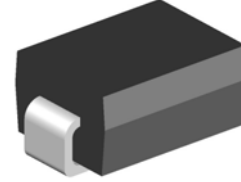


**SPD82581B**

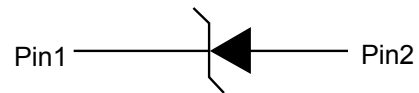
1-Line, 600W, TVS

<http://www.sh-willsemi.com>
**Descriptions**

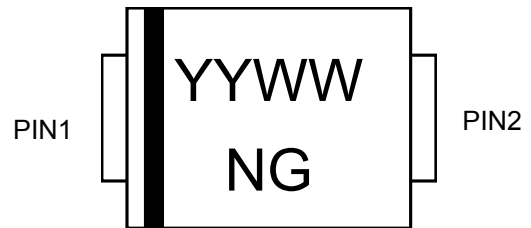
SPD82581B protect sensitive electronics against voltage transients induced by inductive load switching and lightning. Ideal for the protection of I/O interfaces,  $V_{CC}$  bus and other integrated circuits.


**SMB**
**Features**

- For surface mount application
- Excellent clamping capability
- Low profile package
- Fast response time: Typically less than 1.0ps from 0V to 64.4V
- Low inductance
- GPP


**Schematic Diagram**
**Mechanical Data**

- Case: Molded plastic
- Mounting position: Any
- Weight: 0.093 grams



YY = Year Code  
 WW = Week Code  
 NG = Device Code

**Marking (Top View)**
**Order information**

Device	Dim (mm)	Shipping
SPD82581B-2/TR	5.3*3.5*2.3	3000/Tape&Reel

**Absolute maximum ratings**

Rating	Symbol	Value	Units
Peak Pulse Power on 10/1000µs waveform	P <sub>PPM</sub>	600	W
Peak Pulse Current of on 10/1000µs waveform	I <sub>PPM</sub>	6.4	A
Peak Forward Surge Current , 8.3ms Single Half Sine-wave Superimposed on Rated Load,(JEDEC Method)	I <sub>FSM</sub>	100	A
Junction Temperature	T <sub>J</sub>	-55~150	°C
Operating Temperature	T <sub>OP</sub>	-40~125	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

Notes:

1. Mounted on 5.0mm<sup>2</sup> (0.03mm thick) Copper Pads to each terminal

**Electrical characteristics (T<sub>A</sub>=25°C, unless otherwise noted)**

Part Number	Reverse Stand off Voltage V <sub>R</sub> (V)	Breakdown Voltage V <sub>BR</sub> @ I <sub>T</sub> (V)		Test Current I <sub>T</sub> (mA)	Maximum Clamping Voltage V <sub>C</sub> @I <sub>PP</sub> (V)	Maximum Peak Pulse Current I <sub>PP</sub> (A)	Maximum Reverse Leakage I <sub>R</sub> @ V <sub>R</sub> (µA)
		MIN	MAX				
SPD82581B	58	64.4	74.1	1	93.6	6.4	1

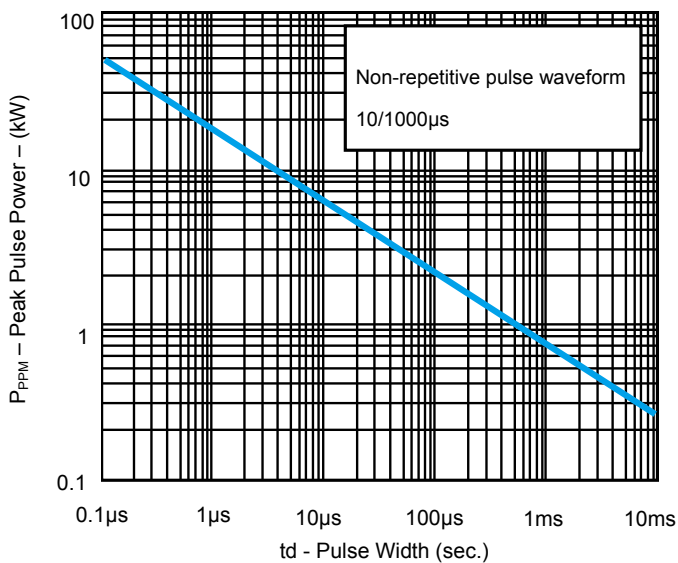
**Typical characteristics (T<sub>A</sub>=25°C, unless otherwise noted)**


