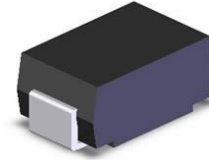


SPD81581A

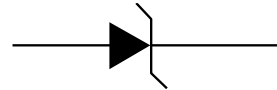
1-Line, 400W, TVS

[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.


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

SMA (DO-214AC)

Schematic Diagram
Mechanical Data

- Case: Molded plastic
- Mounting position: Any
- Weight: 0.063 grams



YY = Year Code
 WW = Week Code
 RG = Device Code

Marking (Top View)
Order information

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

Absolute maximum ratings

Rating	Symbol	Value	Units
Peak Pulse Power on 10/1000µs waveform	P _{PPM}	400	W
Peak Pulse Current of on 10/1000µs 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
Junction Temperature	T _J	-55~150	°C
Operating Temperature	T _{OP}	-40~125	°C
Storage Temperature Range	T _{STG}	-55~150	°C

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)	Maximum Reverse Leakage I _R @ V _R (µA)
		MIN	MAX				
SPD81581A	58	64.4	74.1	1.0	93.6	4.3	1.0

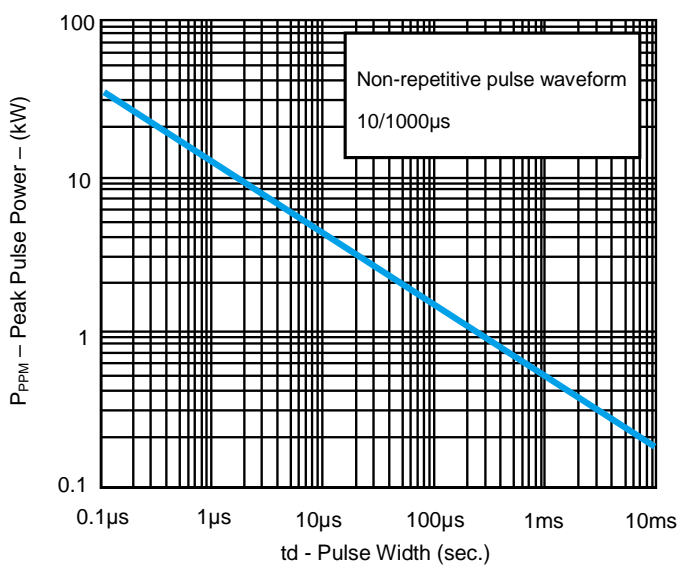
Typical characteristics (T_A=25°C, unless otherwise noted)


