WILLAS

RoHS COMPLIANT

4-Line Transient Voltage Suppressor Array

SEMF05

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=8/20μs)
- Monolithic Structure
- Available in 4 Voltage Types:5V
- Low Clamping Voltage
- ESD Protection > 40 kilovolts
- Low Leakage Current
- Protects up to Four (4) Bidirectional Lines and Five(5) Unidirectional Lines
- **Pb-Free package is available**
  RoHS product for packing code suffix "G"
  Halogen free product for packing code suffix "H"
- **Moisture Sensitivity Level 1**

Complies with the following standards

IEC61000-4-2

Level 4 15 kV (air discharge)

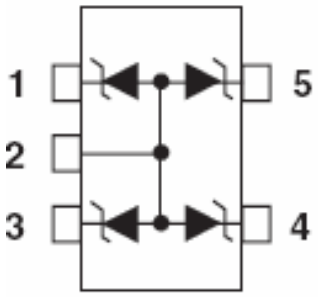
8 kV(contact discharge)

MIL STD 883E - Method 3015-7 Class 3

25 kV HBM (Human Body Model)

Functional Diagram

SOT-353



Absolute Ratings @ 25℃ Unless Otherwise Specified			
Symbol	**Parameter**	**Value**	**Units**
P_{PP}	Peak Pulse Power (t_p=8/20μs)See Figure 1	100	Watts
T_J	Operating Temperature	-55℃ to 150 ℃	℃
T_{STG}	Storage Temperature	-55℃ to 150℃	℃

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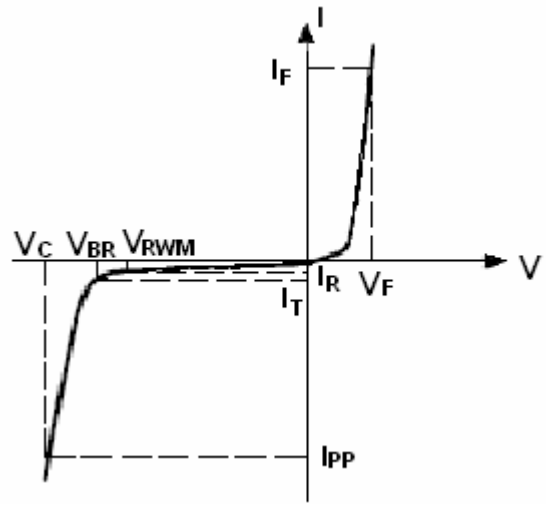
Electrical Parameter

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
SEMF05	6.1	6.7	7.2	1	5.0	1	35

