APPROVAL DRAWING

Surge's product name
SES3V3D923-2U TR (RoHS compliant)

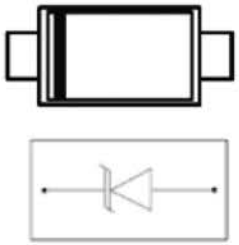
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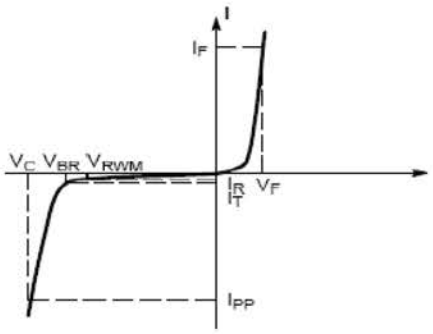
1. DESCRIPTION:

The SES3V3D923-2U is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.



2. FEATURE

- Small Body Outline Dimensions:
- Low Leakage
- Response Time is Typically <1ns
- ESD Rating of Class 3(>16kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- These are Pb-Free Devices



3. APPLICATION

- Cell Phone Handsets and Accessories
- MP3 player
- Portable Instrumentation
- Cordless Phones
- Digital Cameras

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4. ELECTRICAL CHARACTERISTICS PER LINE@25℃(UNLESS OTHERWISE SPECIFIED)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	I_t=1mA	5.0			V
Reverse Leakage Current	I_R	V_{RWM}=3.3V T=25℃			2.5	uA
Clamping Voltage	V_C	I_{PP}=7.0A T_P=8/20uS			9.8	V
Junction Capacitance	C_J	V_R=0V f=1MHz		30		pF

5. ABSOLUTE MAXIMUM RATING @25℃

Rating		Symbol	Value	Units
IEC 61000-4-2(ESD)Contact			±15	kV
ESD Voltage	Per Human Body Model		16	kV
	Per Machine Model		400	V
Peak Pulse Power (T_P=8/20uS)		P_{PP}	60	W
Maximum Peak Pulse Current(T_P=8/20uS)		I_{PP}	9.8	A
Lead Soldering Temperature		T_L	260(10sec)	℃
Operating Temperature		T_J	-55 to + 125	℃
Storage Temperature		T_{STG}	-55 to + 150	℃

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6.TYPICAL CHARACTERISTICS

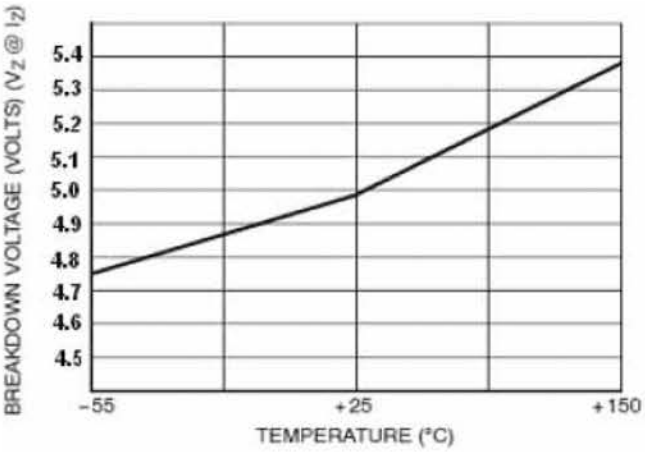


Figure 1. Typical Breakdown Voltage versus Temperature

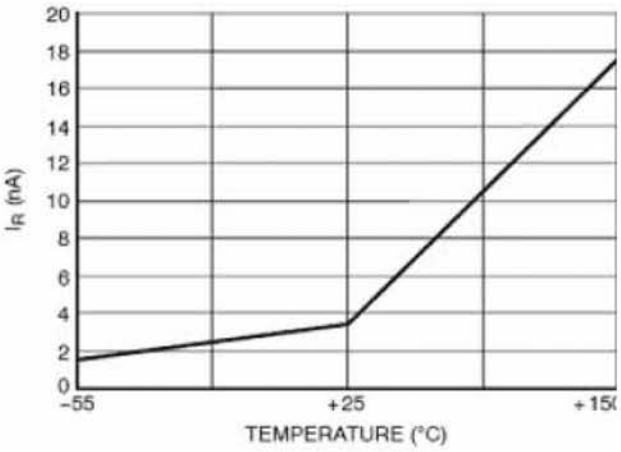


Fig 2. Typical Leakage Current versus Temperature

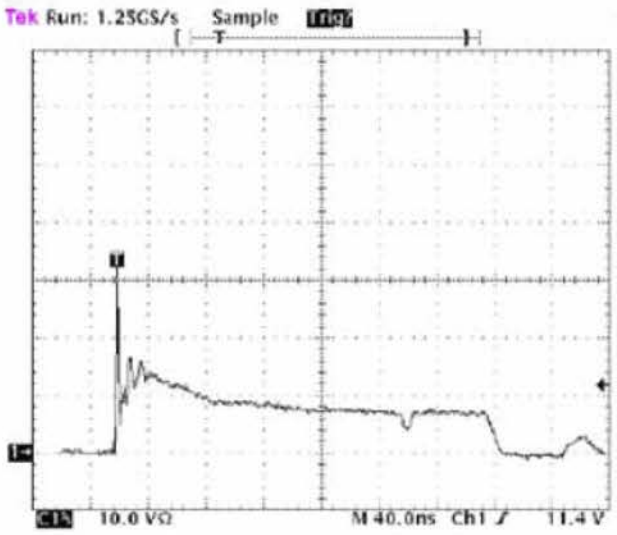


Figure 3. Positive 8kV contact per IEC 61000-4-2-SES3V3D923-2U

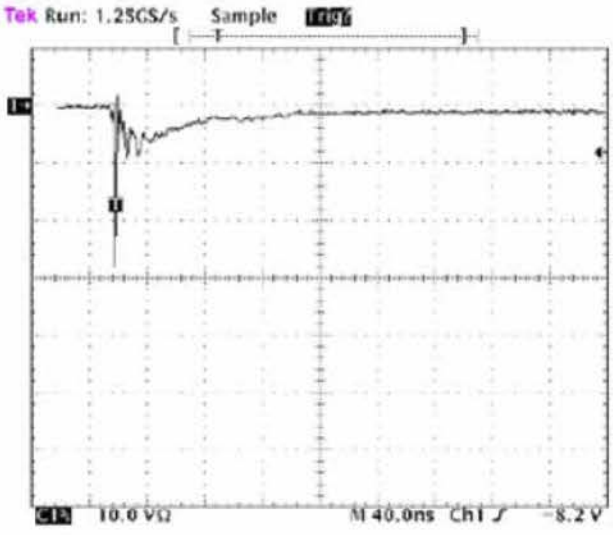
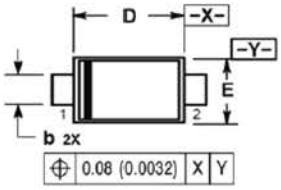
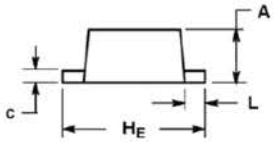


Fig 4. Negative 8kV contact per IEC 61000-4-2- SES3V3D923-2U

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7.PRODUCT DIMENSION AND PAD SIZE.





NOTES:

1.DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982

2.CONTROLLING DIMENSION: MILLIMETERS.

3.MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS.MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.36	0.40	0.43	0.014	0.016	0.017
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

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