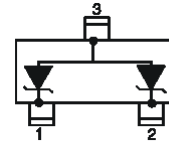


Description

The SES5VT23-3 is Bi-directional Transient Voltage Suppressor Arrays that designed to protect components which are connected to data and transmission lines against electrostatic discharge(ESD), electrical fast transients(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 Model" for air and contact discharge.



Feature

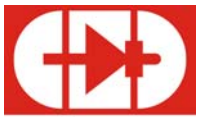
- 300 Watts peak pulse power ($t_p=8/20\mu s$)
- Low clamping voltage
- Protects one bidirectional or two unidirectional lines
- Working voltages: 5V
- ESD Protection > 20 kilovolts
- Complies with
 - 61000-4-2(ESD):Air-15kV, Contact-8kV
 - 61000-4-4(EFT):40A-5/50ns
 - 61000-4-5(Surge):16A, 8/20 μs

Applications

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

Electrical characteristics

Symbol	Parameter
V_{RWM}	Stand-off voltage
V_{BR}	Breakdown voltage
V_{CL}	Clamping voltage
I_R	Leakage current
I_{PP}	Peak pulse current
C_j	Capacitance
V_F	Forward voltage drop

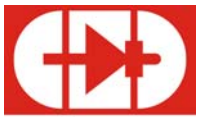


Absolute maximum rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{S}$)	P_{pp}	300	W
Peak Pulse Current ($t_p=8/20\mu\text{S}$)	I_{pp}	16	A
Operating Temperature	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical characteristics @25 $^{\circ}\text{C}$ (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse stand-off voltage	V_{RWM}				5	V
Reverse Breakdown voltage	V_{BR}	$I_T = 1\text{mA}$	6.0		7.4	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$ $T=25^{\circ}\text{C}$			20	μA
Clamping Voltage	V_C	$I_{pp} = 1\text{A}$ $t_p = 8/20\mu\text{s}$			9.8	V
Clamping Voltage	V_C	$I_{pp}=16\text{A}$ $t_p = 8/20\mu\text{s}$			17.5	V
Junction Capacitance	C_j	$V_R=0\text{V}$ $f = 1\text{MHz}$		60	80	pF



Product dimension and pad size

<p style="text-align: center;">PACKAGE OUTLINE</p>	<p style="text-align: center;">SOT-23</p> <p style="text-align: center;">PACKAGE DIMENSIONS</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">DIM</th> <th colspan="2">MILLIMETERS</th> <th colspan="2">INCHES</th> </tr> <tr> <th>MIN</th> <th>MAX</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr><td>A</td><td>2.80</td><td>3.04</td><td>0.1102</td><td>0.1197</td></tr> <tr><td>B</td><td>1.20</td><td>1.40</td><td>0.0472</td><td>0.0551</td></tr> <tr><td>C</td><td>0.89</td><td>1.11</td><td>0.0350</td><td>0.0440</td></tr> <tr><td>D</td><td>0.37</td><td>0.50</td><td>0.0150</td><td>0.0200</td></tr> <tr><td>G</td><td>1.78</td><td>2.04</td><td>0.0701</td><td>0.0807</td></tr> <tr><td>H</td><td>0.013</td><td>0.100</td><td>0.0005</td><td>0.0040</td></tr> <tr><td>J</td><td>0.085</td><td>0.177</td><td>0.0034</td><td>0.0070</td></tr> <tr><td>K</td><td>0.45</td><td>0.60</td><td>0.0180</td><td>0.0236</td></tr> <tr><td>L</td><td>0.89</td><td>1.02</td><td>0.0350</td><td>0.0401</td></tr> <tr><td>S</td><td>2.10</td><td>2.50</td><td>0.0830</td><td>0.0984</td></tr> <tr><td>V</td><td>0.45</td><td>0.60</td><td>0.0177</td><td>0.0236</td></tr> </tbody> </table>	DIM	MILLIMETERS		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
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Revision History

Revision	Date	Changes
1.0	2008-7-3	-
1.1	2008-7-12	1: add Ipp=16A; 2: change the ESD protection from 40KV to 20KV; 3: 61000-4-5(Surge): from 24A to 16A 4: add the max capacitance 80pF