V_{WM}=5V, 3pF ESD Protection Array

FEATURES

- Meet IEC61000-4-2(ESD) ±15kV(air) , ±8kV(contact)
- Working Voltage: 5V
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

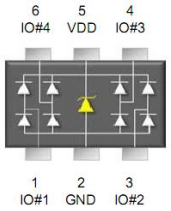
- Digital Visual Interface(DVI)
- 10/100/1000 Ethernet
- Projection TV Monitors and Flat Panel Displays

MECHANICAL DATA

- Case: SOT-363
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 6.99 mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
P_{PPSM}	150	W
I_{PP}	6	A
V_{WM}	5	V
$V_{(BR)}$ at I_R= 1mA	6	V
V_C at I_{PP}= 6A	25	V
Package	SOT-363	
Configuration	Single dice	

Pb-Free RoHS COMPLIANT HALOGEN FREE



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**TESD5V0V4UCU6**	**UNIT**
Marking code on the device		F54	
Rated random recurring peak Impulse power dissipation (tp=8/20μs waveform)	P_{PPSM}	150	W
Peak impulse current (tp=8/20μs waveform)	I_{PP}	6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	±15 ±8	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**
Forward voltage per diode (1)	I_R = 1 mA	$V_{(BR)}$	6	-	-	V
Rated working standoff voltage		V_{WM}	-	-	5	V
Reverse current (1)	V_R= 5 V	I_R	-	-	3	μA
Clamping voltage (2)	IPP = 1 A (any pin to pin 2)	V_C	-	-	15	V
Clamping voltage (2)	IPP = 6 A (any pin to pin 2)	V_C	-	-	25	V
Junction capacitance	1 MHz, VR=0V (between I/O pins)	C_J	-	-	1.5	pF
Junction capacitance	1 MHz, VR=0V (any I/O pin to GND)	C_J	-	-	3	pF

Notes:

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

ORDERING INFORMATION				
PART NO.	**PACKING CODE**	**PACKING CODE SUFFIX**	**PACKAGE**	**PACKING**
TESD5V0V4UCU6 (Note 1)	RF	G	SOT-363	3K / 7" Reel

Notes:

1. Whole series with green compound

EXAMPLE				
EXAMPLE P/N	**PART NO.**	**PACKING CODE**	**PACKING CODE SUFFIX**	**DESCRIPTION**
TESD5V0V4UCU6 RFG	TESD5V0V4UCU6	RF	G	Green compound

