

## Features

- Strong absorption capacity of surge
- High reliability
- Low leakage current
- Fast response time
- Meet MSL level1, per J-STD-020
- Operating Junction Temperature: -40 to +150°C
- Storage Temperature Range: -40 to +150°C

## Applications

TSS components are ideal for the protection of telecommunications equipment such as modems, line cards, fax machines, and other CPE.

## Electrical Characteristics (T<sub>A</sub>=25°C)

Part Number	Marking	Peak Off-state Voltage	Off-state Current	Switching Voltage	Switching Current	On-state Voltage	On-state Current	Holding Current	Off-state Capacitance @2V, 1MHz
		V <sub>DRM max.</sub> (V)	I <sub>DRM max.</sub> (μA)	V <sub>S max.</sub> (V)	I <sub>S max.</sub> (mA)	V <sub>T max.</sub> (V)	I <sub>T max.</sub> (A)	I <sub>H typ.</sub> (mA)	C <sub>O typ.</sub> (pF)
P0080SA	P008A	6	5	25	800	4	2.2	50	50
P0080SB	P008B	6	5	25	800	4	2.2	50	70
P0080SC	P008C	6	5	25	800	4	2.2	50	100
P0300SA	P03A	25	5	40	800	4	2.2	50	70
P0300SB	P03B	25	5	40	800	4	2.2	50	70
P0300SC	P03C	25	5	40	800	4	2.2	50	100
P0640SA	P06A	58	5	77	800	4	2.2	150	50
P0640SB	P06B	58	5	77	800	4	2.2	150	60
P0640SC	P06C	58	5	77	800	4	2.2	150	100
P0720SA	P07A	65	5	88	800	4	2.2	150	50
P0720SB	P07B	65	5	88	800	4	2.2	150	60
P0720SC	P07C	65	5	88	800	4	2.2	150	100
P0900SA	P09A	75	5	98	800	4	2.2	150	45
P0900SB	P09B	75	5	98	800	4	2.2	150	55
P0900SC	P09C	75	5	98	800	4	2.2	150	90

## Electrical Characteristics (T<sub>A</sub>=25°C)

Part Number	Marking	Peak Off-state Voltage	Off-state Current	Switching Voltage	Switching Current	On-state Voltage	On-state Current	Holding Current	Off-state Capacitance @2V, 1MHz
		V <sub>DRM max.</sub> (V)	I <sub>DRM max.</sub> (μA)	V <sub>S max.</sub> (V)	I <sub>S max.</sub> (mA)	V <sub>T max.</sub> (V)	I <sub>T max.</sub> (A)	I <sub>H typ.</sub> (mA)	C <sub>O typ.</sub> (pF)
P1100SA	P11A	90	5	130	800	4	2.2	150	45
P1100SB	P11B	90	5	130	800	4	2.2	150	55
P1100SC	P11C	90	5	130	800	4	2.2	150	90
P1300SA	P13A	120	5	160	800	4	2.2	150	45
P1300SB	P13B	120	5	160	800	4	2.2	150	55
P1300SC	P13C	120	5	160	800	4	2.2	150	90
P1500SA	P15A	140	5	180	800	4	2.2	150	40
P1500SB	P15B	140	5	180	800	4	2.2	150	60
P1500SC	P15C	140	5	180	800	4	2.2	150	85
P1800SA	P18A	170	5	220	800	4	2.2	150	40
P1800SB	P18B	170	5	220	800	4	2.2	150	60
P1800SC	P18C	170	5	220	800	4	2.2	150	85
P2300SA	P23A	190	5	260	800	4	2.2	150	35
P2300SB	P23B	190	5	260	800	4	2.2	150	55
P2300SC	P23C	190	5	260	800	4	2.2	150	80
P2600SA	P26A	220	5	300	800	4	2.2	150	35
P2600SB	P26B	220	5	300	800	4	2.2	150	50
P2600SC	P26C	220	5	300	800	4	2.2	150	80
P3100SA	P31A	275	5	350	800	4	2.2	150	30
P3100SB	P31B	275	5	350	800	4	2.2	150	45
P3100SC	P31C	275	5	350	800	4	2.2	150	65
P3500SA	P35A	320	5	400	800	4	2.2	150	30
P3500SB	P35B	320	5	400	800	4	2.2	150	40
P3500SC	P35C	320	5	400	800	4	2.2	150	65

## Surge Rating

Type	I <sub>PP@8/20μs</sub>	I <sub>PP@10/1000μs</sub>	V <sub>PP@10/700μs</sub>
A	150A	45A	2kV
B	250A	80A	4kV
C	400A	100A	6kV

