

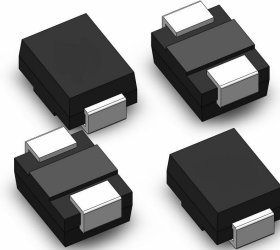
Thyristor Surge Suppressors TSS - SC series

Description:

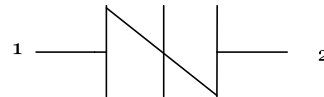
TSS Thyristor solid state protection thyristor protect telecommunications equipment such as modems, line cards, fax machines, and other CPE.

TSS Series devices are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20, K.21 and K.45, IEC 60950, and TIA-968 (formerly known as FCC Part 68).

Appearance:



Schematic Symbol



Features:

- Low Capacitance
- Excellent capability of absorbing transient surge
- Quick response to surge voltage (ns Level)
- Eliminates over voltage caused by fast rising transients
- Moisture sensitivity level: Level1
- Weight 69 mg(approximate)
- Non degenerative

Packaging :

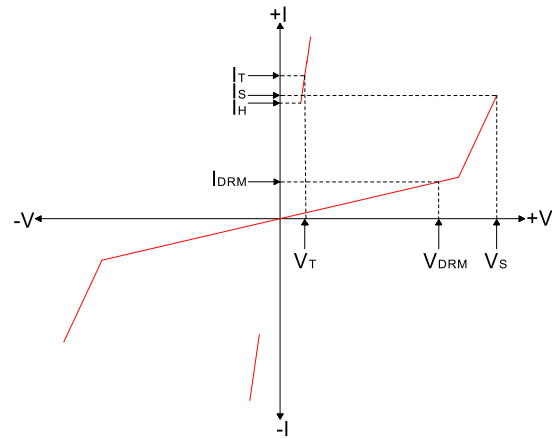
Part Number	Component Package	Quantity	Packaging
P***0SC	DO-214AA (SMB)	2500 PCS	Tape & Reel

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

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-60 to +150	A
Operating junction temperature range	T _j	-40 to +150	A
Thermal Resistance; Junction to Ambient	R _{θJA}	90	°C/W

Electrical Characteristics (TA= 25 °C unless otherwise noted)

V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current @ V_{DRM}
V_S	Switching voltage
I_S	Switching current
V_T	On-state voltage
I_T	On-state current
I_H	Holding current
C_O	Off-state capacitance



Part Number	V_{DRM}	I_{DRM}	V_S ①	I_S	V_T	I_T	I_H	C_O ②
	≤ V	≥ uA	≤ V	≤ mA	≤ V	≤ A	≤ mA	≤ pF
P0080SC	6	5	25	800	4	2.2	50	80
P0080SC-MC	6	5	25	800	4	2.2	20	45
P0220SC	15	5	35	800	4	2.2	50	80
P0220SC-MC	15	5	32	800	4	2.2	20	45
P0300SC	25	5	40	800	4	2.2	50	80
P0300SC-MC	25	5	40	800	4	2.2	50	45
P0640SC	58	5	77	800	4	2.2	120	80
P0640SC-MC	58	5	77	800	4	2.2	120	45
P0720SC	65	5	87	800	4	2.2	120	75
P0720SC-MC	65	5	87	800	4	2.2	120	40
P0900SC	75	5	98	800	4	2.2	120	75
P0900SC-MC	75	5	98	800	4	2.2	120	40
P1100SC	90	5	130	800	4	2.2	120	75
P1100SC-MC	90	5	130	800	4	2.2	120	40
P1300SC	120	5	160	800	4	2.2	120	75
P1300SC-MC	120	5	160	800	4	2.2	120	40
P1500SC	140	5	180	800	4	2.2	120	70
P1500SC-MC	140	5	180	800	4	2.2	120	35
P1800SC	170	5	220	800	4	2.2	120	70
P1800SC-MC	170	5	220	800	4	2.2	120	35
P2300SC	190	5	260	800	4	2.2	120	70
P2300SC-MC	190	5	260	800	4	2.2	120	35

