

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

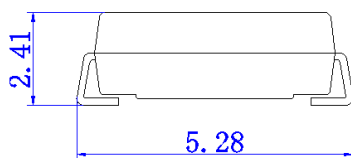
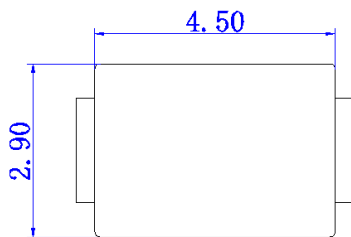
Features

- 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: SMA/DO-214AB
- 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)

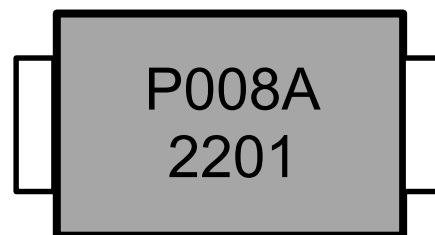
Dimensions & Symbol (Unit: mm Max)



Bi-directional



Marking Information



P008A: P0080TA Marking Code (Others See blow)
2201: Date code(2022 year, 01 week)

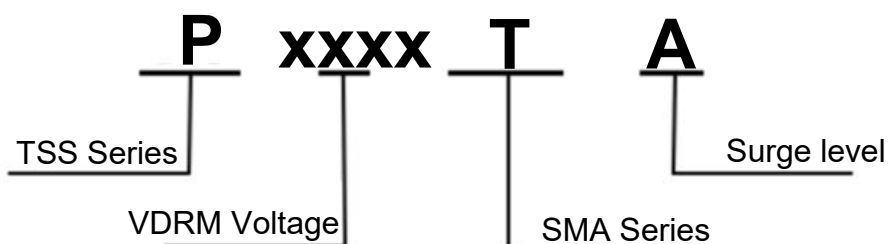
Electrical Characteristics (T=25°C)

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
P0080TA	P008A	5	6	25	800	4	2.2	20	30
P0150TA	P01A	5	14	20	800	4	2.2	20	40
P0220TA	P02A	5	18	30	800	4	2.2	20	60
P0300TA	P03A	5	25	40	800	4	2.2	50	60
P0640TA	P06A	5	58	77	800	4	2.2	100	60
P0720TA	P07A	5	65	88	800	4	2.2	100	50
P0900TA	P09A	5	75	98	800	4	2.2	100	50
P1100TA	P11A	5	90	130	800	4	2.2	100	50
P1300TA	P13A	5	120	160	800	4	2.2	100	45
P1500TA	P15A	5	140	180	800	4	2.2	100	45
P1800TA	P18A	5	170	220	800	4	2.2	100	35
P2000TA	P20A	5	180	220	800	4	2.2	100	35
P2300TA	P23A	5	190	260	800	4	2.2	100	35
P2600TA	P26A	5	220	300	800	4	2.2	100	35
P3100TA	P31A	5	275	350	800	4	2.2	100	35
P3500TA	P35A	5	320	400	800	4	2.2	100	35
P4200TA	P42A	5	400	540	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 range.
- 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($T=25^{\circ}\text{C}$, $\text{RH}=45\%-75\%$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Operating junction temperature range	T_j	-40 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-65 to +150	$^{\circ}\text{C}$
Repetitive peak pulse Voltage(10/700uS)	V_{PP}	2000	V

