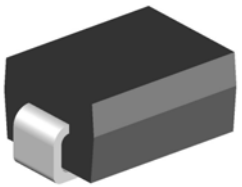
SPD82581B

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.



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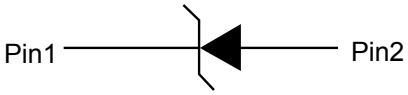
Features

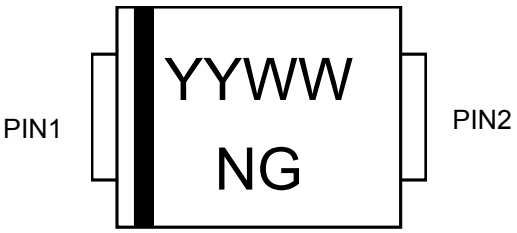
- For surface mount application
- Excellent clamping capability
- Low profile package
- Fast response time: Typically less than 1.0ps from 0V to 64.4V
- Low inductance
- GPP



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_{PPM}	600	W
Peak Pulse Current of on 10/1000μs waveform	I_{PPM}	6.4	A
Peak Forward Surge Current , 8.3ms Single Half Sine-wave Superimposed on Rated Load,(JEDEC Method)	I_{FSM}	100	A
Junction Temperature	T_J	-55~150	℃
Operating Temperature	T_{OP}	-40~125	℃
Storage Temperature Range	T_{STG}	-55~150	℃

Notes:

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

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

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) (A)	Maximum Reverse Leakage I_R @ V_R (μA)
		MIN	MAX				
SPD82581B	58	64.4	74.1	1	93.6	6.4	1

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

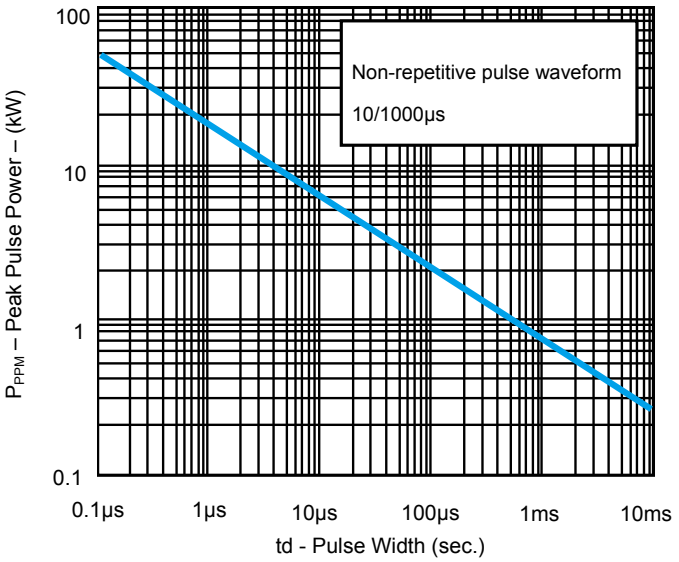


Fig. 1 Peak Pulse Power

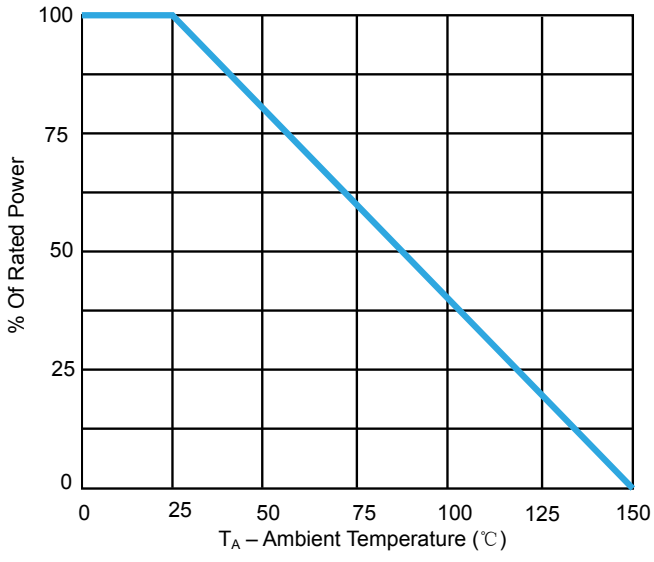


Fig. 2 Pulse Derating Curve

Package outline dimensions (Unit: mm)

