

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.

Features

- Low voltage overshoot
- Low on-state voltage
- Does not degrade in capability after multiple surge events within limit.
- Low capacitance
- Fails short circuit when surged in excess of ratings
- Pb-free E3 means 2nd level interconnect is Pb-free and the terminal finish material is tin(Sn) (IPC/JEDEC J-STD609A.01)

Mechanical Characteristics

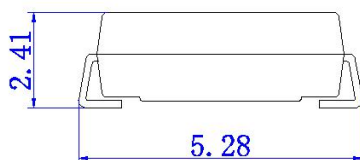
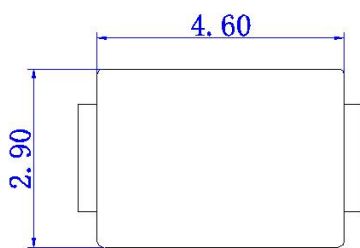
Package: SMA/DO-214AC

- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Polarity: Color band denotes cathode except bi-directional models
- Weight: 0.07g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

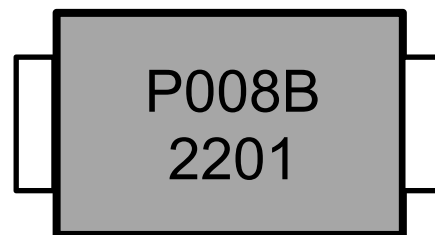
- Audio/Video line
- Network and telecom
- Data lines and security systems
- Serial ports

Dimensions & Symbol (Unit: mm Max)



Bi-directional

Marking Information



P008B: P0080TB Marking Code
2201: Date code(2022 year, 01 week)

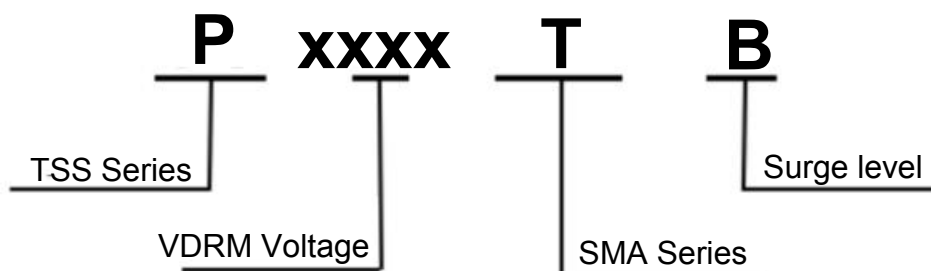
Electrical Characteristics (T=25°C)

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
P0080TB	P008B	5	6	25	800	4	2.2	20	80
P0150TB	P01B	5	14	20	800	4	2.2	40	80
P0220TB	P02B	5	18	30	800	4	2.2	40	80
P0300TB	P03B	5	25	40	800	4	2.2	40	80
P0640TB	P06B	5	58	77	800	4	2.2	100	80
P0720TB	P07B	5	65	88	800	4	2.2	100	75
P0900TB	P09B	5	75	98	800	4	2.2	100	70
P1100TB	P11B	5	90	130	800	4	2.2	100	70
P1300TB	P13B	5	120	160	800	4	2.2	100	70
P1500TB	P15B	5	140	180	800	4	2.2	100	70
P1800TB	P18B	5	170	220	800	4	2.2	100	70
P2000TB	P20B	5	180	220	800	4	2.2	100	70
P2300TB	P23B	5	190	260	800	4	2.2	100	70
P2600TB	P26B	5	220	300	800	4	2.2	100	70
P3100TB	P31B	5	275	350	800	4	2.2	100	60
P3500TB	P35B	5	320	400	800	4	2.2	100	60

Notes:

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

Part number code



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

Parameter	Symbol	Value	Unit
Operating junction temperature range	T_j	-40 to +125	°C
Storage temperature range	T_{stg}	-65 to +150	°C
Repetitive peak pulse Voltage(10/700uS)	V_{PP}	4000	V

