

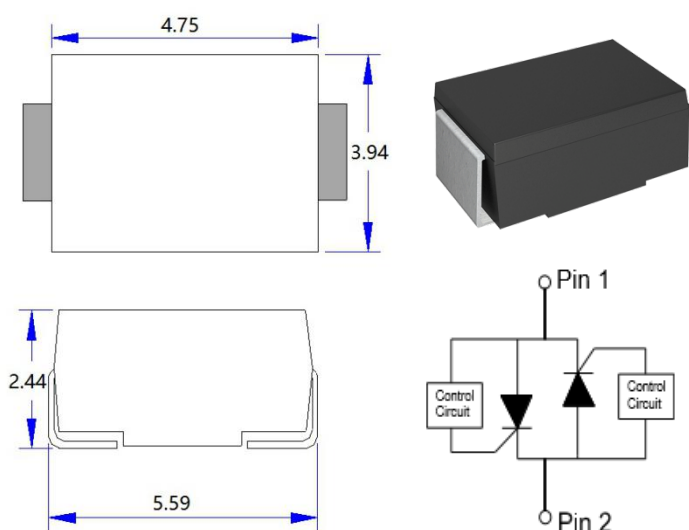
Description

This device has been especially designed to protect 1 low voltage or signal line, as well as classical RS-485 interface, against transient over-voltages. ESD-voltages are clamped by 2 TVS diodes. Surges are suppressed by 2 thyristors, their breakdown voltage close to 25V, then their leakage current as low as 1uA. This devices are not subject to ageing and provide a fail safe mode in short circuit for a better protection. WPM are used to help equipment to meet various standards such as IEC950 / CSA C22.2 and FCC part68.

Features

- Integrated the two TVS diodes and two thyristor
- Accurate voltage of protection
- Low switching voltages: V_{BR}
- Low leakage current: $I_R = 2 \mu A$ max
- High Peak pulse current
- Solid-state silicon technology
- Meets MSL 1 Requirements
- ROHS compliant

Dimensions & Symbol (Unit: mm Max)



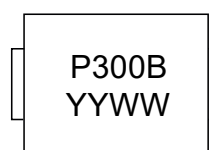
Mechanical Characteristics

- Package: SMB/DO-214AA
- Case Material: "Green" Molding Compound.
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.10g
- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

- RS-485 interface
- Telecommunications infrastructure
- PBX's and other switches
- FCC Part 68 Customer Premise Equipment
- Set-top box ,CATV lines
- Ammeter

Marking Information



P300B = Device Marking Code
YYWW = Date Code

Ordering Information

Out line	Reel (pcs)	Reel diameters (mm)
Taping	3K	330

Absolute Maximum ratings ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

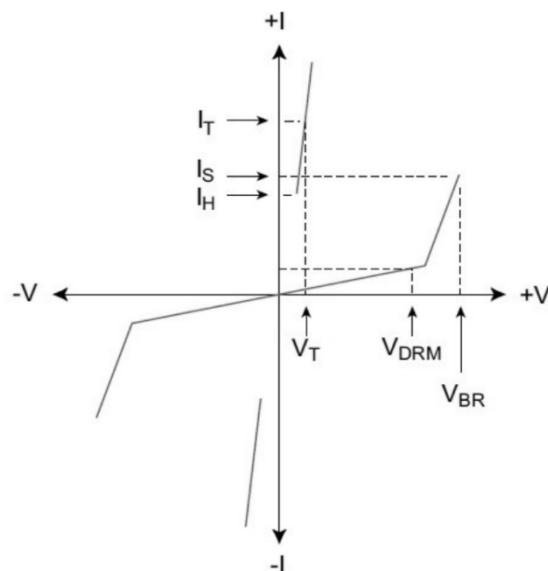
Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-40 to +150	$^{\circ}\text{C}$
Operating junction temperature range	T_j	-40 to +150	$^{\circ}\text{C}$
Repetitive peak pulse current	I_{PP}	100	A

Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

Part Number	V_{RM}	I_{RM}	V_{BO}	I_{BO}	V_{T}	I_{T}	C_{O}	I_{H}
	Min.	Max.	Max.		Max.		Max.	Typ.
	V	μA	V	mA	V	A	pF	mA
WP61300B	25	5	40	800	4	2.2	75	50

