

**1-Line, Bi-directional, Thyristor Surge Suppressors**

**Descriptions**

The SPD9211B is a bi-directional TSS (Thyristor Surge Suppressors). It is specifically designed to protect telephones, fax machines, communication connections, modems, video lines and so on.

The SPD9211B is used to enable equipment to meet various regulatory requirements including IEC 61000-4-5, GR-1089-CORE, ITU-T K.20, K.21 and K.45, IEC 60950, UL 60950, and TIA-968.

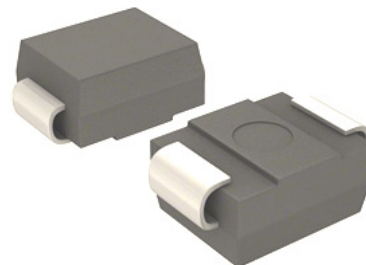
The SPD9211B is available in SMB package. Standard products are Pb-free and Halogen-free.

**Features**

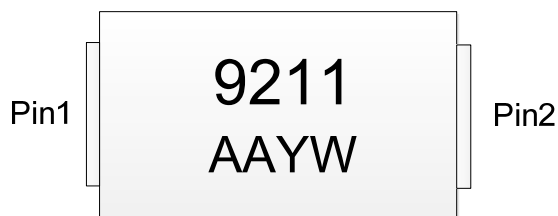
- Reverse stand-off voltage:  $\pm 6.0V$  Max
- Excellent capability of absorbing transient surge
- Quick response to surge voltage
- Eliminate voltage overshoot caused by fast-rising transients
- Low capacitance:  $C_j = 55pF$  typ.
- Low leakage current:
- Solid-state silicon technology, non degenerative

**Applications**

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



**SMB (DO-214AA)**



9211 & AA = Device code  
 Y = Year code (A~Z)  
 W = Week code (A~Z)

**Marking (Top View)**

**Order information**

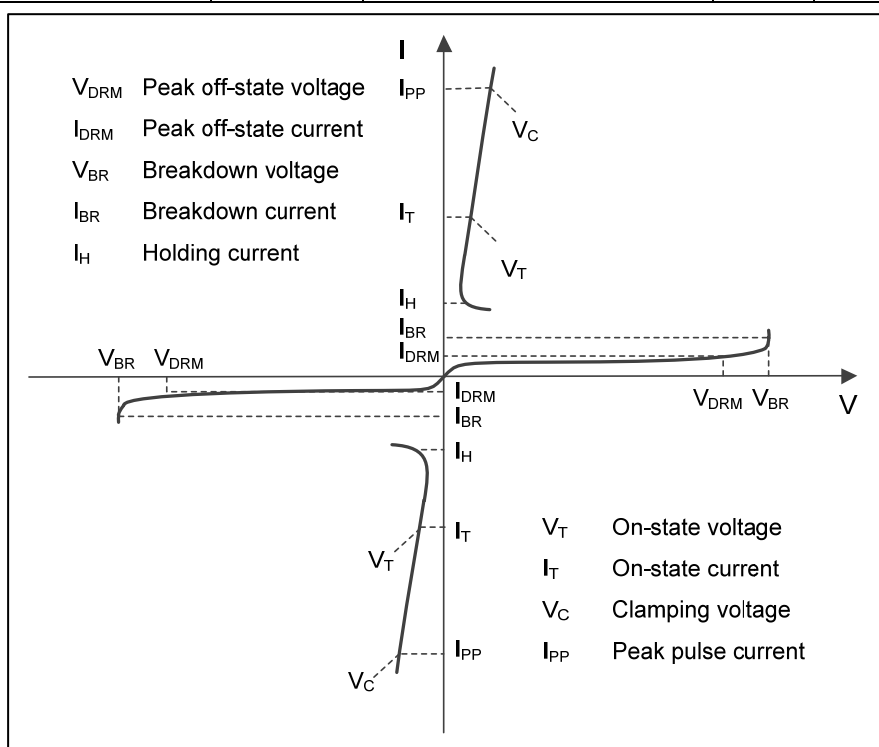
Device	Package	Shipping
SPD9211B-2/TR	SMB	3000/Tape&Reel

**Absolute maximum ratings**

Parameter	Symbol	Rating	Unit
Non-repetitive peak pulse current 8/20μs (IEC 61000-4-5, 1.2/50μs voltage wave shape)	$I_{PP}$	±300	A
10/700μs (ITU-T K.20/21/45, K.44 10/700μs voltage wave shape)	$V_{PP}$	±2000	V
10/1000μs (GR-1089-CORE, 10/1000μs voltage wave shape)	$I_{PP}$	±50	A
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	$R_{θJA}$	90	°C/W

**Electrical characteristics ( $T_A=25^{\circ}C$ , unless otherwise noted)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak off-state voltage	$V_{DRM}$				±6	V
Peak off-state current	$I_{DRM}$	$V_{DRM} = \pm 6V$			1	μA
Breakdown voltage	$V_{BR}$	$I_{BR} = 0.5mA$	6.2			V
Holding current	$I_H$			30	50	mA
On-state current	$I_T$				2.2	A
On-state voltage	$V_T$	$I_T = 2.2A$			4	V
Junction capacitance	$C_J$	$V_R = 2V, f = 1MHz$		55		pF



**Definitions of electrical characteristics**