

## APPROVAL DRAWING

Surge Components product name
SES5VT23-3 TR (RoHS compliant)

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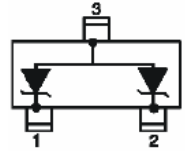
Surge Components, Inc.

Customer Acknowledgement
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Manufacturer Surge Components, Inc.
2009-05-06

## 1. DESCRIPTION

The SES5VT23-3 is transient Voltage Suppressor Arrays that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD), electrostatic fast transient (EFT), and lightning.



All pins are rated to withstand 20kv ESD pulses using the IEC 61000-4-2 contact discharge method, which can meet the requirement of Level 4, "Human body mode" for air and contact discharge

## 2. FEATURE

- 300 Watts peak pulse power ( $t_p=8/20\mu s$ )
- Low clamping voltage
- Protects one bidirectional or two unidirectional lines
- Working voltage: 5V
- ESD Protection > 20 kilovolts
- Complies with
  - 61000-4-2(ESD): Air-15Kv, Contact-8kV
  - 61000-4-4(EFT) 40A-5/50ns
  - 61000-4-5(Surge) 16A, 8/20us

## 3. APPLICATION

- Cell Phone Handsets and Accessories
- Portable Electronics
- Control & Monitoring Systems
- Servers, Notebooks, and Desktop PCs
- Set-Top Box
- Communication Systems

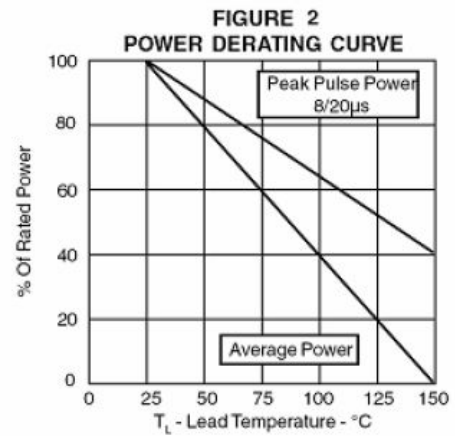
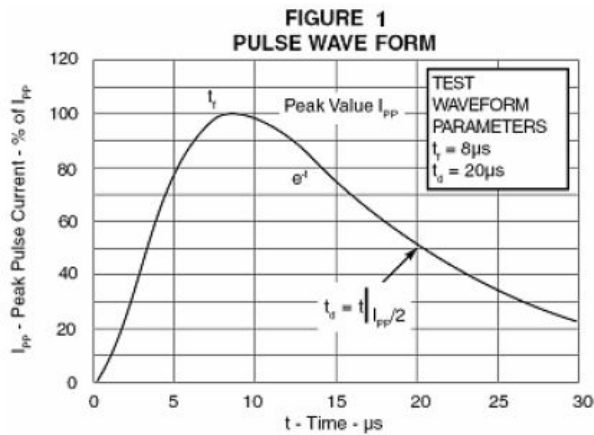
## 4. ELECTRICAL CHARACTERISTICS PER LINE@25°C (UNLESS OTHERWISE SPECIFIED)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse stand-off voltage	$V_{RWM}$				5	V
Reverse Breakdown voltage	$V_{BR}$	$I_t = 1mA$	6.0		7.4	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V$ $T=25^\circ C$			20	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A$ $t_p = 8/20\mu s$			9.8	V
Clamping Voltage	$V_C$	$I_{PP} = 5A$ $t_p = 8/20\mu s$			17.5	V
Junction Capacitance	$C_j$	$V_R = 0V$ , $f = 1MHz$		60	80	pF

### 5. ABSOLUTE MAXIMUM RATING @25°C

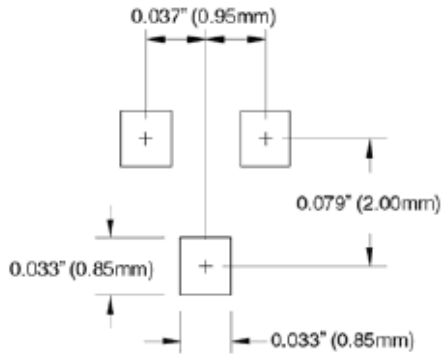
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	300	W
Peak Pulse Current ( $t_p=8/20\mu s$ )	$I_{PP}$	16	A
Operating Temperature	$T_j$	-55 to +150	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

### 6. TYPICAL CHARACTERISTICS



**7. PRODUCT DIMENSION**

DIM	MILIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	0.89	1.11	0.0350	0.0440
D	0.37	0.50	0.0150	0.0200
G	1.78	2.04	0.0701	0.0807
H	0.013	0.100	0.0005	0.0040
J	0.085	0.177	0.0034	0.0070
K	0.45	0.60	0.0180	0.0236
L	0.89	1.02	0.0350	0.0401
S	2.10	2.50	0.0830	0.0984
V	0.45	0.60	0.0177	0.0236

**MOUNTING PAD**

**SOT-23**

**PACKAGE OUTLINE**