Electrical Parameters & V-I Curve

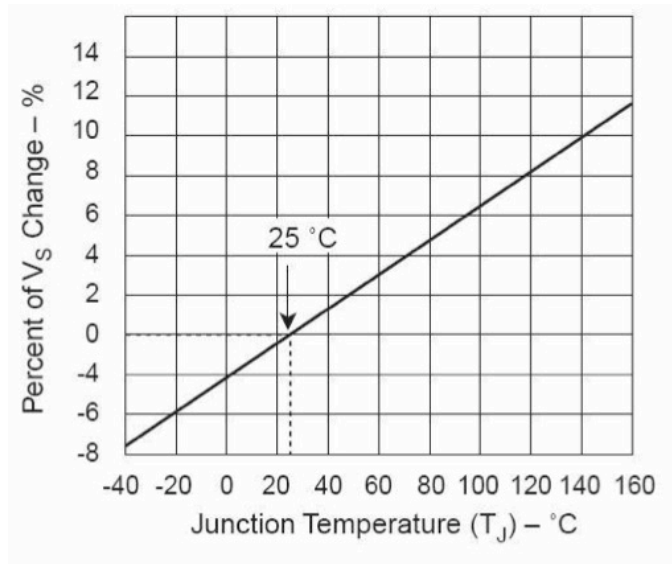
Symbol	Parameter
V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current
V_{S}	Switching voltage
I_{S}	Switching current
V_{T}	On-state voltage
I_{T}	On-state current
I_{H}	Holding current
C_{O}	Off-state capacitance