Characteristic Curves ( $T_A=25^\circ\text{C}$ )

Figure 1. V-I Characteristics

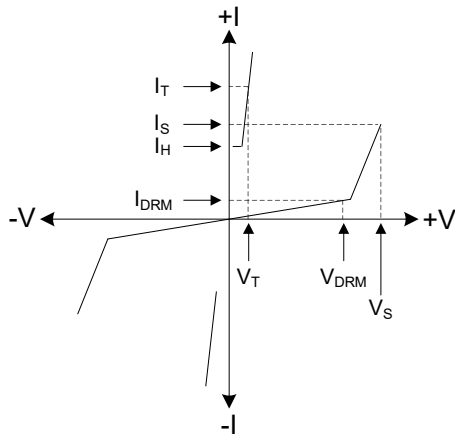


Figure 2. Pulse Waveform

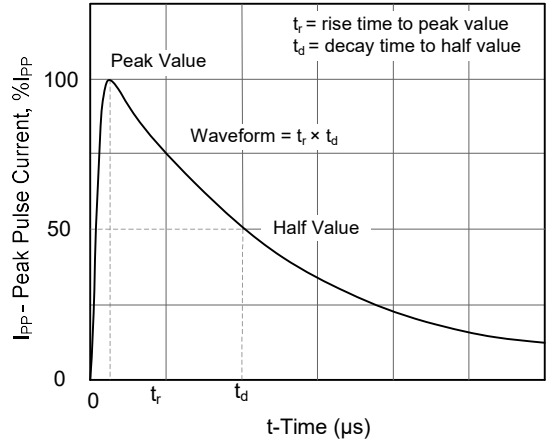


Figure 3. Normalized  $V_S$  Change versus Junction Temperature

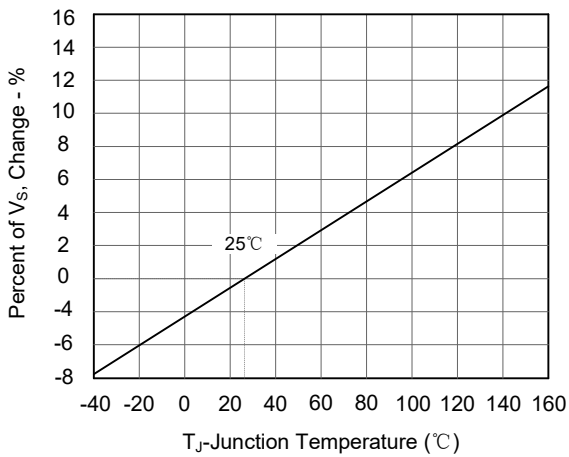
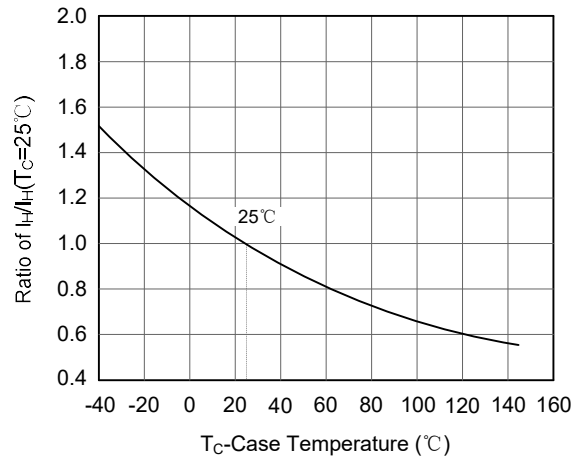
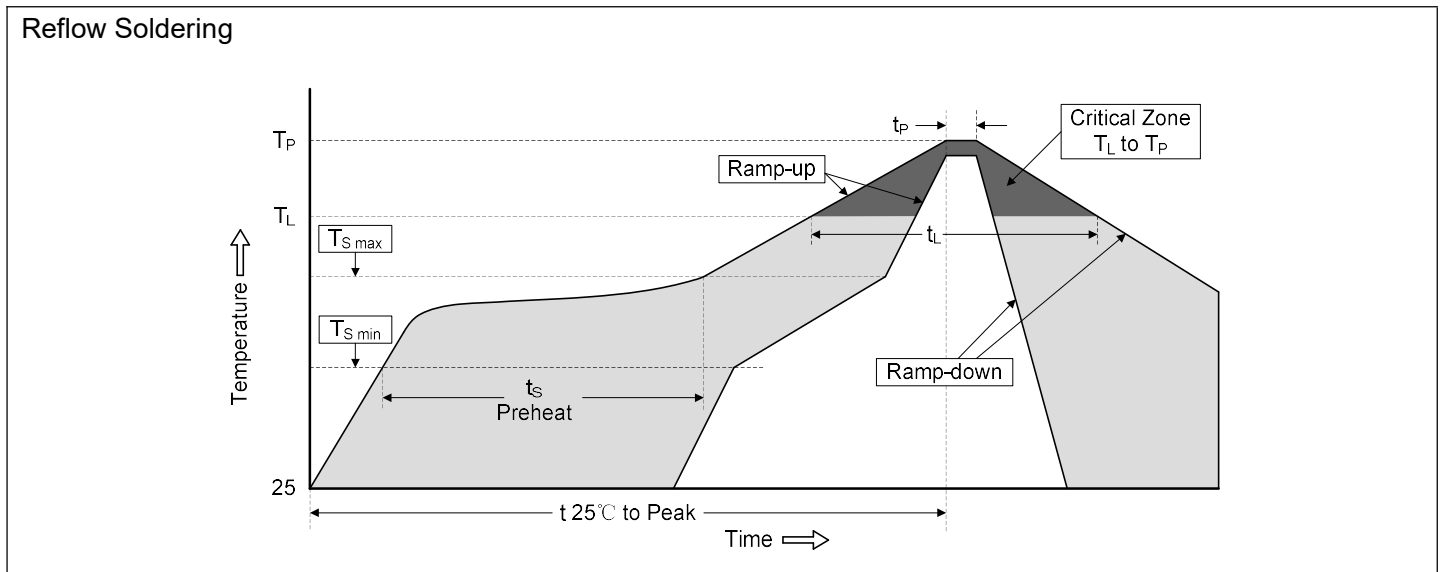