Part Number	V _{DRM}	I _{DRM}	V _S ①	I _S	V _T	I _T	I _H	C _O ②
	≤ V	≥ uA	≤ V	≤ mA	≤ V	≤ A	≤ mA	≤ pF
P2600SC	220	5	300	800	4	2.2	120	70
P2600SC-MC	220	5	300	800	4	2.2	120	35
P3100SC	275	5	350	800	4	2.2	120	65
P3100SC-MC	275	5	350	800	4	2.2	120	30
P3500SC	320	5	400	800	4	2.2	120	65
P3500SC-MC	320	5	400	800	4	2.2	120	30
P3800SC	340	5	450	800	4	2.2	120	65
P3800SC-MC	340	5	450	800	4	2.2	120	30
P4200SC	340	5	450	800	4	2.2	120	65
P4200SC-MC	340	5	450	800	4	2.2	120	30

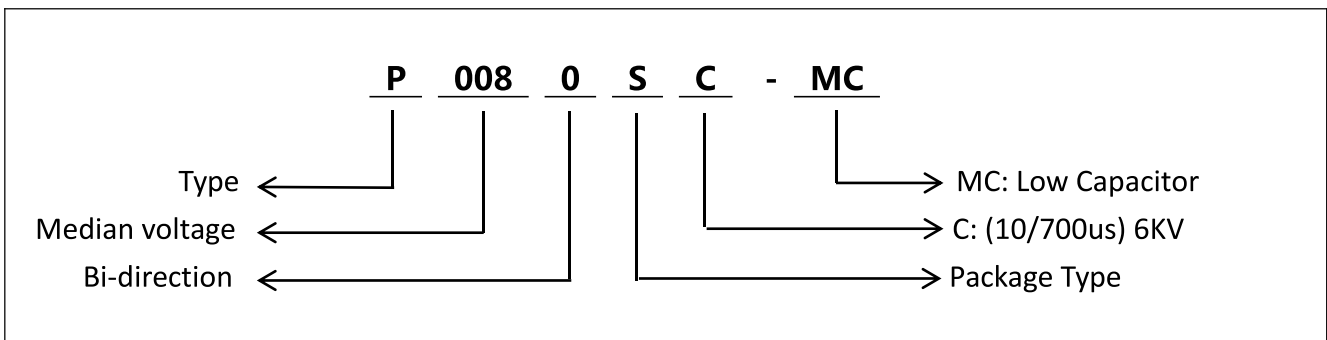
① V_s is measured at 100KV/s

② Off-state capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz

Surge Ratings

Series	Min IPP (A)				
	2/10us	8/20us	10/360us	10/1000us	5/310us
	2/10us	1.2/50us	10/360us	10/1000us	10/700us
TSS -SC	500 A	400 A	175 A	100 A	150 A

Part Numbering



Typical Characteristics

Figure.1: Normalized Vs change vs.junction Temperature.

Percent of Vs change (%)

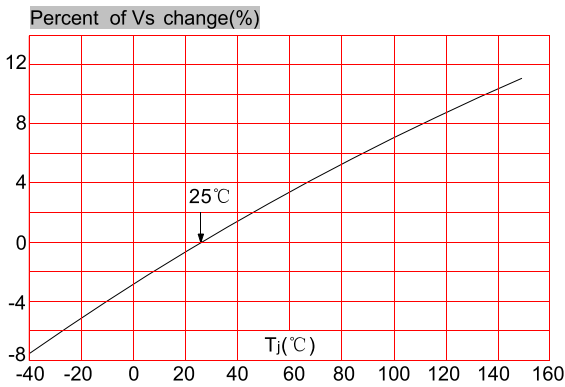


Figure.2: Normalized DC holding current vs. case Temperature

I_H(T_j)/I_H(T_j=25°C)

