Description

TSS Series are designed to protect baseband equipment such as modems, line cards, CPE and DSL equipments from damaging overvoltage transients. The series provide a robust peak surge current capability which enables equipments to comply with global regulatory standards.

Applications

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

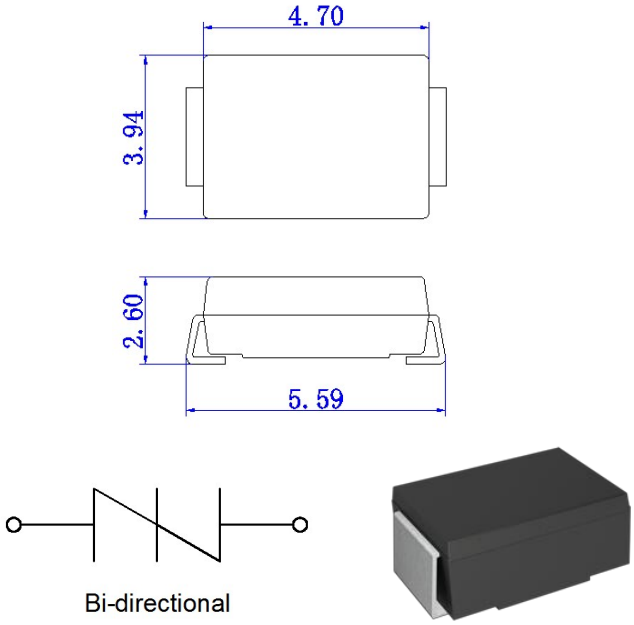
Features

- Low voltage overshoot
- Low on-state voltage
- Low capacitance
- Low leakage current
- High reliability
- Quick response to surge voltage (ns Level)
- Does not degrade in capability after multiple surge events within limit.
- Low capacitance
- Fails short circuit when surged in excess of ratings

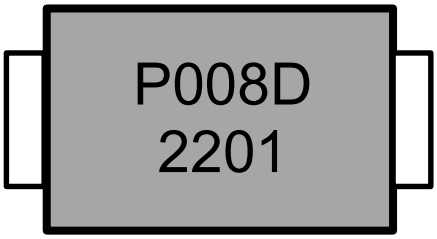
Mechanical Characteristics

- Package: SMB/DO-214AA
- Case Material:Molded Plastic. UL Flammability Classification Rating 94V-0 .RoHS compliant
- Moisture Sensitivity: Meet MSL 1
- Terminal：Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode except bi-directional models
- Weight: 0.09g(approximate)

Dimensions & Symbol（Unit: mm Max）



Marking Information



P008D：P0080SD Marking Code (Others See blow)
2201：Date code(2022 year，01 week)

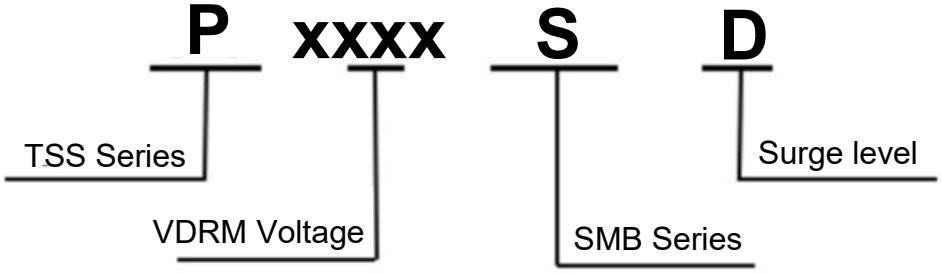
Electrical Characteristics (T=25℃)

Part Number	Marking Code	I_{DRM}@V_{DRM}		V_S @I_S		V_T@ I_T		I_H	C_O
		μA	V	V	mA	V	A	mA	pF
		max	min	max	max	max	max	min	max
P0080SD	P008D	5	6	25	800	4	2.2	50	150
P0150SD	P01D	5	14	20	800	4	2.2	50	150
P0220SD	P02D	5	18	30	800	4	2.2	50	150
P0300SD	P03D	5	25	40	800	4	2.2	50	150
P0640SD	P06D	5	58	77	800	4	2.2	100	150
P0720SD	P07D	5	65	88	800	4	2.2	100	150
P0900SD	P09D	5	75	98	800	4	2.2	100	140
P1100SD	P11D	5	90	130	800	4	2.2	100	110
P1300SD	P13D	5	120	160	800	4	2.2	100	100
P1500SD	P15D	5	140	180	800	4	2.2	100	90
P1800SD	P18D	5	170	220	800	4	2.2	100	90
P2000SD	P20D	5	180	220	800	4	2.2	100	80
P2300SD	P23D	5	190	260	800	4	2.2	100	70
P2600SD	P26D	5	220	300	800	4	2.2	100	60
P3100SD	P31D	5	275	350	800	4	2.2	100	60
P3500SD	P35D	5	320	400	800	4	2.2	100	60

Notes:

- *All measurements are made at an ambient temperature of 25℃. I_{PP} applies to -40℃through +85℃temperaturer*
- *Off-state capacitance (C_O) is measured at 1 MHz with a 2 V bias and is typical val*

Part number code



Absolute Maximum Ratings(T=25ºC, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating junction temperature range	T_j	-40 to +125	℃
Storage temperature range	T_{stg}	-65 to +150	℃
Repetitive peak pulse Voltage(10/700uS)	V_{PP}	8000	V

Typical Characteristics

FIG1：V-I cure characteristics

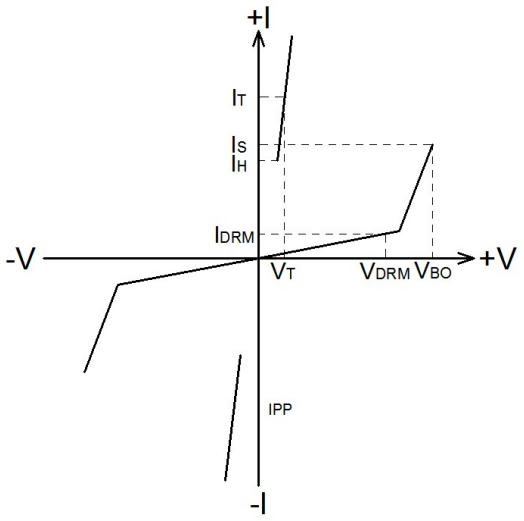


FIG2：Pulse Waveform

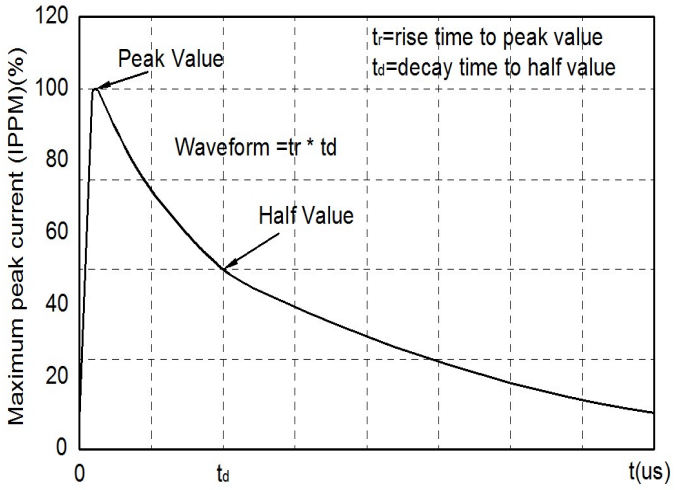


FIG3：Normalized Vs change vs.junction temperature

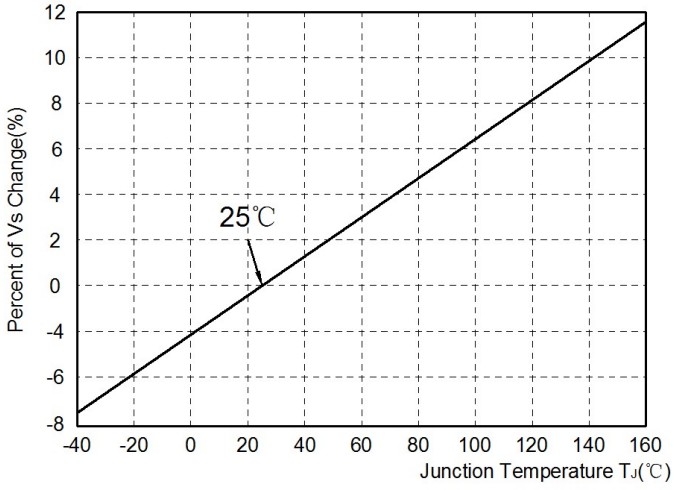
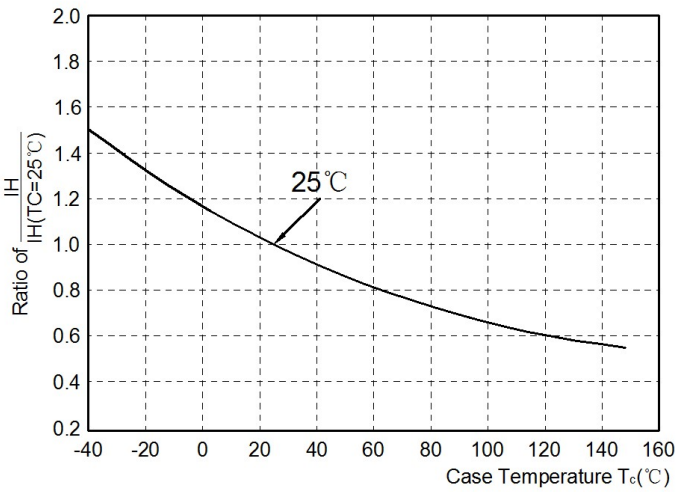
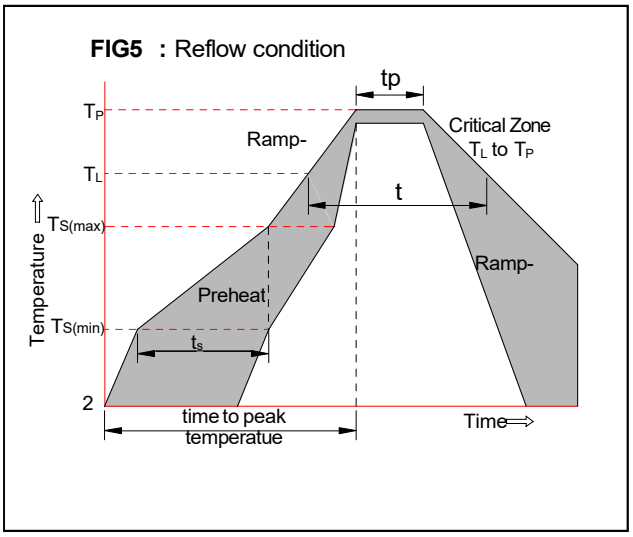


