

SEMFxxC SERIES
5-Line Transient Voltage Suppressor Array

Revision:B

General Description

The Standard TVS are designed to low voltage, integrated circuits from transients caused by electrostatic discharge (ESD), electrical fast transients (EFT) and other induced voltages.

Applications

- Computer Notebooks
- Communication Systems & Cellular Phones
- Printers
- Personal Digital Assistant(PDA)
- Video Equipment

Features

- 100 W Peak Pulse Power per Line ($t_p=8/20\mu s$)
- Monolithic Structure
- Available in 4 Voltage Types:5V to 24V
- Low Clamping Voltage
- ESD Protection > 40 kilovolts
- Low Leakage Current
- Protects up to Four (4) Bidirectional Lines and Five(5) Unidirectional Lines
- RoHS Compliant on Lead-Free Versions

Complies with the following standards

IEC61000-4-2

Level 4 15 kV (air discharge)

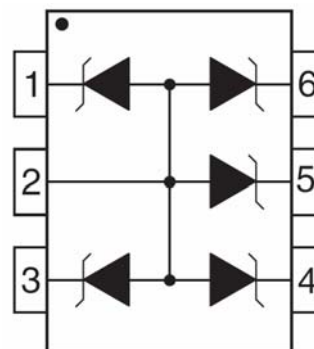
8 kV(contact discharge)

MIL STD 883E - Method 3015-7 Class 3

25 kV HBM (Human Body Model)

Functional Diagram

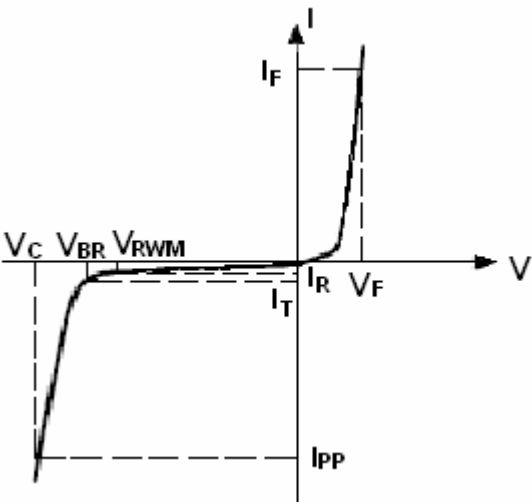

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Absolute Ratings @ 25°C Unless Otherwise Specified

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power ($t_p=8/20\mu s$) See Figure 1	100	Watts
T_J	Operating Temperature	-55°C to 150 °C	°C
T_{STG}	Storage Temperature	-55°C to 150°C	°C

Electrical Parameter

Symbol	Parameter
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @ I _{PP}
V _{RWM}	Working Peak Reverse Voltage
I _R	Maximum Reverse Leakage Current @ V _{RWM}
I _T	Test Current
V _{BR}	Breakdown Voltage @ I _T
I _F	Forward Current
V _F	Forward Voltage @ I _F



Electrical Characteristics

Part Numbers	V _{BR}			I _T	V _{RWM}	I _R	C
	Min.	Typ.	Max.				Typ. 0v bias
	V	V	V	mA	V	μA	pF
SEMF05C	6.1	6.7	7.2	1	5.0	5	35
SEMF12C	13.3	14.5	15.0	1	12	1	30

