200W, 24V ESD Protection Array

FEATURES

- Small package for use in portable electronics
- Meet IEC61000-4-2(ESD) ±30kV(air) , ±30kV(contact)
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

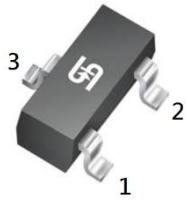
- High Speed Line: USB 2.0 / VGA/ DVI /SDI /HDMI
- Touch Panel
- Battery Management System
- POE PD

MECHANICAL DATA

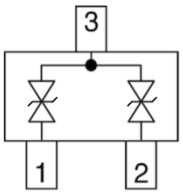
- Case: SOT-23
- Molding compound meets UL 94 V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Weight: 8.70mg (approximately)
- Marking code on the device: W3

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
P_{PPM}	200	W
I_{PP}	3	A
V_{WM}	24	V
V_C at I_{PP} = 3 A	70	V
Package	SOT-23	

Pb-Free RoHS COMPLIANT HALOGEN FREE



SOT-23



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**TESD24VS2BT**	**UNIT**
Rated random recurring peak Impulse power dissipation (tp = 8/20μs waveform)	P_{PPM}	200	W
Peak impulse current (tp = 8/20μs waveform)	I_{PP}	3	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	kV
Junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Reverse breakdown voltage(1)	I_R = 5mA	$V_{(BR)}$	25.4	-	-	V
Rated working standoff voltage		V_{WM}	-	-	24	V
Reverse current(1)	V_R = 24V	I_R	-	-	50	nA
Clamping voltage(2)	I_{PP} = 1A	V_C	-	-	40	V
Clamping voltage(2)	I_{PP} = 3A	V_C	-	-	70	V
Junction capacitance	1MHz, V_R = 0V	C_J	-	11	-	pF

Notes:

1. Pulse test with PW = 30ms
2. tp = 8/20μs waveform

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
TESD24VS2BT RFG	SOT-23	3K / 7" Reel

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 8/20μs pulse waveform according to IEC 61000-4-5