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

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

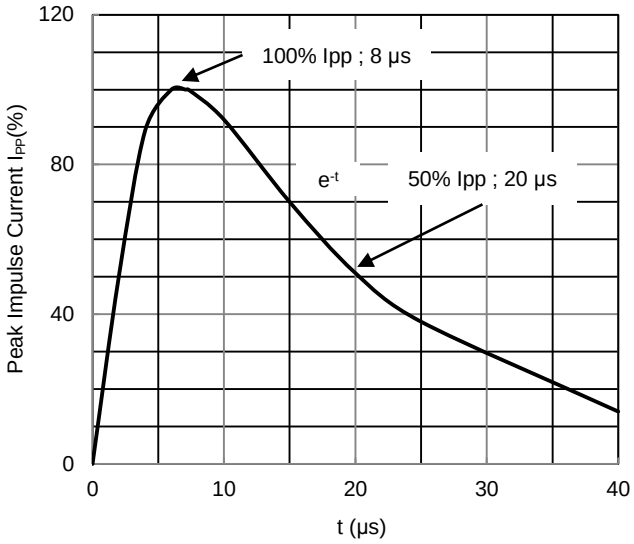


Fig. 2 ESD pulse waveform according to IEC 6100-4-2

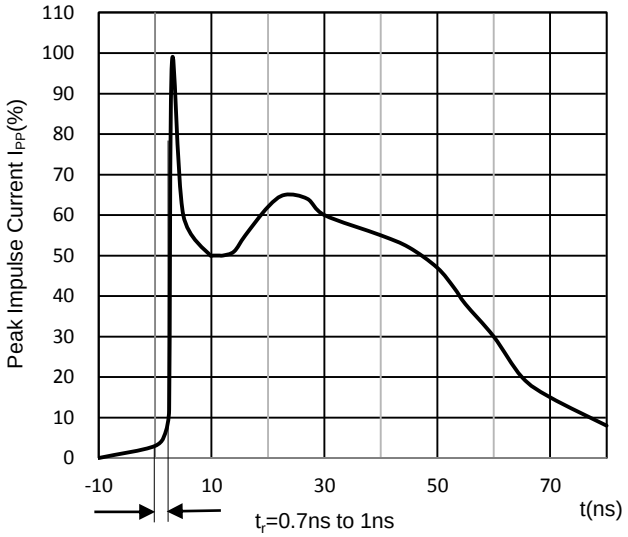


Fig. 3 TLP I-V Curve

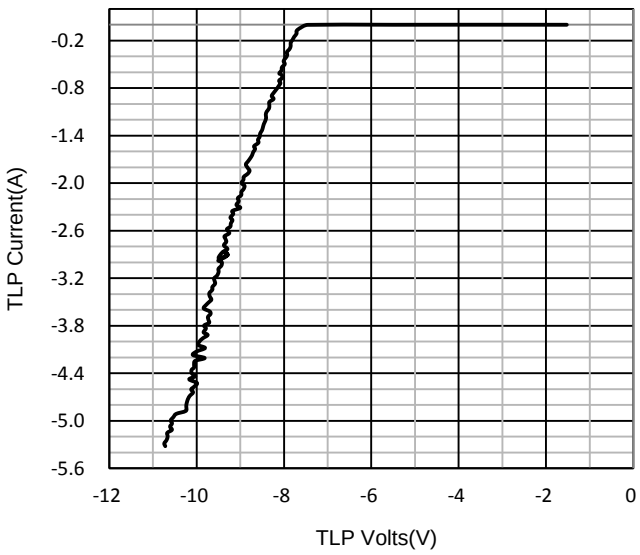
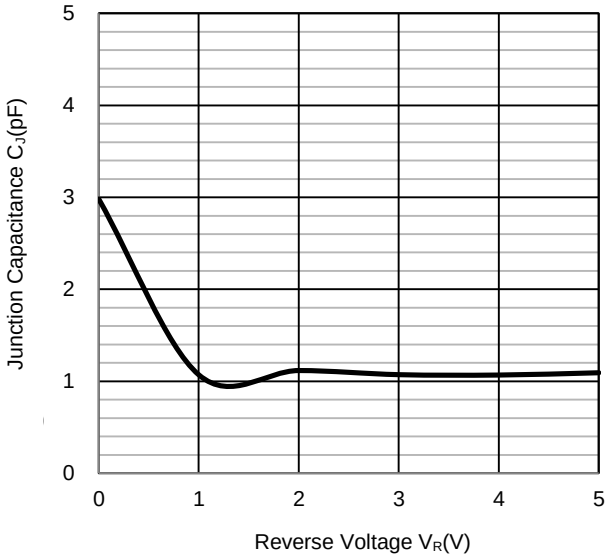


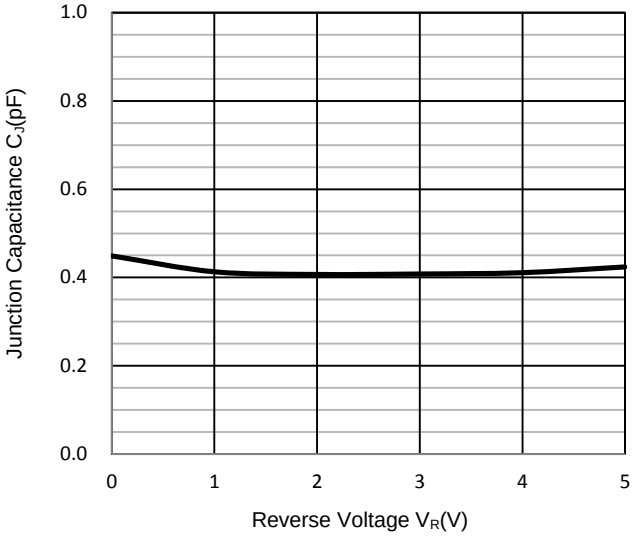
Fig. 4 Typical Junction Capacitance (any I/O pin to GND)



CHARACTERISTICS CURVES

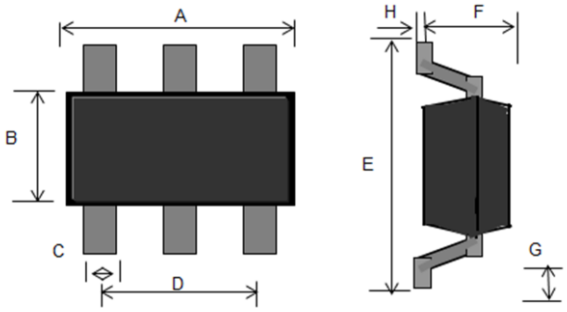
(T_A = 25°C unless otherwise noted)

Fig. 5 Typical Junction Capacitance (between I/O pins)



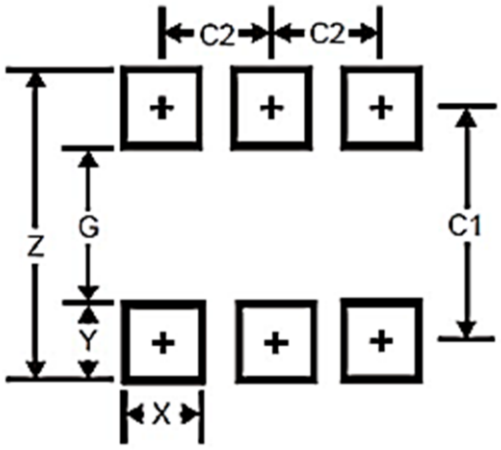
PACKAGE OUTLINE DIMENSION

SOT-363



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.15	0.35	0.006	0.014
D	1.20	1.40	0.047	0.055
E	2.15	2.45	0.085	0.096
F	0.85	1.05	0.033	0.041
G	0.25	0.46	0.010	0.018
H	0.00	0.10	0.000	0.004

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	3.20	0.126
G	1.60	0.063
X	0.55	0.022
Y	0.80	0.031
C1	2.40	0.094
C2	0.95	0.037

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