Typical Characteristics

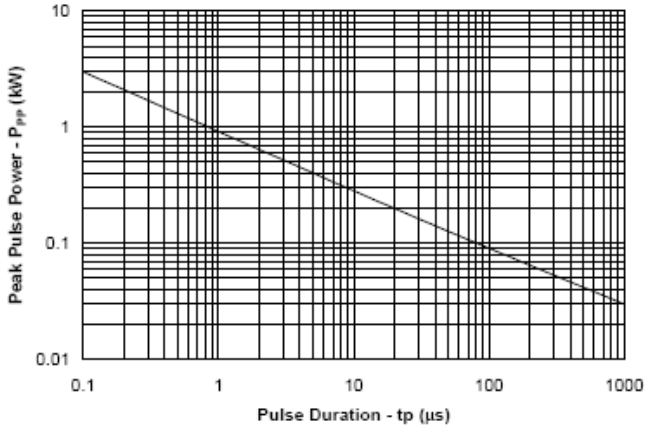


Fig1. Non-Repetitive Peak Pulse Power vs. Pulse Time

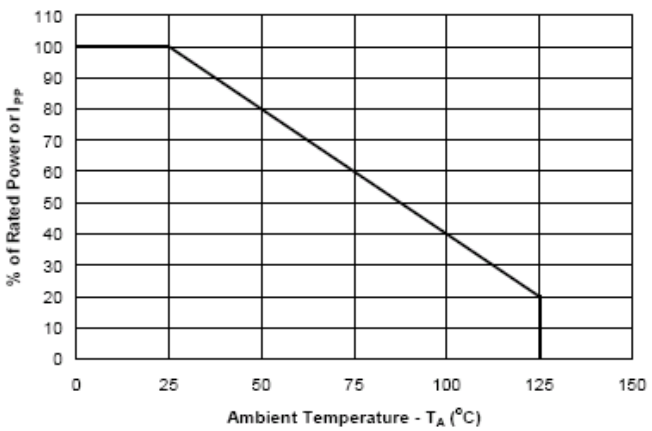


Fig2. Power Derating Curve

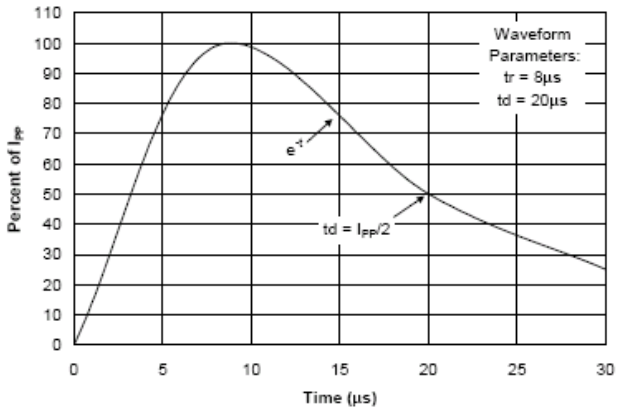


Fig3. Pulse Waveform

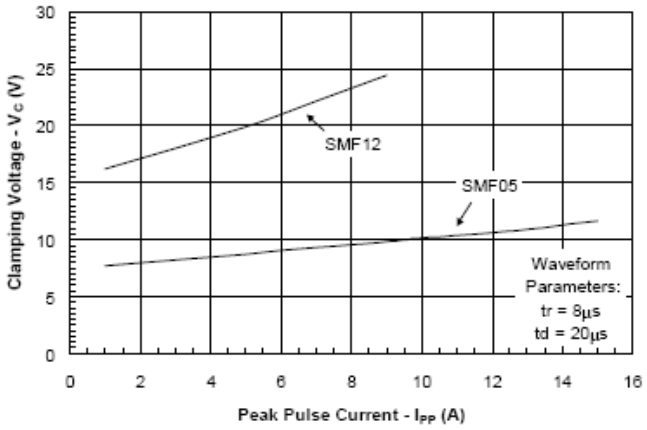
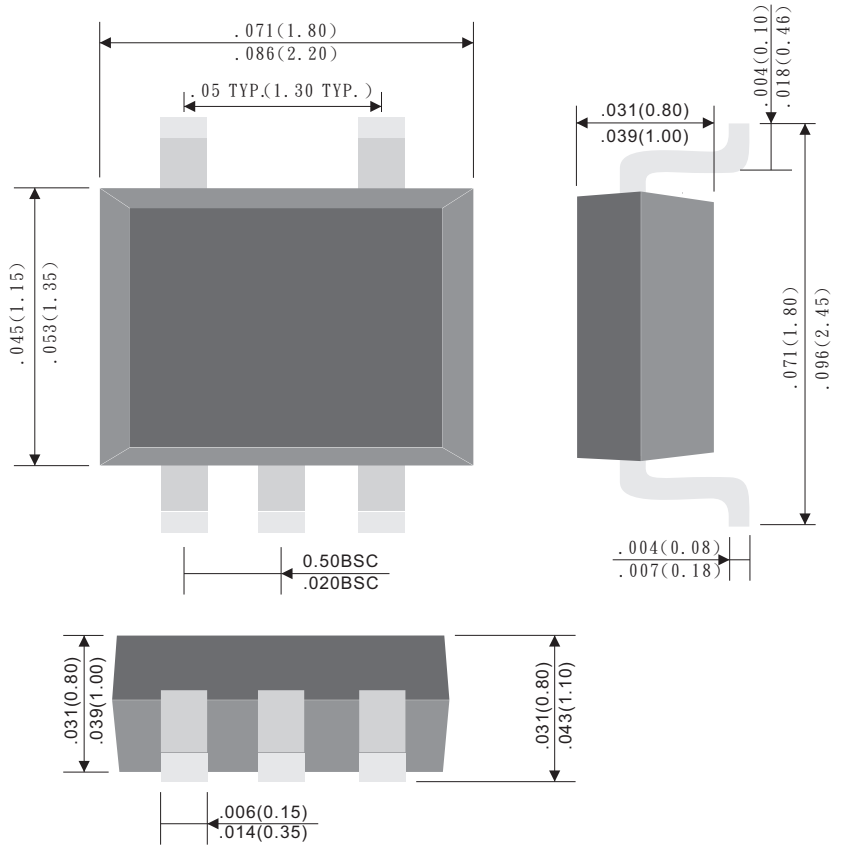


Fig4. Clamping Voltage vs. Peak Pulse Current

SOT-353 Mechanical Data



Dimensions in inches and (millimeters)

Marking

Type number	Marking code
SEMF05	WE

Ordering Information:

Device PN	Packing
SEMF05 -T(1)G(2)-WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

(2) RoHS product for packing code suffix ”G”；Halogen free product for packing code suffix “H”

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