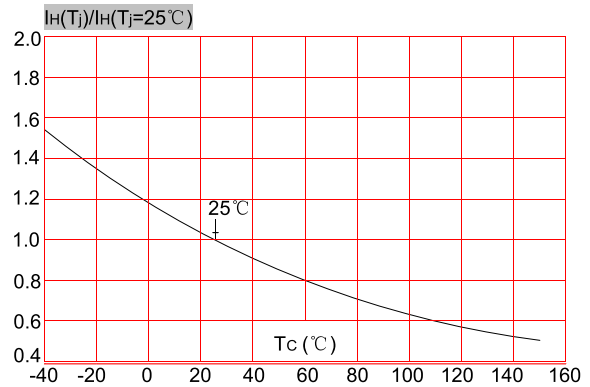


Figure.3: tr × td pulse waveform

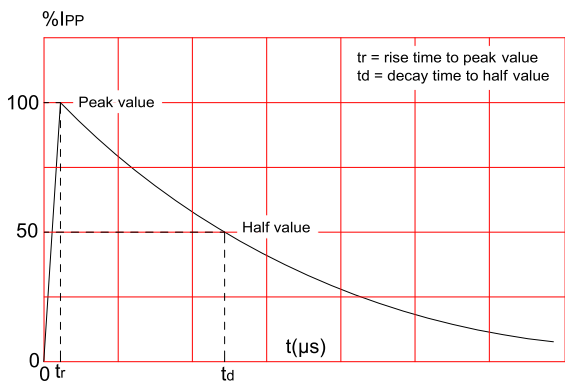
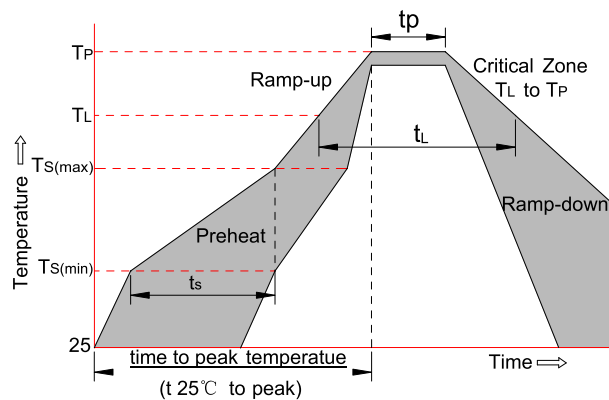


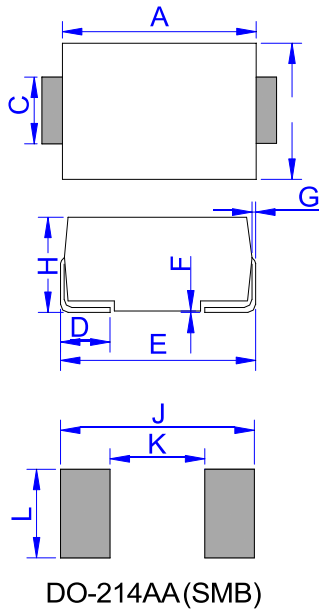
Figure.4: Reflow condition



Soldering Parameters

Profile Feature		Pb-Free Assembly (see FIG.4)
Average Ramp-Up Rate (TS max to TP)		3°C/ second max.
Preheat	Temperature Min (TS min)	150°C
	Temperature Max (TS max)	200°C
	Time(TSmin to TS max)	60-180 seconds
Reflow	Temperature(TL)	217°C
	Time (TL)	60-150 seconds
Peak/Classification Temperature(TP):		260°C
Ramp-down Rate:		6°C/ second max.
Time 25°C to Peak Temperature		8 minutes max.
Do not exceed		+260°C

Outline Drawing



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80	-	0.270	-
K	-	2.60	-	0.100
L	2.40	-	0.090	-

Tape and Reel Specifications

