

Description

TVS diodes can be used in a wide range of applications which like consumer electronic products, automotive industries, munitions, telecommunications, aerospace industries, and intelligent control systems.

Feature

- Glass passivated or planar junction
- Excellent clamping capability
- Repetition rate (duty cycle): 0.01%
- Low profile package and low inductance
- Fast response time: typically less than 1.0ps from 0V to VBR min.
- High temperature soldering: 260°C/10s at terminals.
- Plastic package has Underwriters Laboratory Flammability 94V-0.
- For surface mounted applications in order to optimize board space.

Mechanical Characteristics

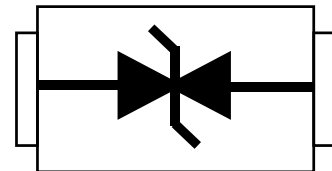
- Package: SMB/DO-214AA
- Case Material: "Green" MoldingCompound.
- UL Flammability Classification Rating 94V-0
- Polarity: Color band denotes cathode except bi-directional models
- Standard Packaging: 12mm tape (EIA STD RS-481)
- Weight: 0.10g

Applications

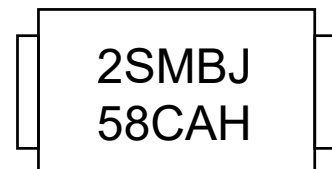
- POE application
- I/O Interface.
- AC/DC Power supply
- Low frequency signal transmission line (RS232, RS485, etc.)



SMB(Top View)



Circuit Diagram



Marking (Top View)

Transient Voltage Suppression

2.0SMBJ58CAH

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}	-	-	-	58	V
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	61	-	71.2	V
Reverse Leakage Current	I_R	$V_{RWM} = 58\text{V}$	-	-	10	μA
Clamping Voltage	V_C	$I_{PP} = 650\text{A}, t_p = 8/20\mu\text{s}$	-	75	80	V
		$I_{PP} = 100\text{A}, t_p = 10/700\mu\text{s}$	-	75	80	V
		$I_{PP} = 40\text{A}, t_p = 10/1000\mu\text{s}$	-	60	65	V

Absolute maximum rating@25°C

Rating	Symbol	Value	Units
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	650	A
Peak Pulse Current ($t_p = 10/700\mu\text{s}$)	I_{PP}	100	A
Peak Pulse Current ($t_p = 10/1000\mu\text{s}$)	I_{PP}	40	A
Operating Temperature Range	T_J	-55~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

Typical Characteristics

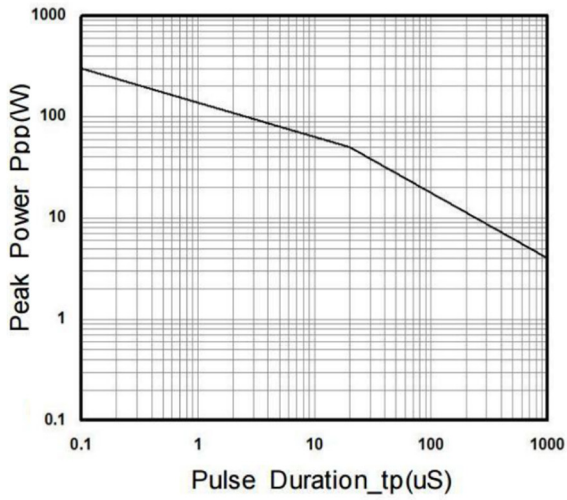


Fig 1. Peak Pulse Power vs. Pulse Time

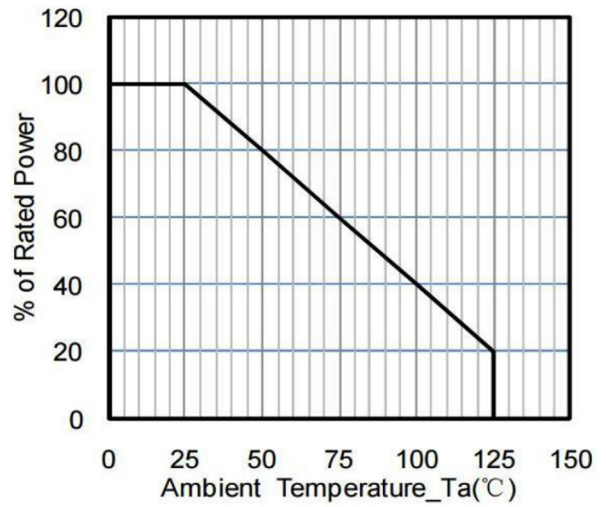


Fig 2. Power Derating Curve

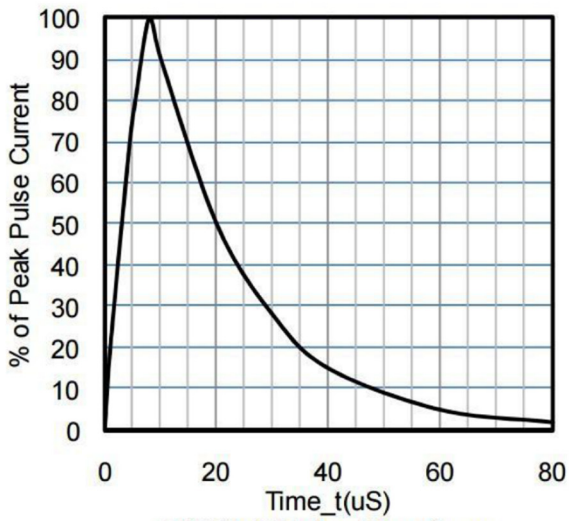
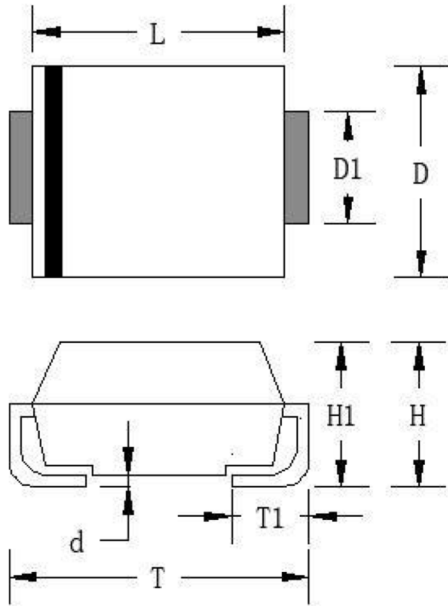



Fig 3. 8 X 20uS Pulse Waveform

Product dimension (SMB)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
D	3.40	3.94	0.134	0.155
D1	1.90	2.10	0.075	0.083
L	4.22	4.70	0.166	0.185
T	5.21	5.59	0.205	0.220
c	0.080	0.150	0.003	0.006
d	0.00	0.23	0.000	0.009
H	1.95	2.60	0.077	0.102
H1	2.00	2.34	0.079	0.092


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