

SPD9511B

1-Line, Bi-directional, Thyristor Surge Suppressors

Descriptions

The SPD9511B is a bi-directional TSS (Thyristor Surge Suppressors) which can provide ESD protection for IC. It is specifically designed to protect telecom equipments from damaging overvoltage transients.

The SPD9511B is used to enable equipments to meet various regulatory requirements including, ITU-T K.20, K.21 and IEC 61000-4-5

The SPD9511B is available in SMB package. Standard products are Pb-free and Halogen-free.

Features

- Peak off-state voltage: ±190V Max
- Excellent capability of absorbing transient surge
- Quick response to surge voltage
- Eliminate voltage overshoot caused by fast-rising transients
- Low leakage current:
- Solid-state silicon technology, non degenerative

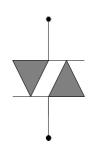
Applications

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

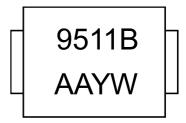
http//:www.sh-willsemi.com



SMB (DO-214AA)



Schematic Diagram



AA = Device code
Y = Year code
W = Week code
Marking (Top View)

Order information

Device	Package	Shipping	
SPD9511B-2/TR	SMB	3000/Tape&Reel	

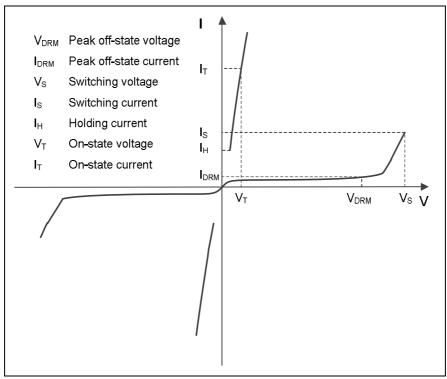


Electrical characteristics (T_A=25 °C, unless otherwise noted)

	V _{DRM}	I _{DRM}	Vs	V _{BR} ¹	Is	I _H	V _T	I _T	Co²
Part Number	V	μΑ	V	V	mA	mA	V	Α	pF
		Max.	Max.	Min.		Max.	Max.		Тур.
SPD9511B	190	1	260	200	800	150	4	2.2	50

Notes:

- 1) V_{BR} is measured at I_{BR} =1mA.
- 2) Off-state capacitance is measured at f = 1MHz, $V_{DC} = 2V$.



Definitions of electrical characteristics

Surge Ratings

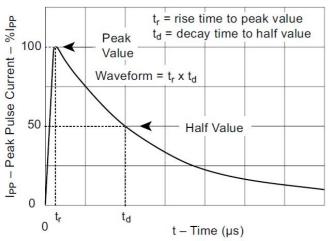
	Surge Level(IEC61000-4-5)	
Part Number	Voltage waveform:10/700 <i>us</i>	
	Current waveform:5/320us	
	V	
SPD9511B	6000	

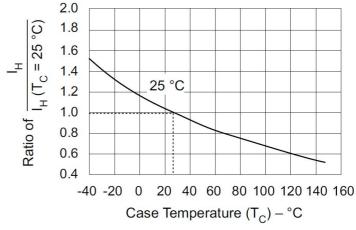


Thermal considerations

Parameter	Symbol	Rating	Unit
Operation junction temperature	T _J	-40~150	°C
Storage temperature	T _{STG}	-55~150	°C
Lead temperature	T _L	260	°C
Junction to ambient thermal resistance	$R_{\theta JA}$	90	°C/W

Typical characteristics (T_A=25°C, unless otherwise noted)



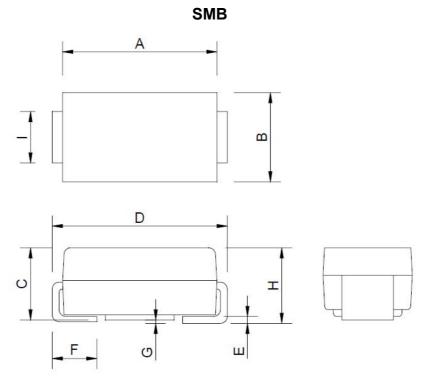


Peak pulse current waveform

Normalized holding current vs. Case temperature

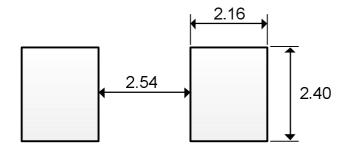


Package outline dimensions



Symbol	Dimensions in millimeter				
	Min.	Тур.	Max.		
Α	4.30	4.50	4.70		
В	3.30	3.50	3.70		
С	2.00	2.15	2.30		
D	5.05	5.30	5.55		
E	0.10	0.20	0.30		
F	0.95	1.25	1.55		
G	0.20 Max.				
Н	2.10	2.30	2.50		
I	1.85	2.00	2.15		

Recommend land pattern (Unit: mm)



Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.