

**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)**

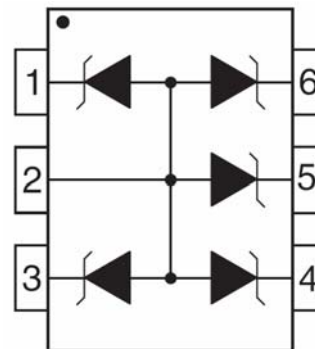
**MIL STD 883E - Method 3015-7 Class 3**

**25 kV HBM (Human Body Model)**

**Functional Diagram**



SOT-363

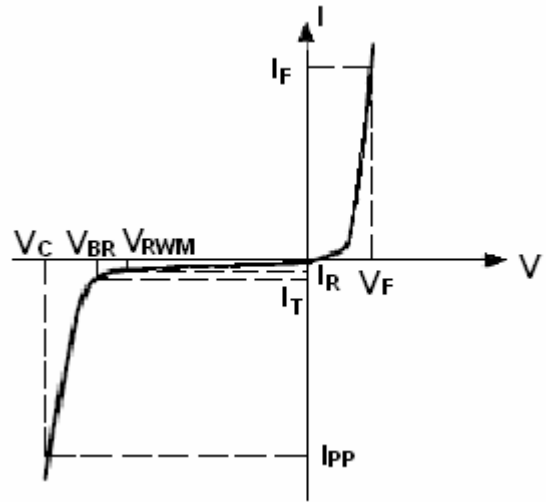


<b>Absolute Ratings @ 25°C Unless Otherwise Specified</b>			
Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power ( $t_p=8/20\mu s$ )See Figure 1	100	Watts
T <sub>J</sub>	Operating Temperature	-55°C to 150 °C	°C
T <sub>STG</sub>	Storage Temperature	-55°C to 150°C	°C

# SEMFxxC SERIES

## 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	$V_{BR}$			$I_T$	$V_{RWM}$	$I_R$	<b>C</b>
	Min.	Typ.	Max.				Typ. 0v bias
	V	V	V				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