FIG4：Normalized DC holding current vs.case temperature

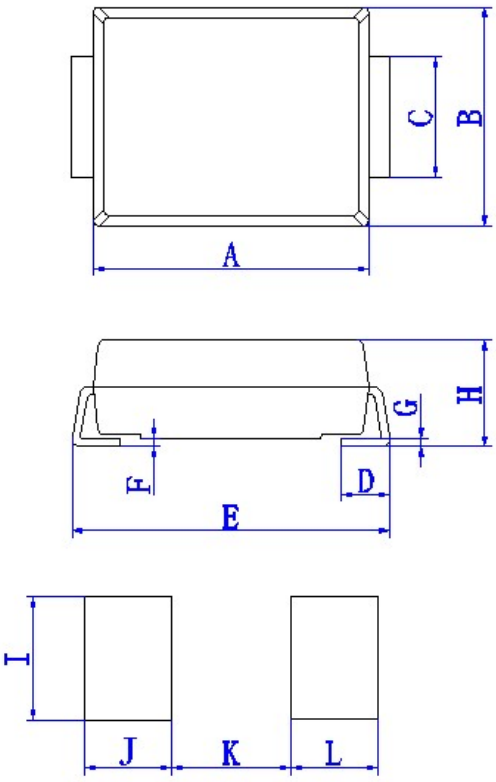


Soldering parameters

Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

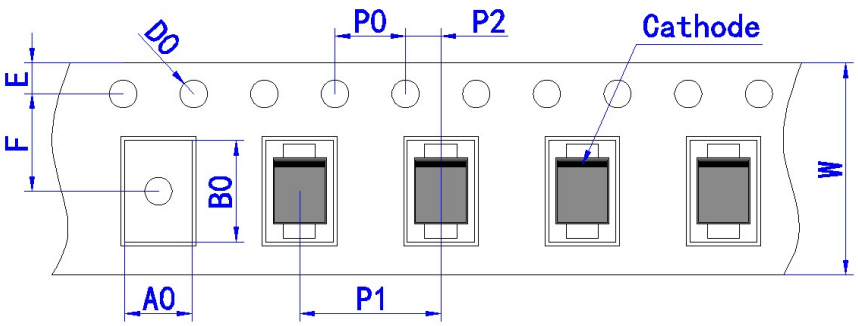


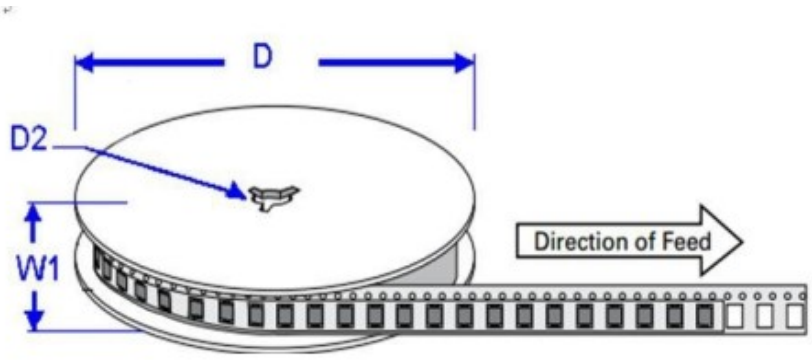
Package mechanical data



Ref.(mm)	Millimeters	
	Min.	Max.
A	4.22	4.70
B	3.4	3.94
C	1.9	2.1
D	0.90	1.42
E	5.21	5.59
F	0	0.23
G	0.15	0.25
H	1.95	2.60
I	2.2	/
J	2.1	/
K	/	2.74
L	2.1	/

Tape & reel specification - SMB





Ref.	Millimeters
A0	3.81±0.20
B0	5.74±0.20
C	330.00
D0	1.55±0.10
E	1.75±0.20
E1	13.50±1.00
F	5.50±0.10
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
W	12.00±0.30
W1	16.00±4.00