Ipp 10*1000us (A)	I _{tsm} 60Hz (A)	di/dt (A)
A	150	150	90	50	45	20	500
B	250	250	150	100	80	30	500
C	500	400	200	150	100	50	500

■ Characteristics (Typical)

FIG1: V-I Characteristics

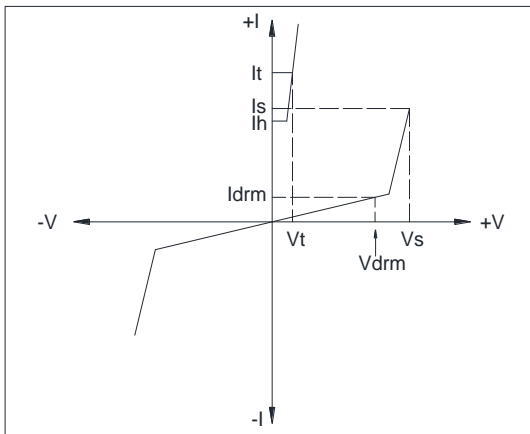


FIG2: tr*td Pulse Wave-form

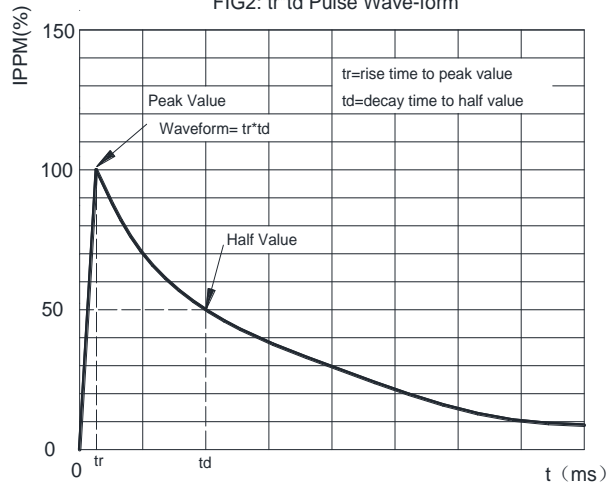


FIG3: Normalized V_s Change versus Junction Temperature

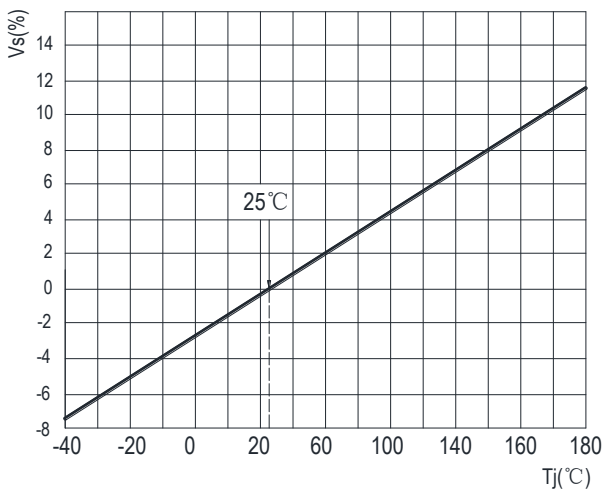
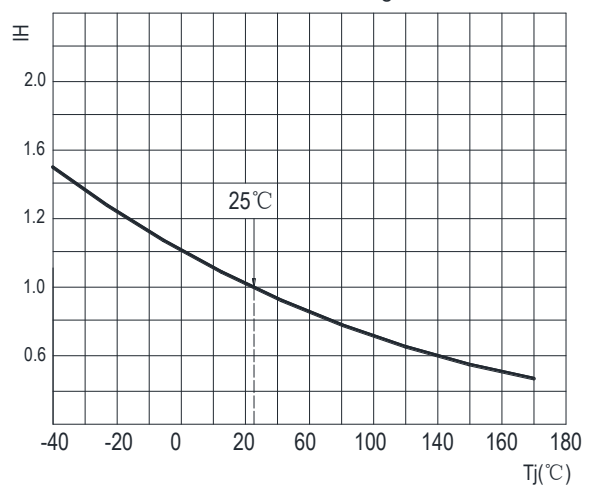


FIG4: Normalized DC Holding Current



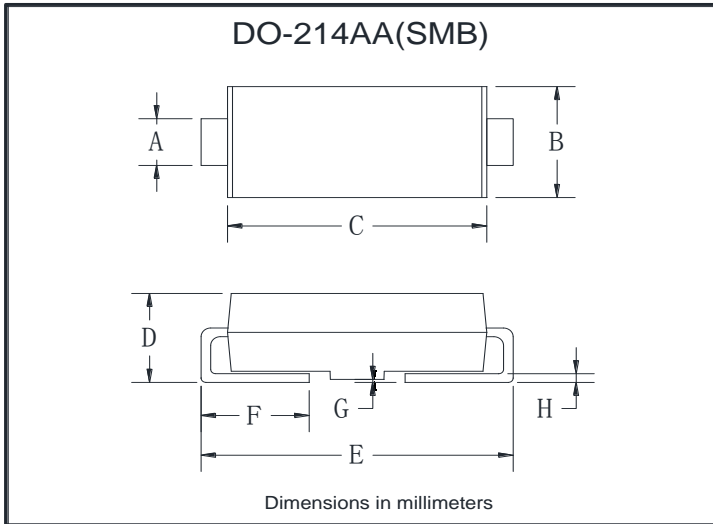


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■ Ordering Information (Example)

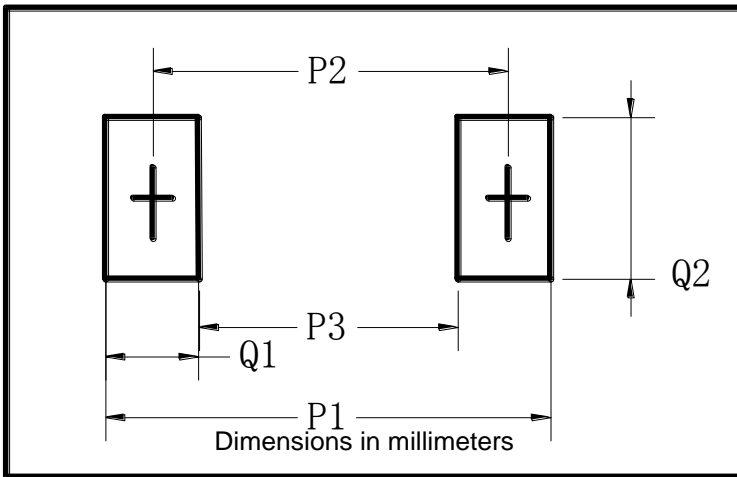
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
P0080SA-P3500SC	F1	Approximate 0.0975	3000	6000	48000	13" reel
P0080SA-P3500SC	F2	Approximate 0.0975	750	3000	24000	7" reel
P0080SA-P3500SC	F3	Approximate 0.0975	500	2000	16000	7" reel

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



SMBJ TSS SERIES

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