Typical Characteristics

FIG1: V-I cure characteristics

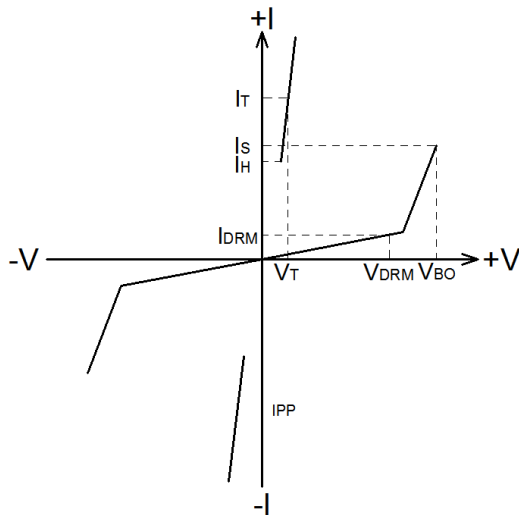


FIG2: Pulse Waveform

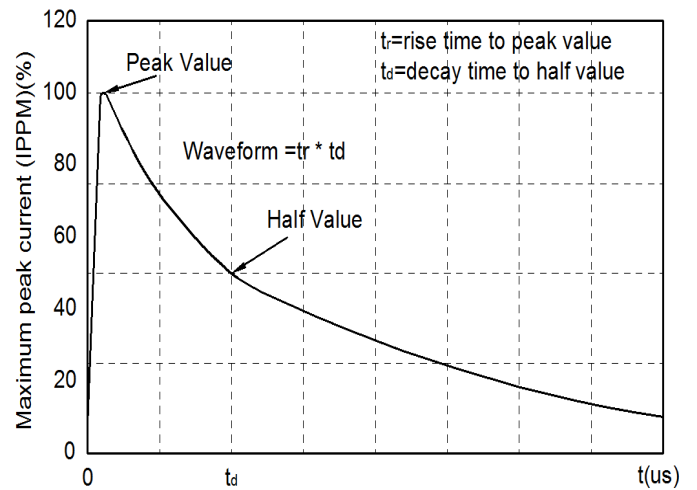


FIG3: Normalized V_s change vs. junction temperature

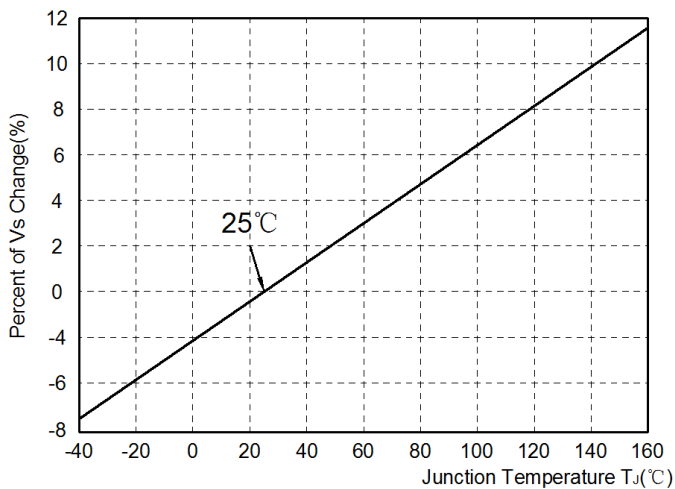
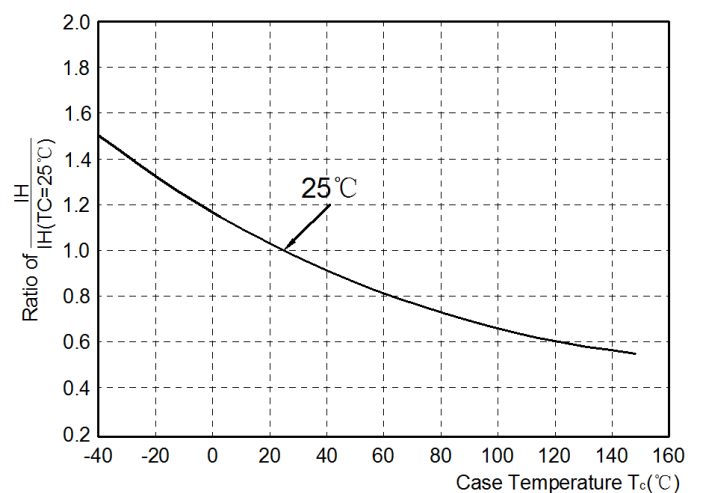
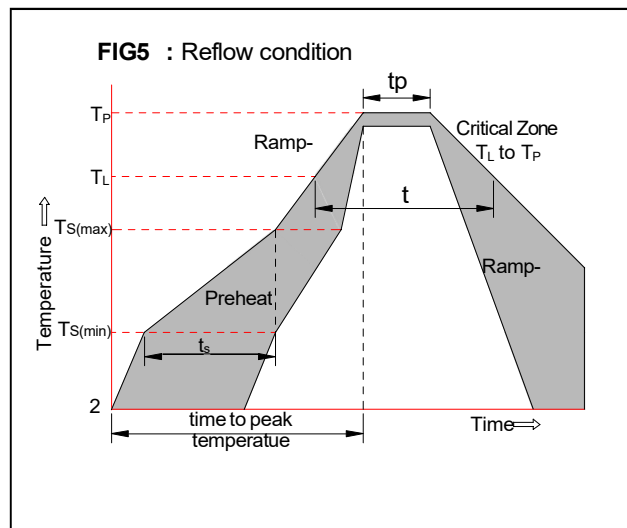