Typical Characteristics

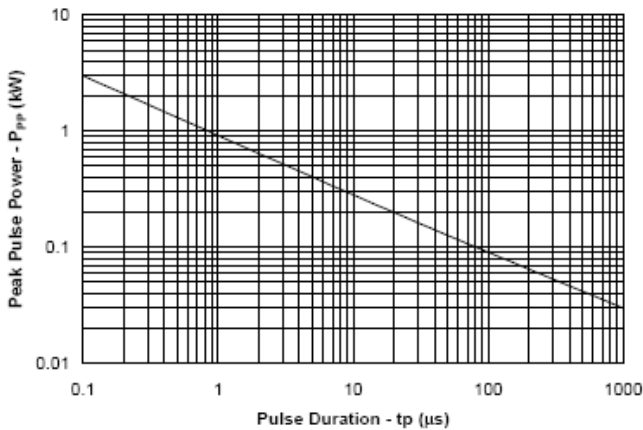


Fig1. Non-Repetitive Peak Pulse Power vs. Pulse Time

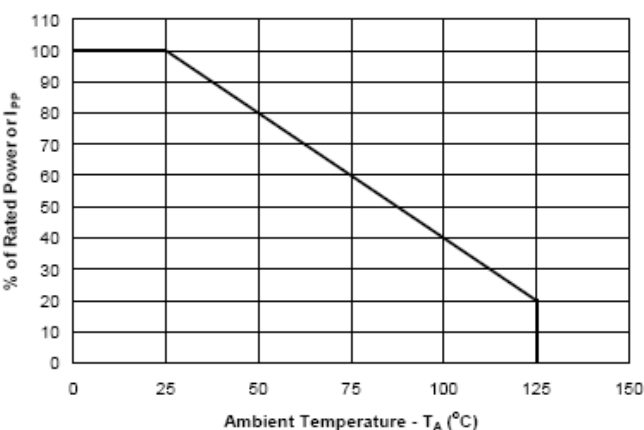


Fig2. Power Derating Curve

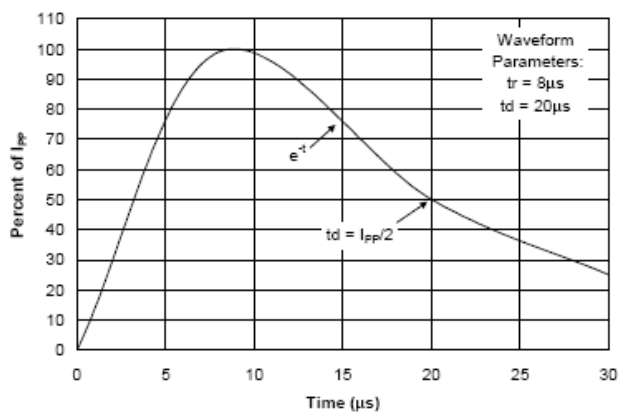


Fig3. Pulse Waveform

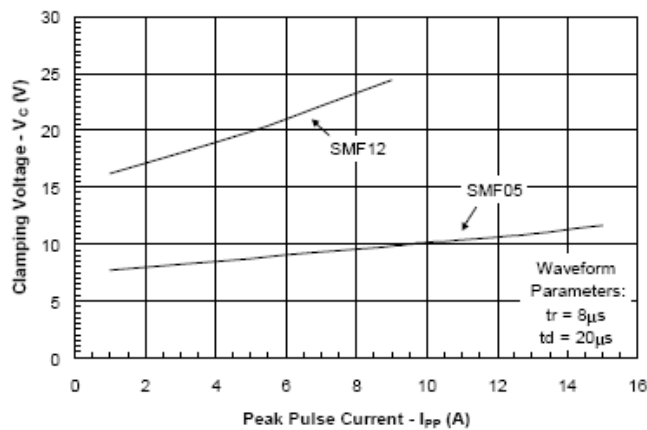
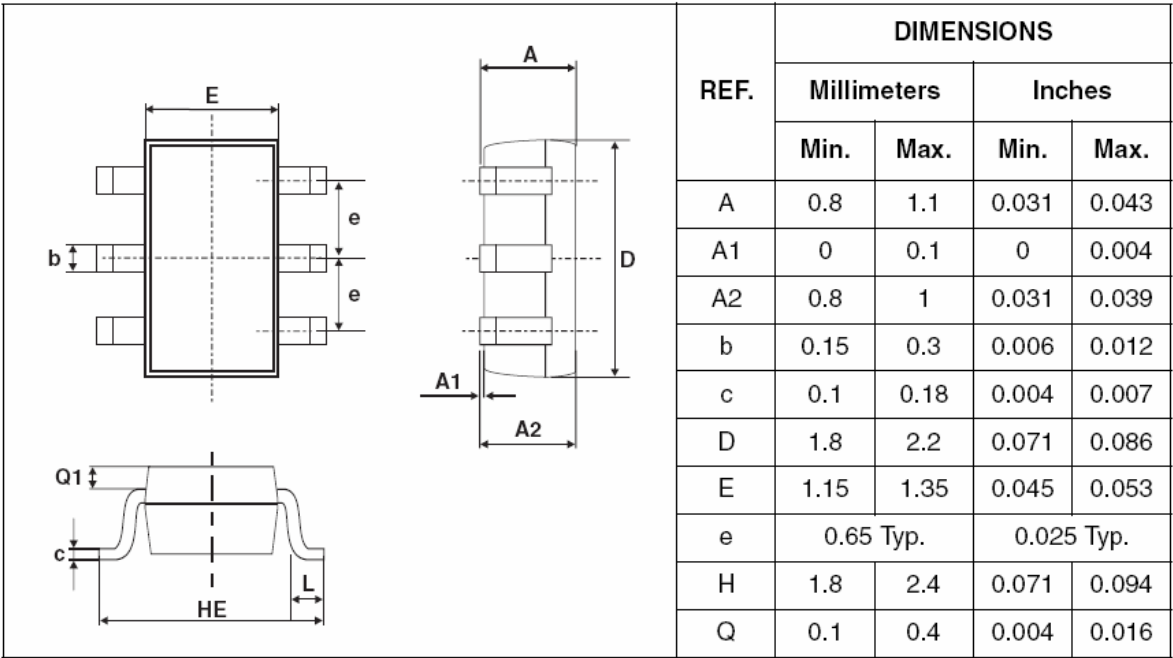


Fig4. Clamping Voltage vs. Peak Pulse Current

SOT-363 Mechanical Data



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