Fig. 1 Peak Pulse Power

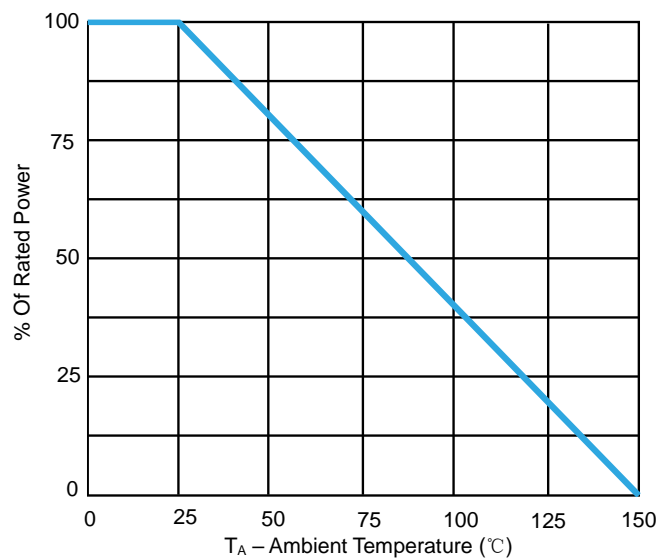
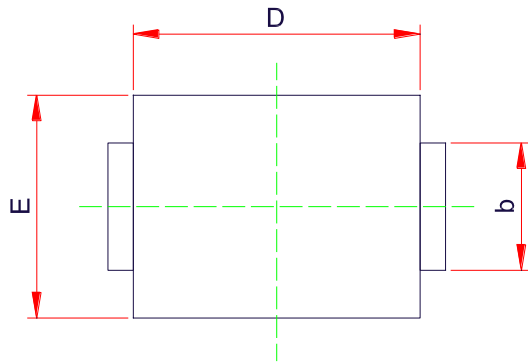
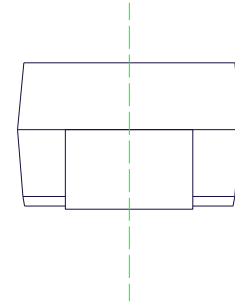
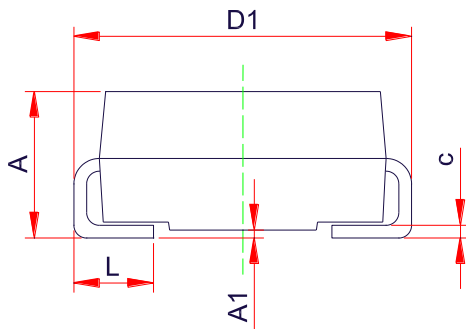
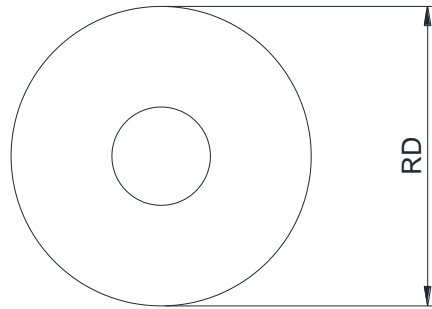
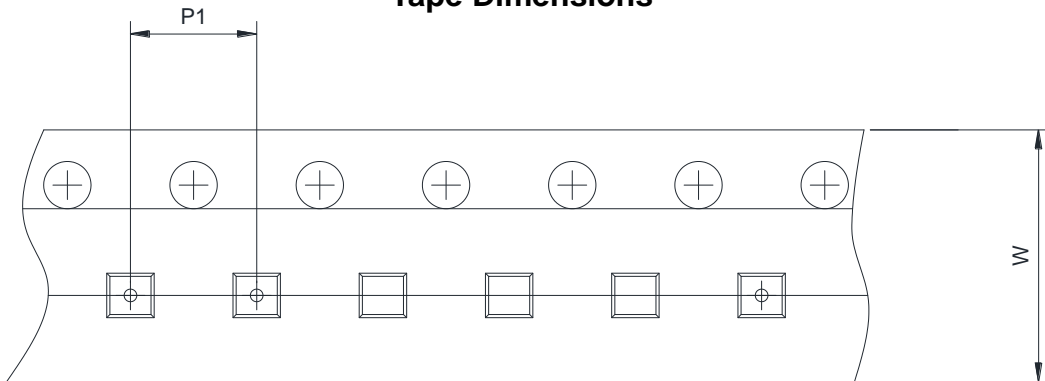
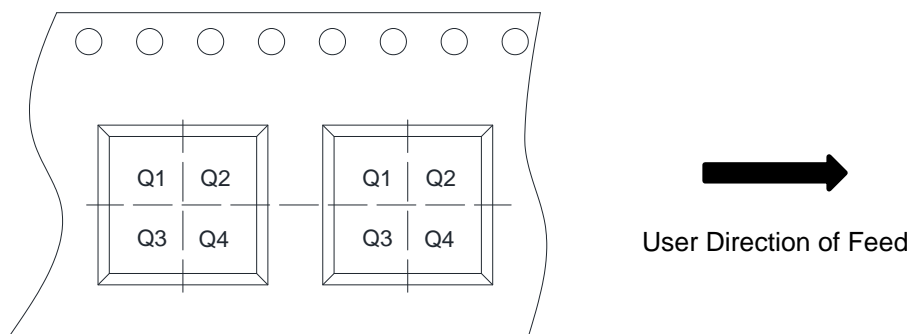


Fig. 2 Pulse Derating Curve

PACKAGE OUTLINE DIMENSIONS
SMA

TOP VIEW

SIDE VIEW

SIDE VIEW

Symbol	Dimensions in millimeters	
	Min.	Max.
A	1.90	2.50
A1	0.203 MAX	
c	0.14	0.31
D	3.85	4.60
D1	4.70	5.30
E	2.18	2.80
b	1.27	1.80
L	0.76	1.52

TAPE AND REEL INFORMATION
Reel Dimensions

Tape Dimensions

Quadrant Assignments For PIN1 Orientation In Tape


RD	Reel Dimension	<input type="checkbox"/> 7inch	<input checked="" type="checkbox"/> 13inch
W	Overall width of the carrier tape	<input type="checkbox"/> 8mm	<input checked="" type="checkbox"/> 12mm <input type="checkbox"/> 16mm
P1	Pitch between successive cavity centers	<input type="checkbox"/> 2mm	<input checked="" type="checkbox"/> 4mm <input type="checkbox"/> 8mm
Pin1	Pin1 Quadrant	<input checked="" type="checkbox"/> Q1	<input checked="" type="checkbox"/> Q2 <input type="checkbox"/> Q3 <input type="checkbox"/> Q4