FIG4: Normalized DC holding current vs. case temperature

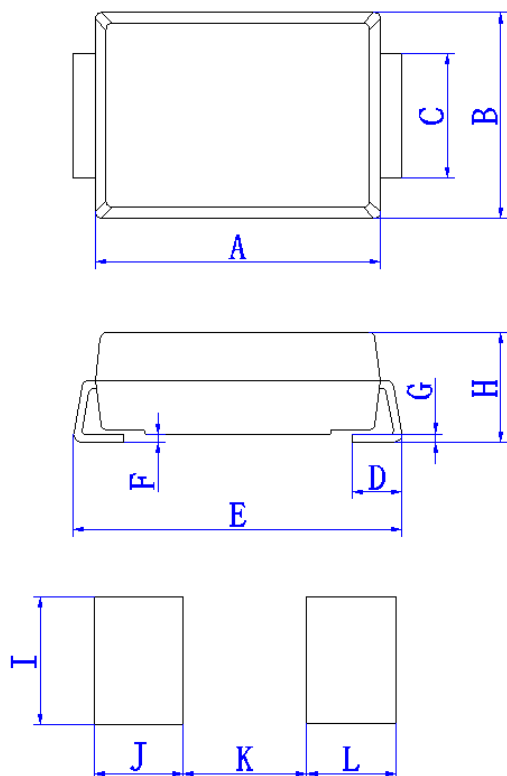


Soldering parameters

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

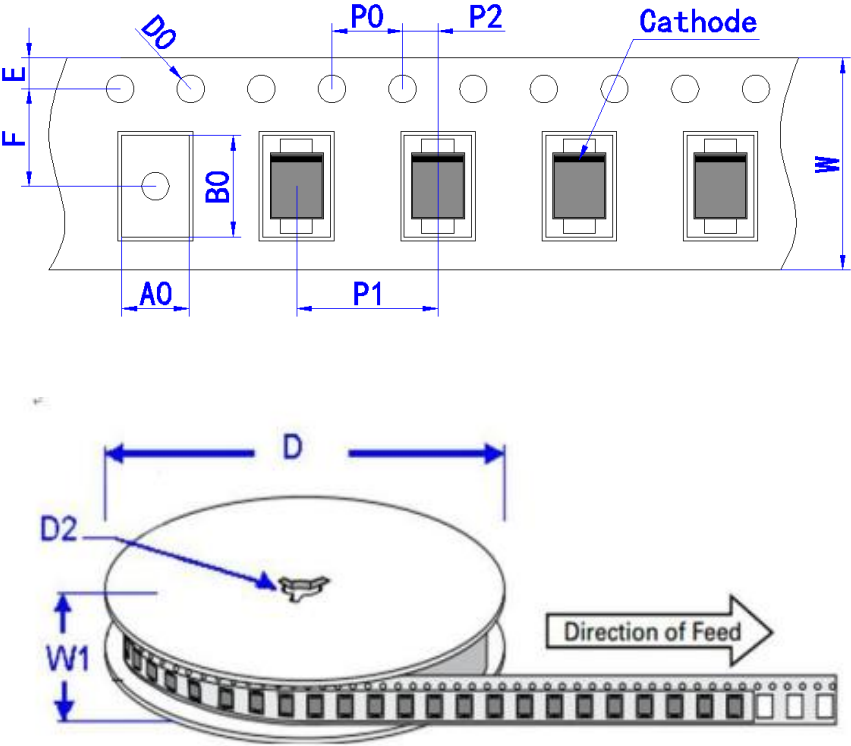


Package mechanical data



Ref.(mm)	Millimeters	
	Min.	Max.
A	3.99	4.50
B	2.50	2.90
C	1.20	1.70
D	0.76	1.52
E	4.93	5.28
F	0	0.20
G	0.15	0.25
H	1.98	2.41
I	1.50	1.70
J	1.40	1.60
K	2.30	2.50
L	1.40	1.60

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
D	333±4.00
D2	13.5±0.2