

SPD82152B

1-Line, 600W, TVS

[Http://www.sh-willsemi.com](http://www.sh-willsemi.com)

Descriptions

SPD82152B 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.

Features

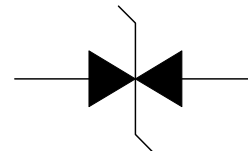
- For surface mount application
- Excellent clamping capability
- Low profile package
- Fast response time: Typically less than 1.0ps from 0V to 16.7V
- Low inductance
- GPP

Mechanical Data

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



SMB



Schematic Diagram



XXXX = Date code

BM = Device code

Marking (Top View)

Order information

Device	Package	Shipping
SPD82152B-2/TR	SMB	3000/Tape&Reel

Absolute maximum ratings

Part Number	Reverse Stand off Voltage V_R (V)	Breakdown Voltage $V_{BR}@ I_T$ (V)		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage $I_R @ V_R$ (μA)
		MIN	MAX				
SPD82152B	15	16.7	19.2	1	24.4	24.6	5

Thermal considerations

Rating	Symbol	Value	Units
Peak Pulse Power on 10/1000 μs waveform	P_{PPM}	600	W
Peak Pulse Current of on 10/1000 μs waveform	I_{PPM}	24.6	A
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

Notes :

1. Mounted on 5.0mm² (0.03mm thick) Copper Pads to each terminal

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

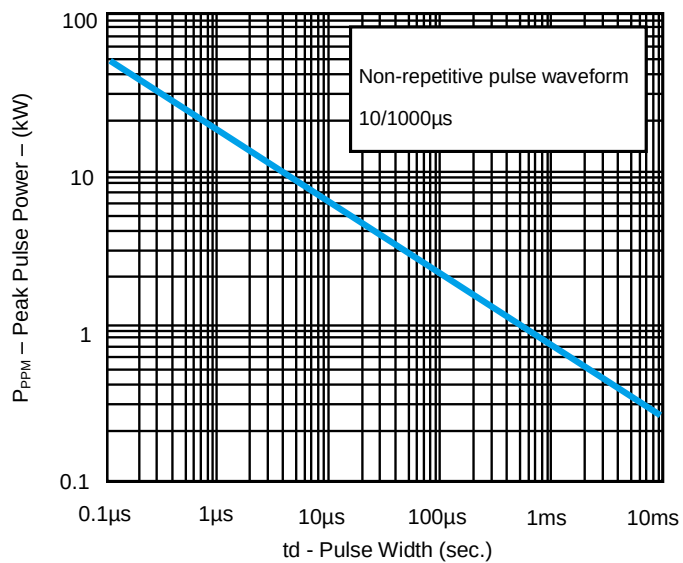


Fig. 1 Peak Pulse Power

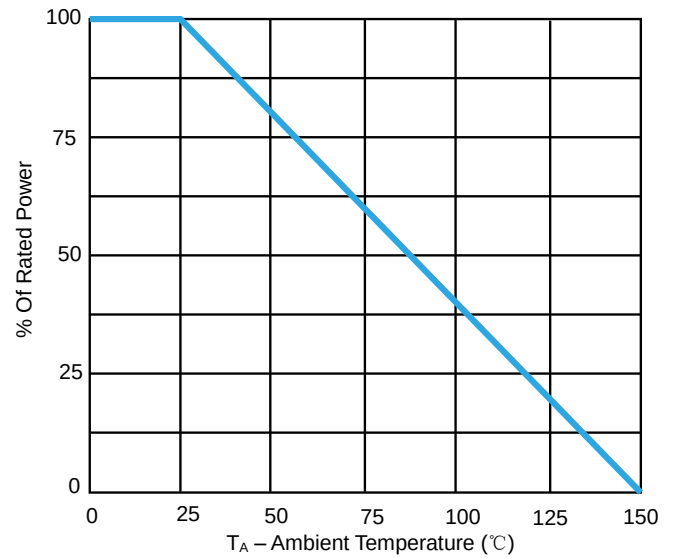
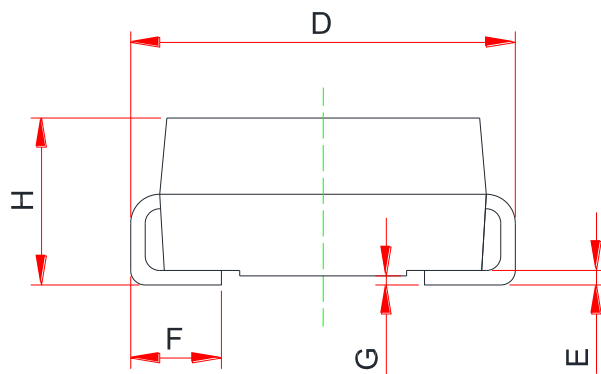
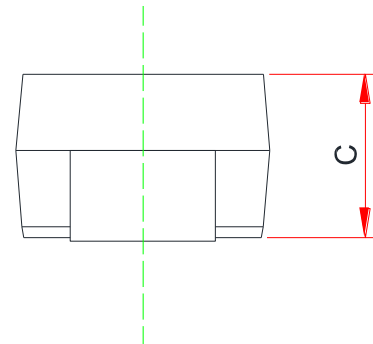
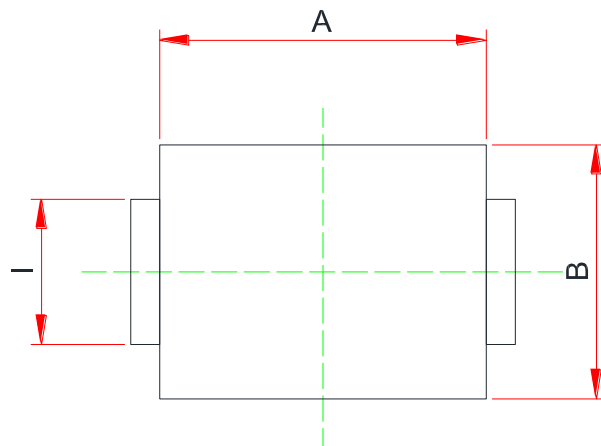
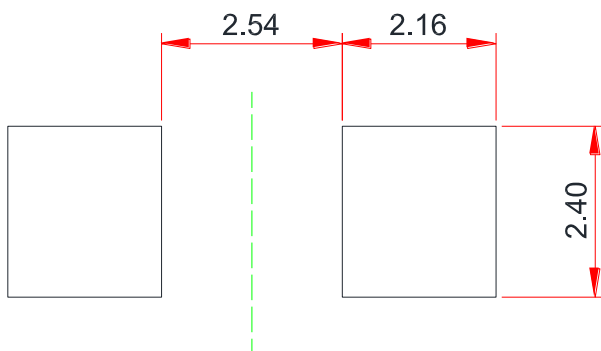


Fig. 2 Pulse Derating Curve

Package outline dimensions (Unit:mm)
SMB


Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	4.30	4.50	4.70
B	3.30	3.50	3.70
C	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.		
H	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.