Fig. 1 Peak Pulse Power

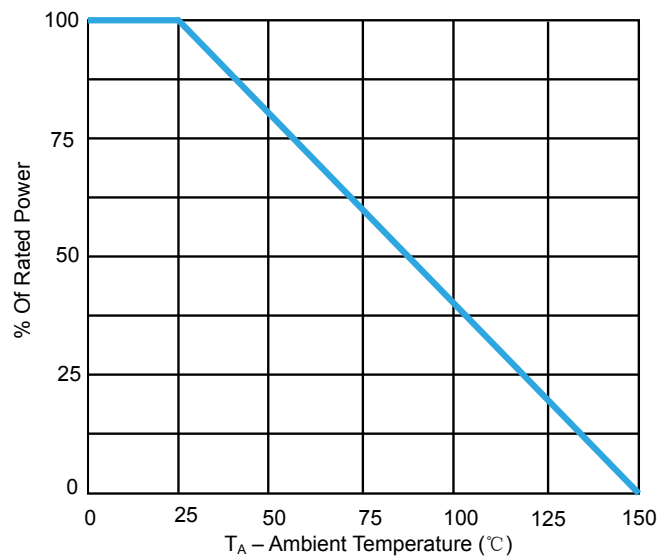
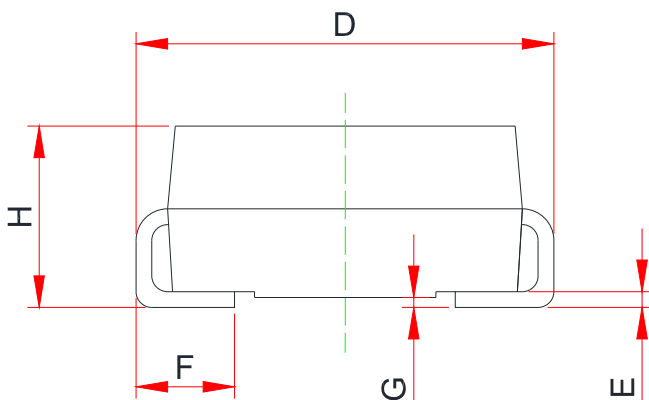
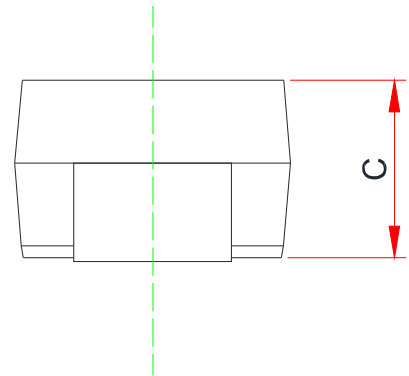
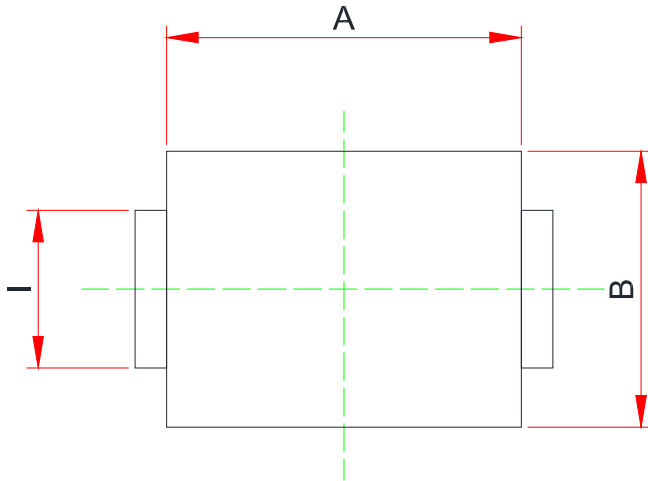
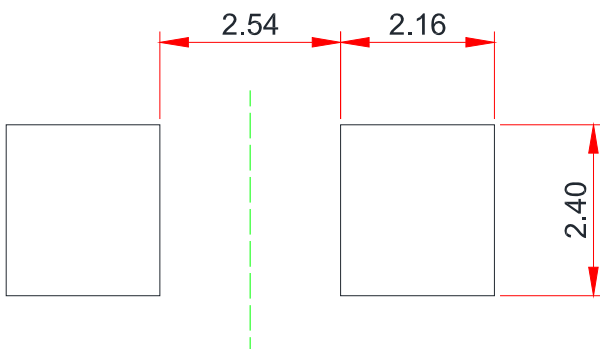


Fig. 2 Pulse Derating Curve

**Package outline dimensions (Unit: mm)**
**SMB**


Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	4.06		4.57
B	3.30		3.94
C	1.95		2.62
D	5.08		5.59
E	0.13		0.31
F	0.76		1.52
G	0.20 Max.		
H	2.10	2.30	2.50
I	1.78	2.00	2.20

**Recommended 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.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [Will Semiconductor](#) manufacturer:*

Other Similar products are found below :

[NTE4902](#) [P4SMAJ15A](#) [P4SMAJ26A](#) [SMAJ400CA-TP](#) [TGL34-47CA](#) [ESDAULC45-1BF4](#) [SM1605E3/TR13](#) [SMF20A-TP](#) [P4SMAJ12A](#)  
[CPDUR24V-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [MPLAD30KP45CAE3](#) [MMBZ27VCLQ-7-F](#) [MMAD1108/TR13](#) [MPLAD30KP24A](#)  
[ACPDQC5V0R-HF](#) [DFLT170A-7](#) [NTE4900](#) [NTE4926](#) [NTE4938](#) [SMF22A-TP](#) [SMF12A-TP](#) [SLVU2.8-TP](#) [SMLJ6.5CA-TP](#) [SMAJ6.5CA-](#)  
[TP](#) [MMAD1108E3/TR13](#) [D5V0M1U2LP3-7](#) [SMAJ400A-TP](#) [AOZ8811DT-03](#) [AOZ8831DI-05](#) [AOZ8831DT-03](#) [SMAJ188CA](#) [3SMC33CA](#)  
[BK](#) [CPDQC3V3C-HF](#) [CPDQC12VE-HF](#) [MPLAD30KP170CA](#) [82357120100](#) [5.0SMLJ15CA-TP](#) [5KP18A-TP](#) [P6KE8.2A-TP](#)  
[MPLAD30KP43CAE3](#) [SMAJ43A-TP](#) [D5V0F6U8LP33-7](#) [TVS5501V10MUT5G](#) [5.0SMLJ24CA-TP](#) [SMAJ110CA-TP](#) [MPLAD15KP75CAE3](#)  
[MMAD1103e3/TR13](#) [DFLT40AQ-7](#)