Figure 4. Normalized DC Holding Current versus Case Temperature

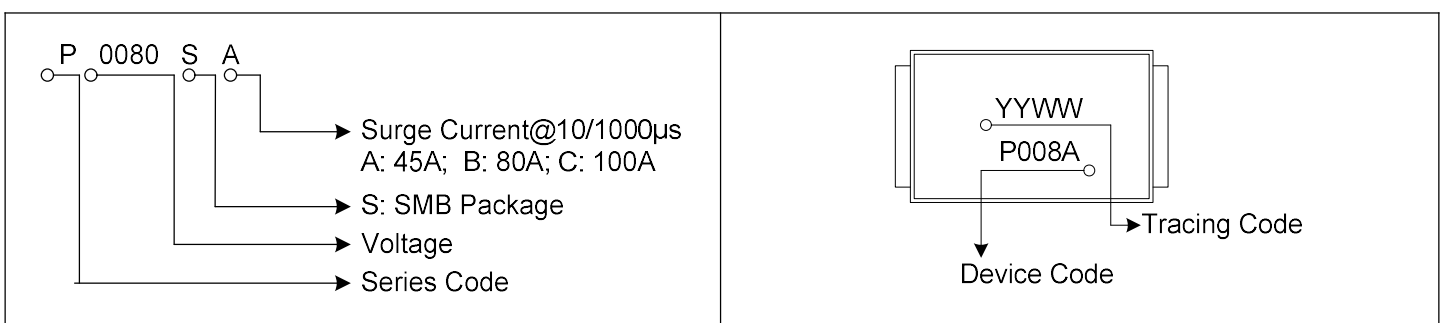


## Soldering Parameters



Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat -Temperature Min (T <sub>S min</sub> ) -Temperature Max (T <sub>S max</sub> ) -Time (min to max) (t <sub>s</sub> )	150°C 200°C 60-180 seconds
T <sub>S max</sub> to T <sub>L</sub> -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T <sub>L</sub> ) -Time (t <sub>L</sub> )	217°C 60-150 seconds
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

## Part Number Code and Marking Code



**Dimensions (SMB/DO-214AA)**

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.930	2.200	0.076	0.086
B	4.060	4.750	0.160	0.187
C	3.300	3.940	0.130	0.155
D	2.160	2.650	0.085	0.104
E	0.760	1.520	0.030	0.060
F	-	0.203	-	0.008
G	5.210	5.590	0.205	0.220
H	0.152	0.305	0.006	0.012
I	2.260	-	0.089	-
J	2.160	-	0.085	-
K	-	2.740	-	0.107

**Packaging Specification**

**Tape**

**13 Inches Reel**

**Quantity: 3000pcs/reel**