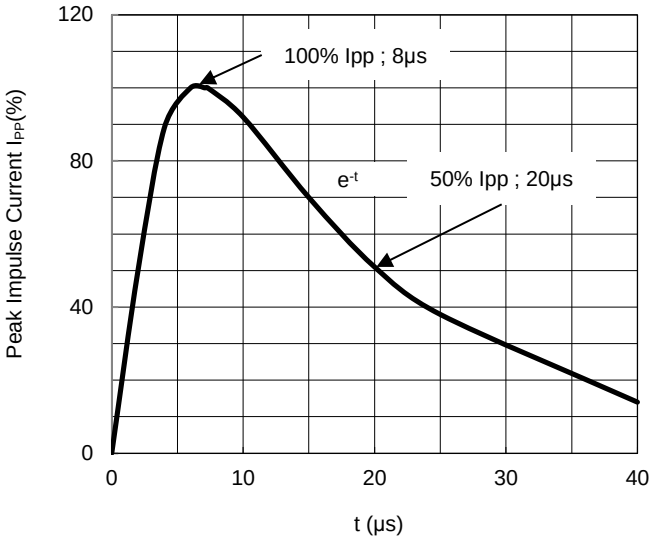


Fig.2 ESD pulse waveform according to IEC 61000-4-2

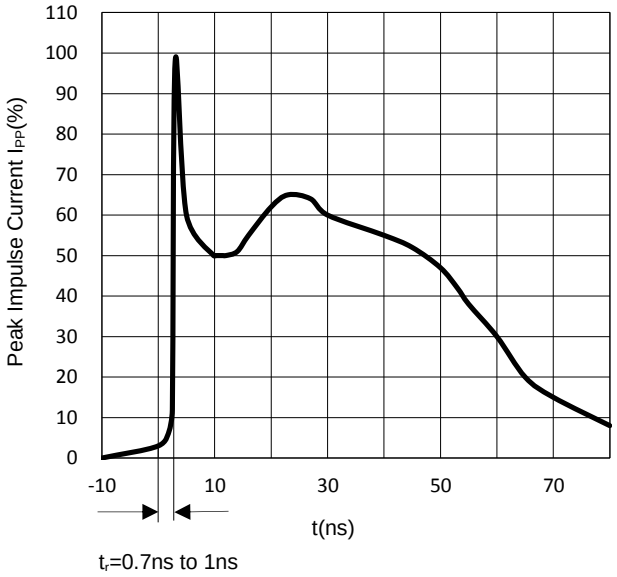
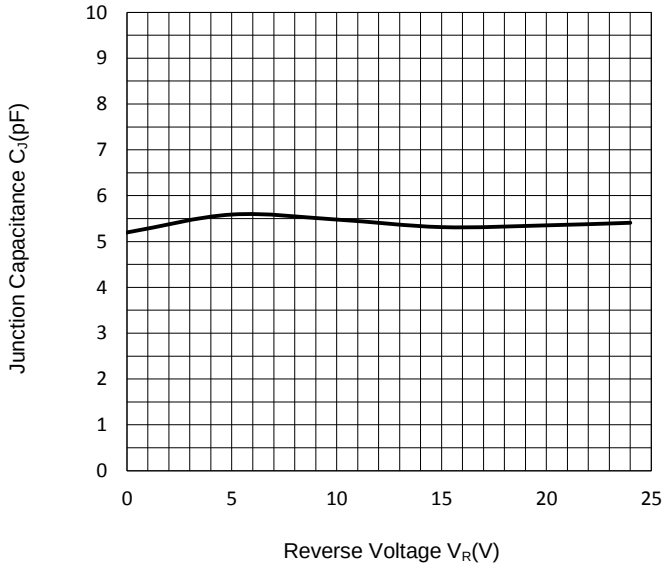
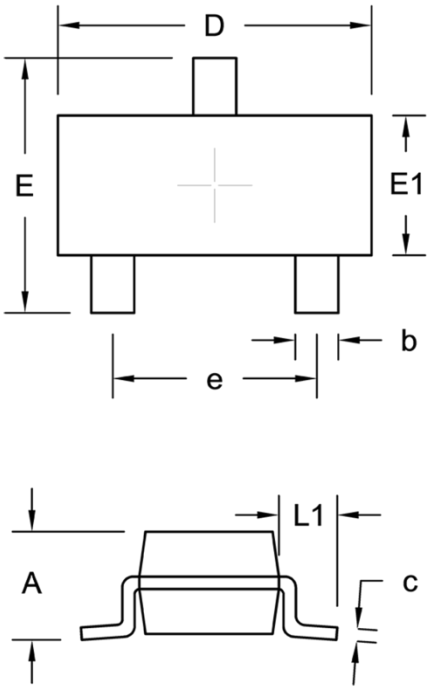


Fig.3 Typical Junction Capacitance



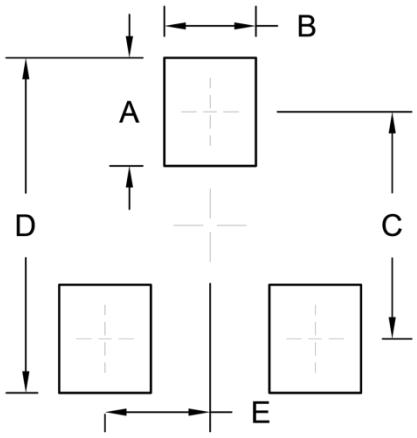
PACKAGE OUTLINE DIMENSIONS

SOT-23



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.89	1.12	0.035	0.044
b	0.30	0.50	0.012	0.020
c	0.08	0.20	0.003	0.008
D	2.80	3.04	0.110	0.120
E	2.10	2.64	0.083	0.104
E1	1.20	1.40	0.047	0.055
e	1.90 BSC		0.075 BSC	
L1	0.54 REF.		0.021 REF.	

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.00	0.039
B	0.85	0.033
C	2.10	0.083
D	3.10	0.122
E	0.98	0.039

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