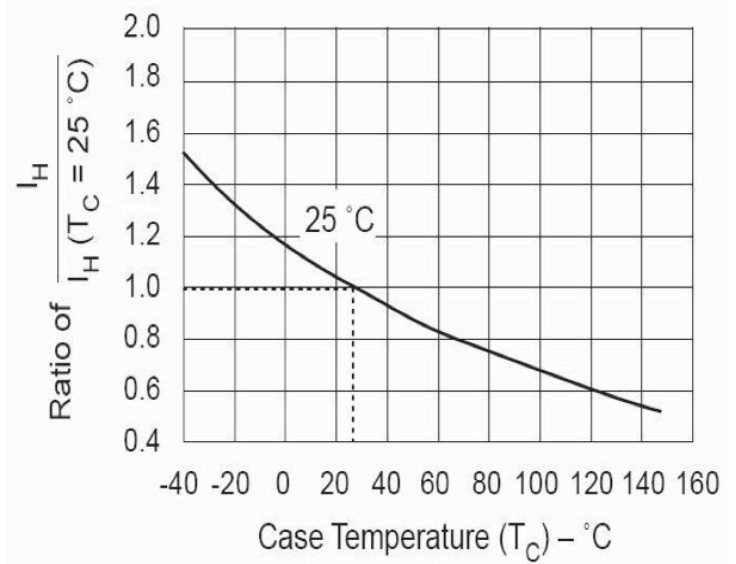
Surge Ratings

Series	I_{PP} (A) min			
	2×10 μs	8×20 μs	5×320 μs	10×1000 μs
B	250	250	100	80

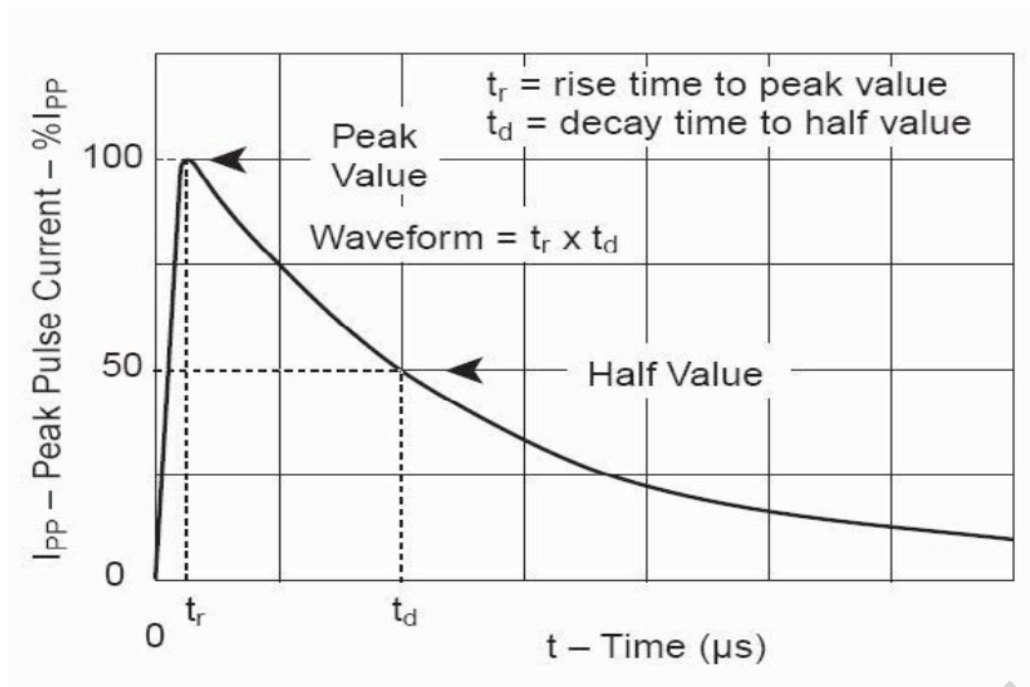
Electrical Characteristics Curves



Normalized V_S Change – Junction Temperature

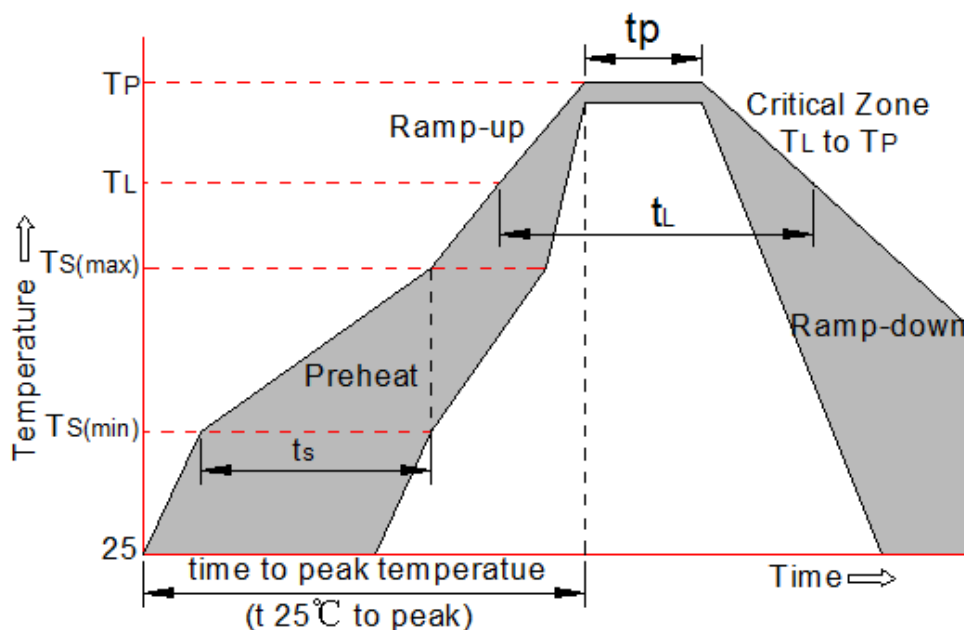


Normalized DC Holding Current



Tr -td Puls Wave-form

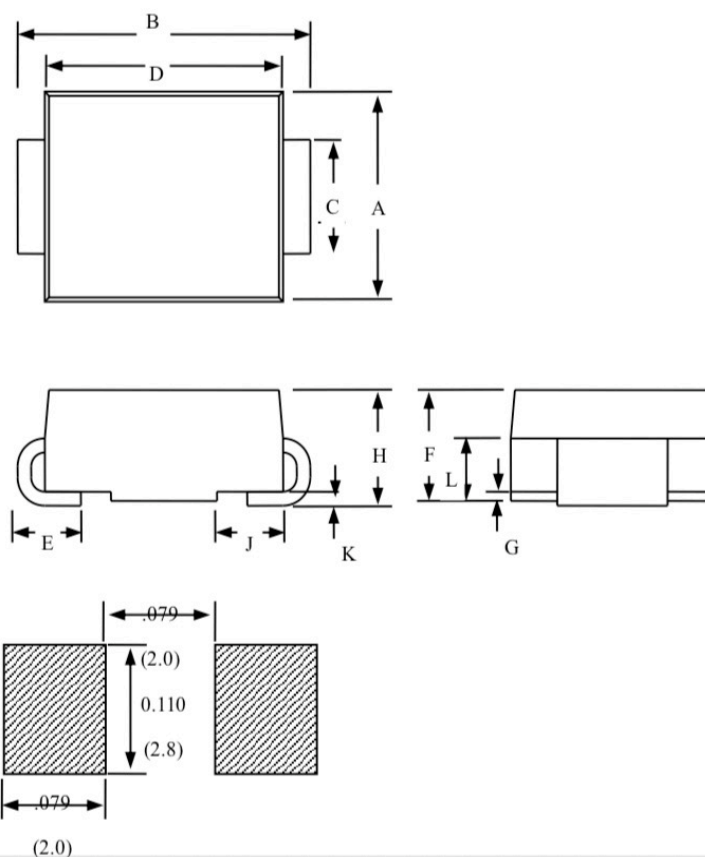
Soldering Parameters



Soldering Condition		Pb-Free assembly
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max ($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

Package Mechanical Data (SMB)

Dimension	Inches		Millimeters	
	M _{IN}	M _{AX}	M _{IN}	M _{AX}
A	0.134	0.155	3.40	3.94
B	0.205	0.22	5.21	5.59
C	0.075	0.083	1.90	2.11
D	0.166	0.185	4.22	4.70
E	0.036	0.056	0.91	1.42
F	0.073	0.087	1.85	2.2
G	0.002	0.008	0.05	0.20
H	0.077	0.094	1.95	2.40
J	0.043	0.053	1.09	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24



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