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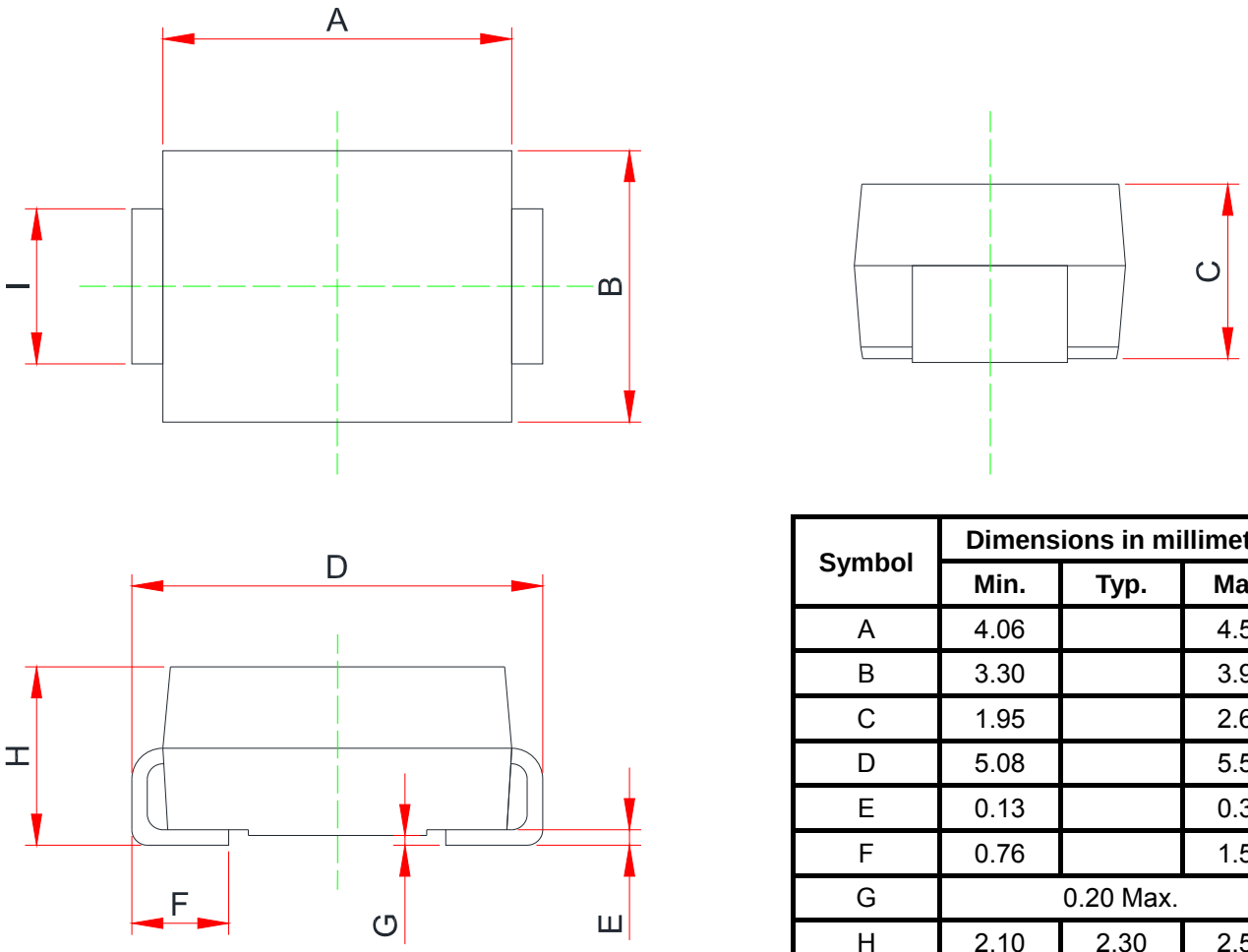
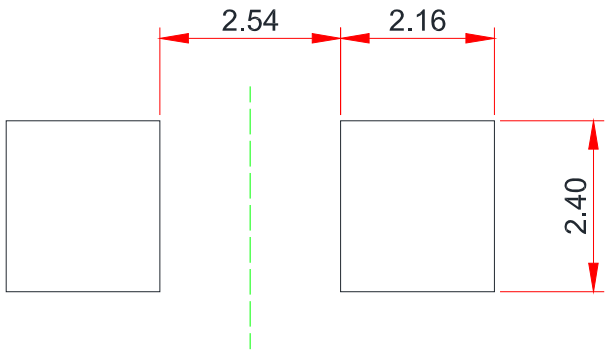


Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	4.06		4.57
B	3.30		3.94
C	1.95		2.62
D	5.08		5.59
E	0.13		0.31
F	0.76		1.52
G	0.20 Max.		
H	2.10	2.30	2.50
I	1.78	2.00	2.20

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.