Typical Characteristics

FIG1: V-I cure characteristics

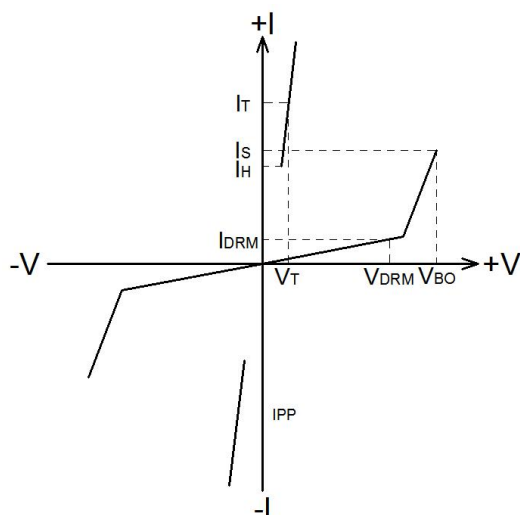


FIG2: Pulse Waveform

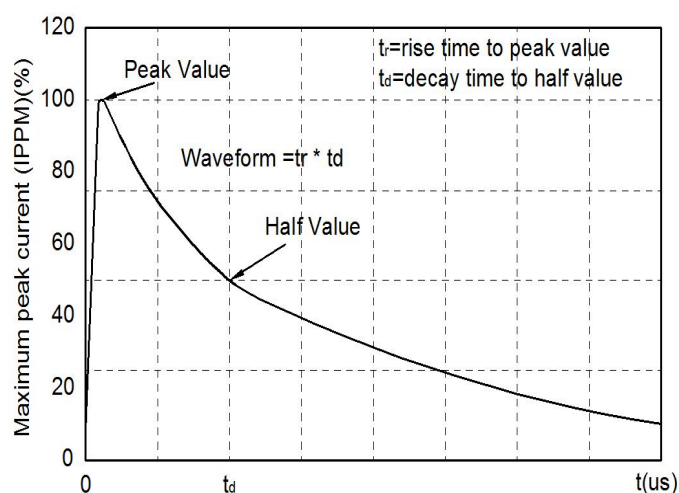


FIG3: Normalized Vs change vs.junction temperature

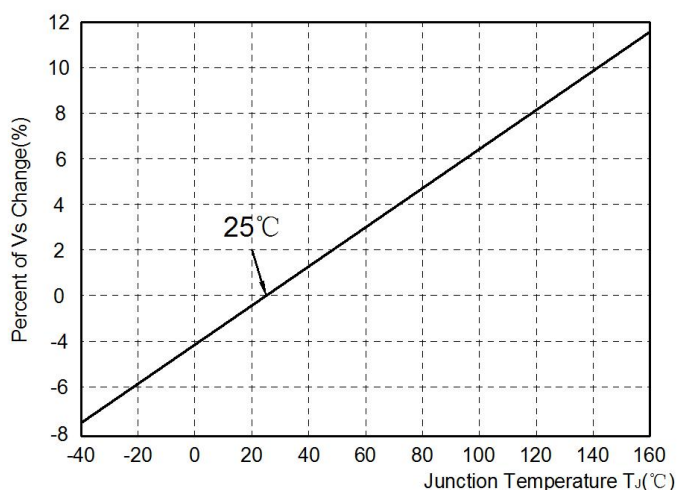
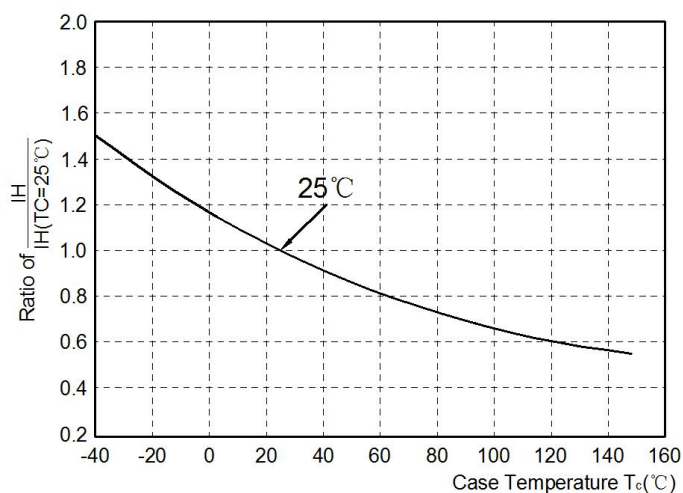
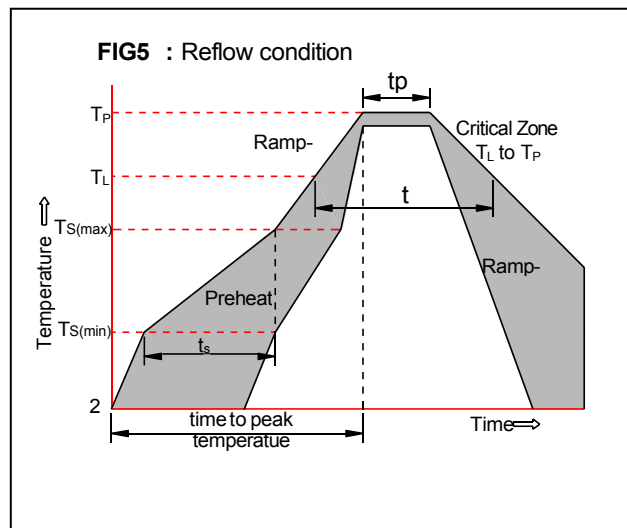


