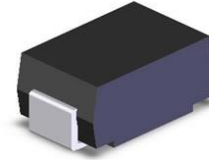


SPD81581A

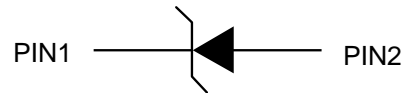
1-Line, 400W, TVS

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

SPD81581A 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.


SMA (DO-214AC)
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: 0.063 grams



XXXX = Date code

RG = Device code

Marking (Top View)
Order information

Device	Package	Shipping
SPD81581A-2/TR	SMA	5000/Tape&Reel

Absolute maximum ratings

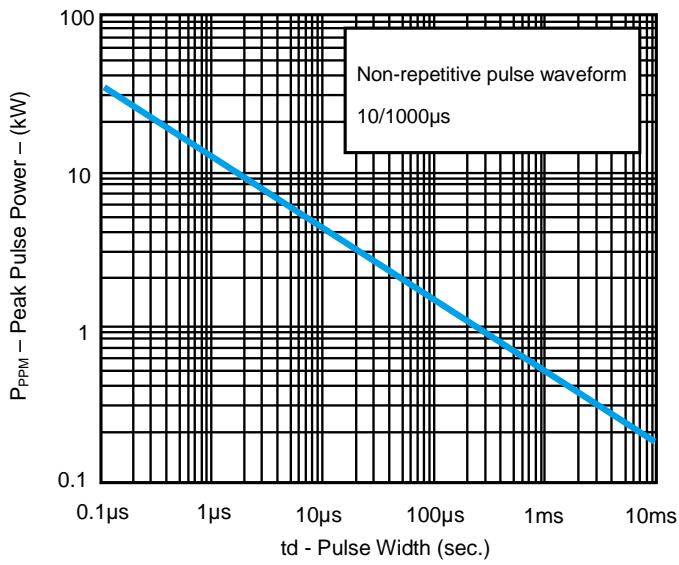
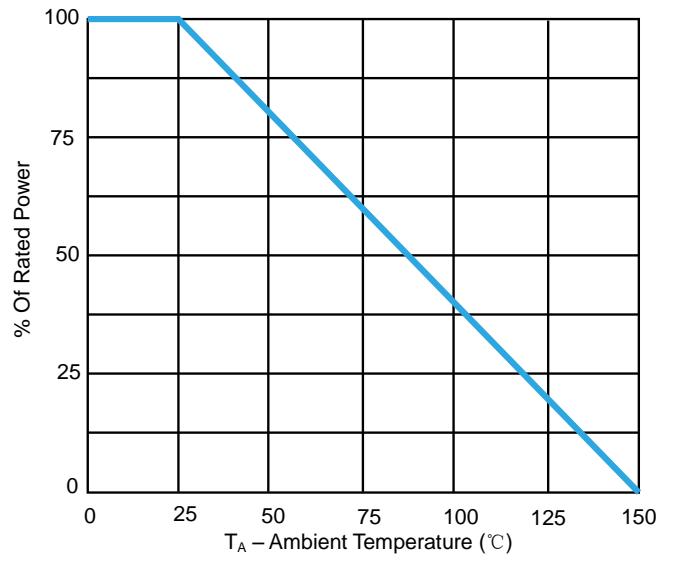
Part Number	Reverse Stand off Voltage V_R (V)	Breakdown Voltage $V_{BR}@ I_T$ (V)		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage I_R @ V_R (μ A)
		MIN	MAX				
SPD81581A	58	64.4	74.1	1.0	93.6	4.3	5.0

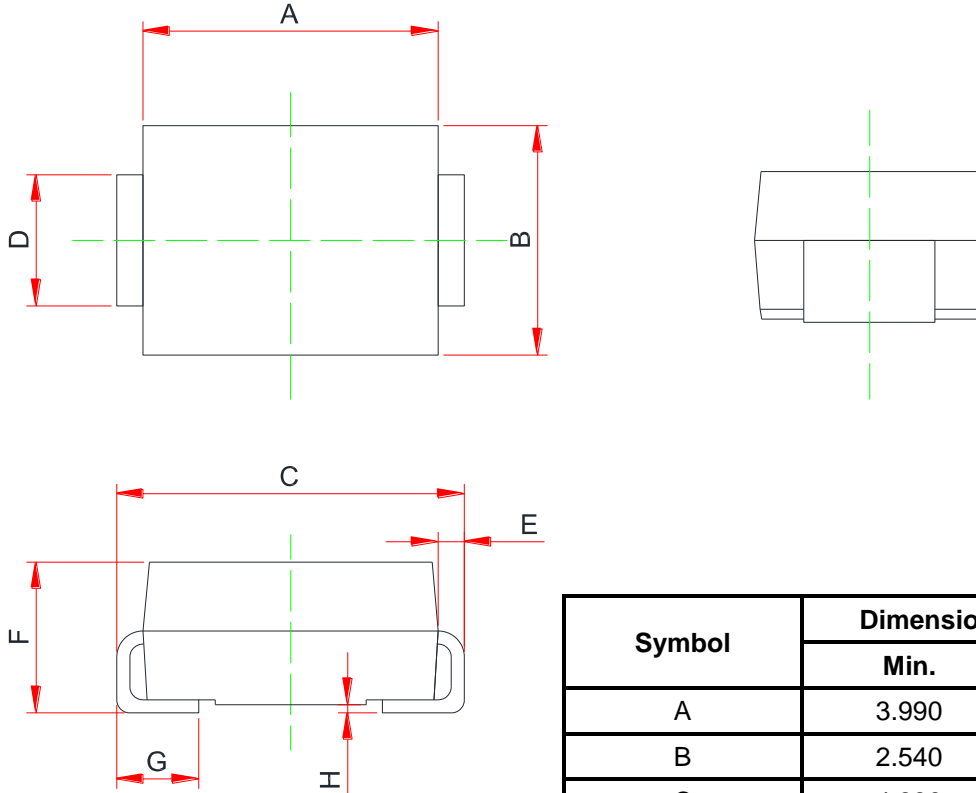
Thermal considerations

Rating	Symbol	Value	Units
Peak Pulse Power on 10/1000 μ s waveform	P_{PPM}	400	W
Peak Pulse Current of on 10/1000 μ s waveform	I_{PPM}	4.3	A
Peak Forward Surge Current , 8.3ms Single Half Sine-wave Superimposed on Rated Load,(JEDEC Method)	I_{FSM}	40	A
Operating Temperature Range	T_{OP}	-55 to +150	$^{\circ}$ C
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}$ C

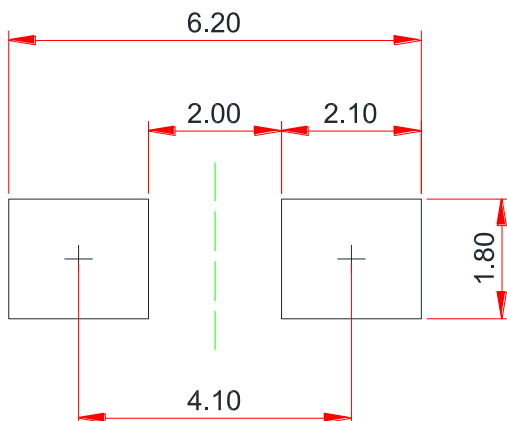
Notes:

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)
SMA


Symbol	Dimensions in millimeter	
	Min.	Max.
A	3.990	4.500
B	2.540	2.790
C	4.930	5.280
D	1.250	1.650
E	0.152	0.305
F	1.980	2.290
G	0.780	1.520
H	-	0.203

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.