

**SESOT05CLC~SESOT24CLC**  
**Ultra low capacitance dual TVS for high data lines**

Revision:A

**General Description**

This transient overvoltage suppressor is intended to protect sensitive equipment against electrostatic discharge events as well to offer a minimum Insertion loss in data transmission lines in communications ports used in portable consumer, computing and networking applications. This dual transient voltage suppressor comes in a single SOT-23, offering board space reduction, where the application requires it.

**Applications**

- Ethernet – 10/100/1000 Base T
- Cellular Phones
- Handheld – Wireless Systems
- Personal Digital Assistant(PDA)
- USB Interface

**Features**

- Improved leakage current, maximum of 5  $\mu$ A @ 5Vdc
- Maximum capacitance @ 0 Vdc Bias of 1.2 pF between terminals 1-3 or terminals 2-3
- In compliance with EU RoHS 2002/95/EC directives

**Complies with the following standards**

**IEC61000-4-2**

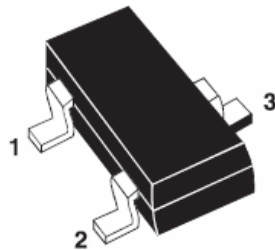
**Level 4 15 kV (air discharge)**

**8 kV(contact discharge)**

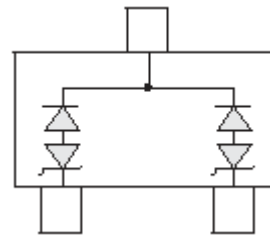
**MIL STD 883E - Method 3015-7 Class 3**

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

**Functional diagram**



**SOT-23**

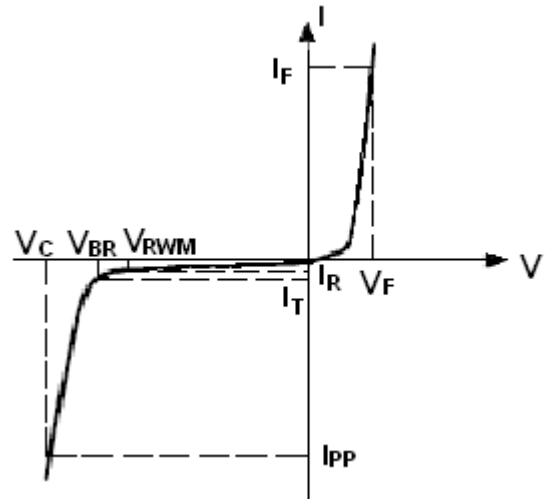


**Absolute Ratings (T<sub>amb</sub>=25°C)**

Symbol	Parameter	Value	Units
T <sub>J</sub>	Operating Temperature	-55 to +125	°C
T <sub>STG</sub>	Storage Temperature	-55 to +125	°C
V <sub>PP</sub>	Electrostatic discharge		
	MIL STD 883C -Method 3015-6	25	kV
	IEC61000-4-2 air discharge	15	
IEC61000-4-2 contact discharge	8		

## 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	$V_{BR}$			$I_T$	$V_{RWM}$	$I_R$	$V_F$	$I_F$	$C$
	Min.	Typ.	Max.				Max.		Typ. 0v bias
	V	V	V				V		pF
SESOT05CLC	6.0	6.7	7.4	1	5	20	1.25	200	1.2
SESOT12CLC	13.3	14.0	14.7	1	12	1	1.25	200	1.2
SESOT15CLC	16.7	17.4	18.1	1	15	1	1.25	200	1.2
SESOT24CLC	26.7	27.4	28.1	1	24	1	1.25	200	1.2