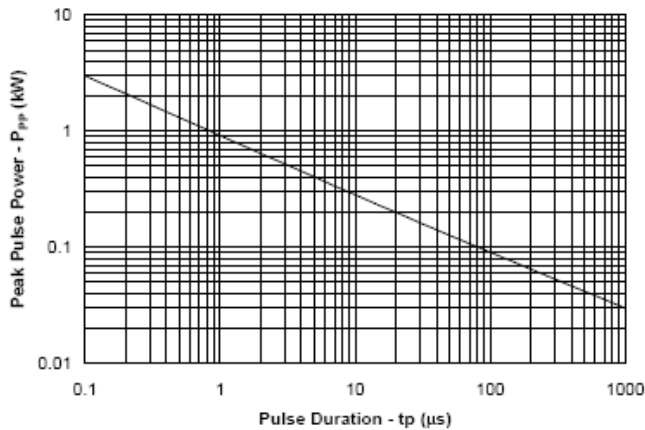


Fig1. Non-Repetitive Peak Pulse Power vs. Pulse Time

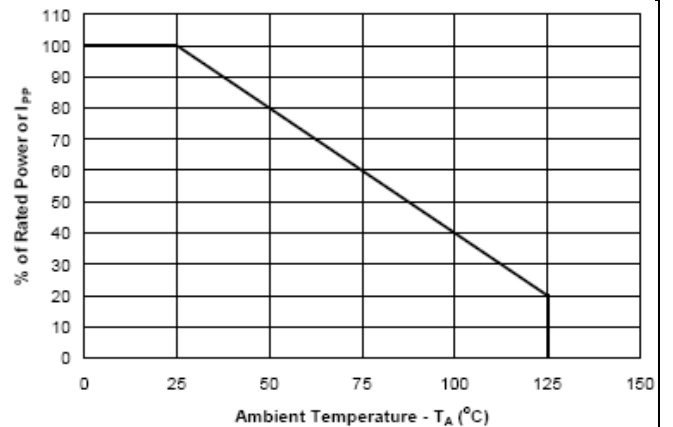
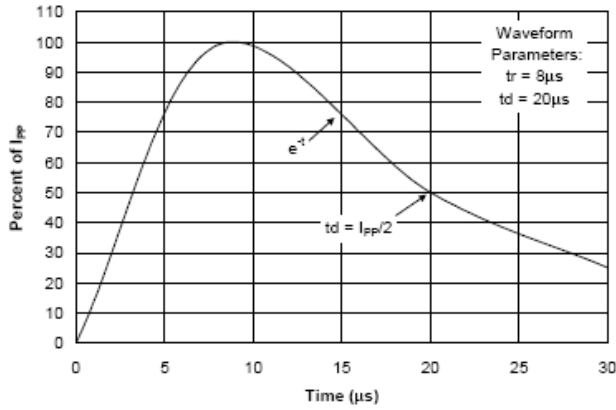
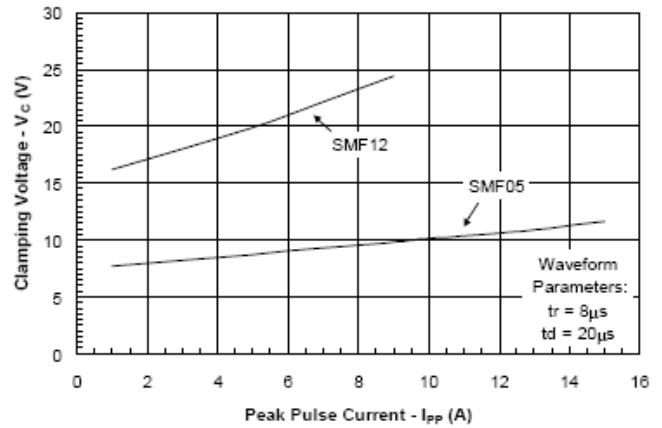


Fig2. Power Derating Curve

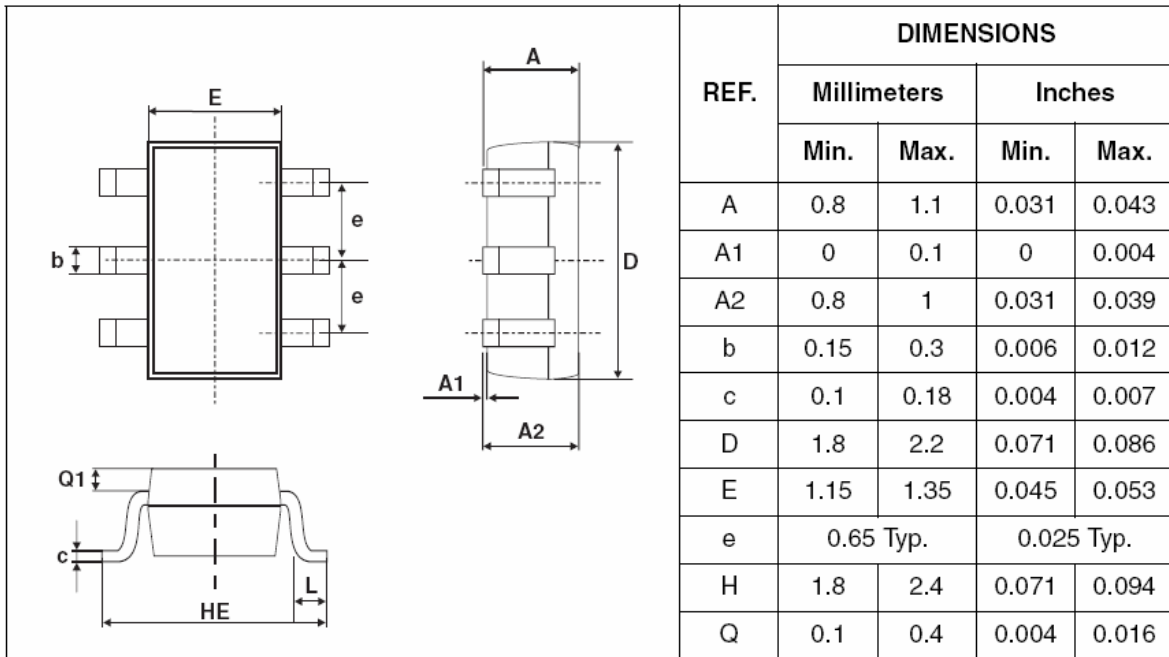


**Fig3. Pulse Waveform**



**Fig4. Clamping Voltage vs. Peak Pulse Current**

## SOT-363 Mechanical Data



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