FIG4: Normalized DC holding current vs.case temperature

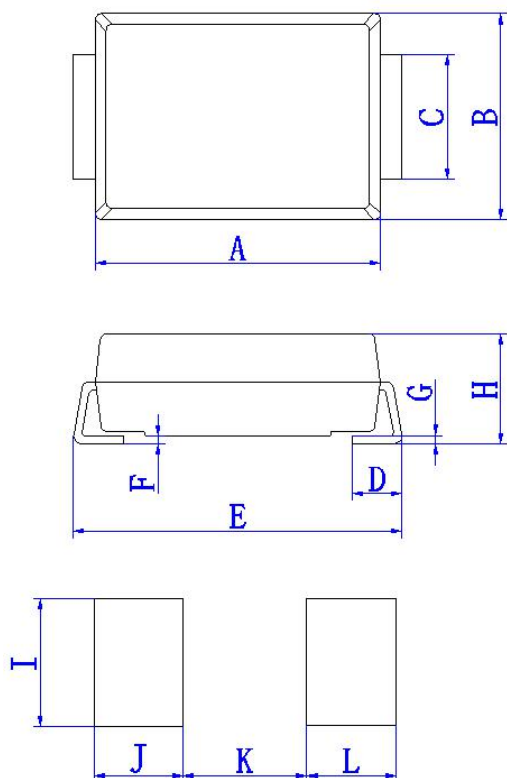


Soldering parameters

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

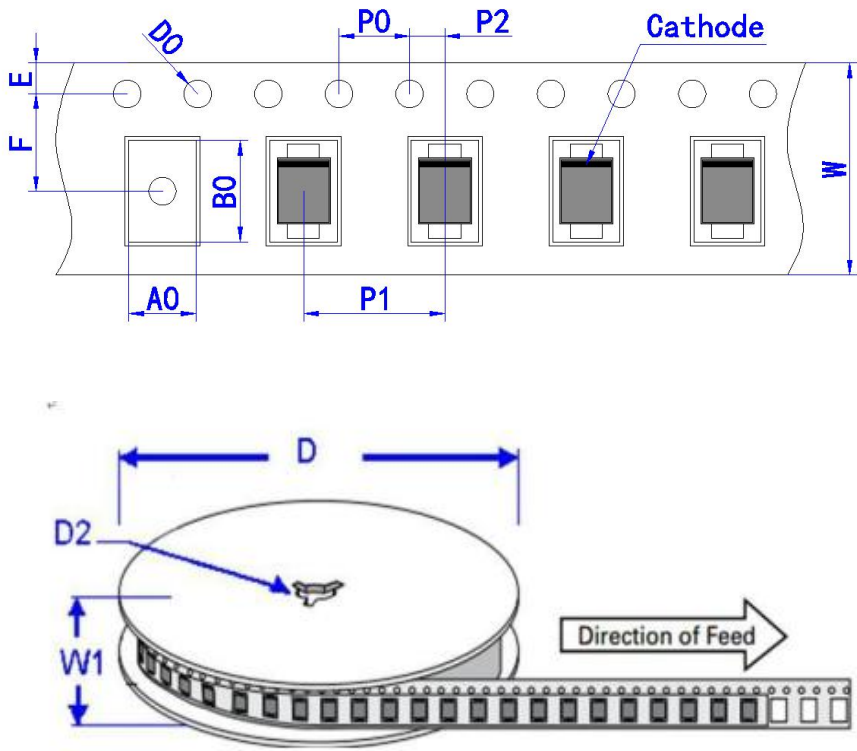


Typical Characteristics



Ref.(mm)	Millimeters	
	Min.	Max.
A	3.99	4.5
B	2.5	2.9
C	1.2	1.7
D	0.76	1.52
E	4.93	5.28
F	0	0.203
G	0.15	0.25
H	1.98	2.41
I	1.8	/
J	2.1	/
K	/	2.3
L	2.1	/

Tape & reel specification - SMA



Ref.	Millimeters
A0	2.79±0.20
B0	5.33±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	4.00±0.20
P2	2.00±0.20
W	12.00±0.30
W1	16.00±4.00