## Typical Characteristics

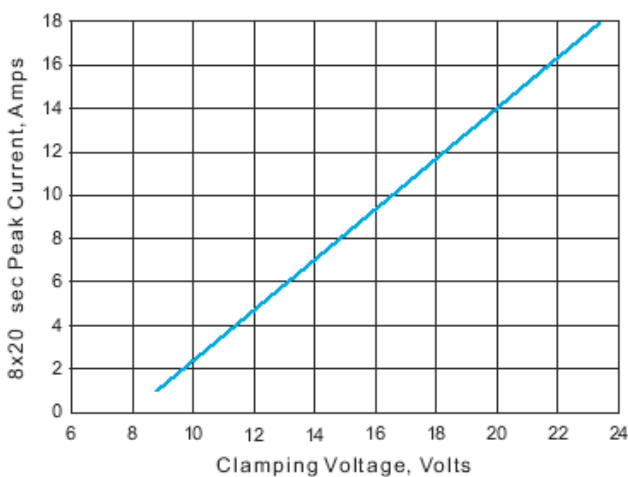


Fig1. Clamping Voltage vs  $I_{pp}$  8x20 sec

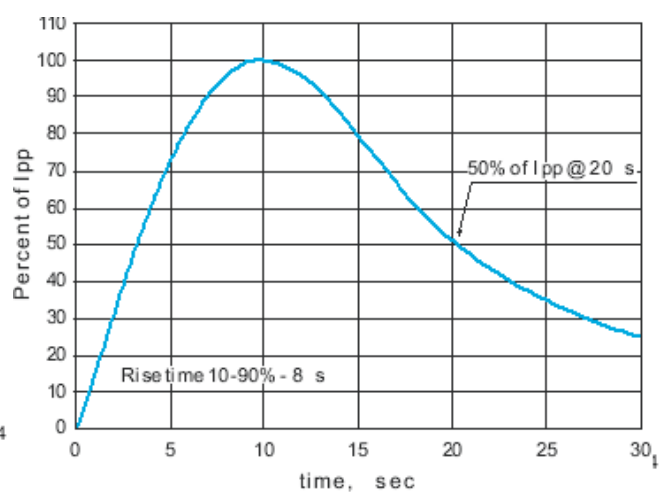


Fig2. Pulse Waveform

# SESOT05CLC series

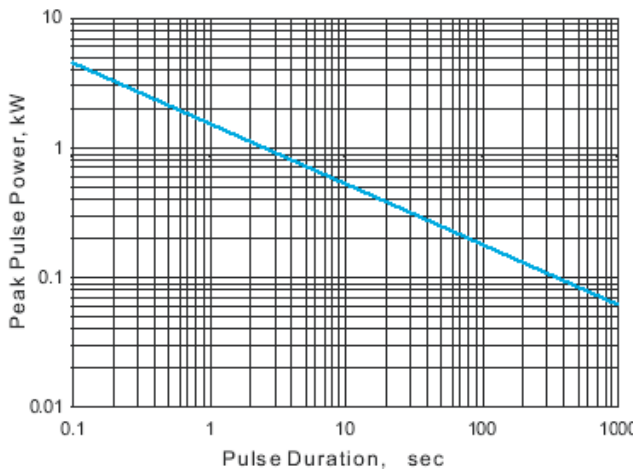


Fig3. Non-Repetitive Peak Power vs Pulse Time

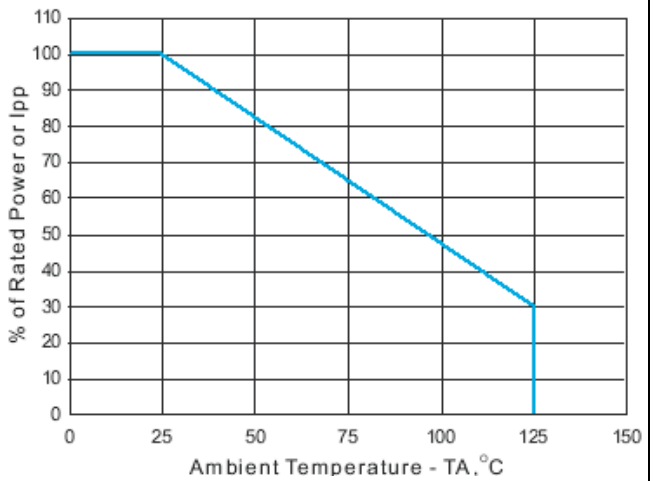
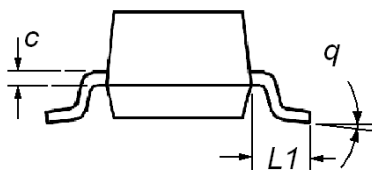
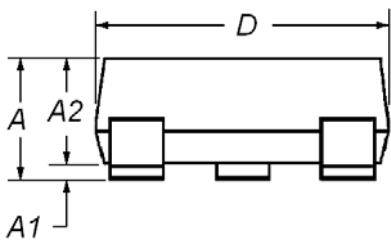
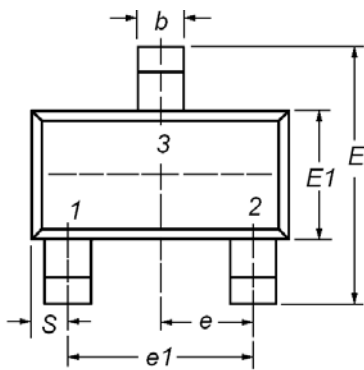


Fig4. Power Derating Curve

## SOT-23 Mechanical Data



Dim	Millimeters		
	Min	TYP	Max
A	1.00	1.20	1.40
A1	0	0.05	0.10
A2	1.00	1.15	1.30
b	0.35	0.40	0.50
c	0.10	0.15	0.20
D	2.70	2.90	3.10
E	2.40	2.60	2.80
E1	1.40	1.50	1.60
e	0.85	1.00	1.15
e1	1.80	1.90	2.00
L1	0.40	.	
q	0°	5°	10°
S	0.45	0.50	0.55

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