

V_{WM}=5V, 0.6pF ESD Protection Array

FEATURES

- Meet IEC61000-4-2(ESD) ±18kV(air) , ±12kV(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

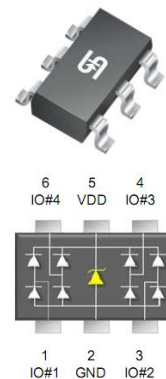
APPLICATIONS

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

MECHANICAL DATA

- Case: SOT-26
- 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: 7.6537 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
P _{PPSM}	75	W
I _{PP}	5	A
V _{WM}	5	V
V _(BR) at I _R =1 mA	6	V
V _C at I _{PP} = 5 A	15	V
Package	SOT-26	
Configuration	Single dice	



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	TESD5V0V4UCX6	UNIT
Marking code on the device		F4	
Rated random recurring peak Impulse power dissipation (tp=8/20µs waveform)	P _{PPSM}	75	W
Peak impulse current (tp=8/20µs waveform)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±18 ±12	kV
Junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_R = 1 \text{ mA}$	$V_{(BR)}$	6	-	-	V
Rated working standoff voltage		V_{WM}	-	-	5	V
Reverse current ⁽¹⁾	$V_R = 5 \text{ V}$	I_R	-	-	0.1	μA
Clamping voltage ⁽²⁾	$I_{PP} = 1 \text{ A}$ (any I/O pin to Ground)	V_C	-	-	12	V
Clamping voltage ⁽²⁾	$I_{PP} = 5 \text{ A}$ (any I/O pin to Ground)	V_C	-	-	15	V
Junction capacitance	1 MHz, $V_R = 0\text{V}$ (between I/O pins)	C_J	-	-	0.4	pF
Junction capacitance	1 MHz, $V_R = 0\text{V}$ (any I/O pin to Ground)	C_J	-	-	0.6	pF

Notes:

1. Pulse test with $PW=30 \text{ ms}$
2. $t_p=8/20\mu\text{s}$ waveform

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TESD5V0V4UCX6 (Note 1)	RF	G	SOT-26	3K / 7" Reel

Notes:

1. Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TESD5V0V4UCX6 RFG	TESD5V0V4UCX6	RF	G	Green compound

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

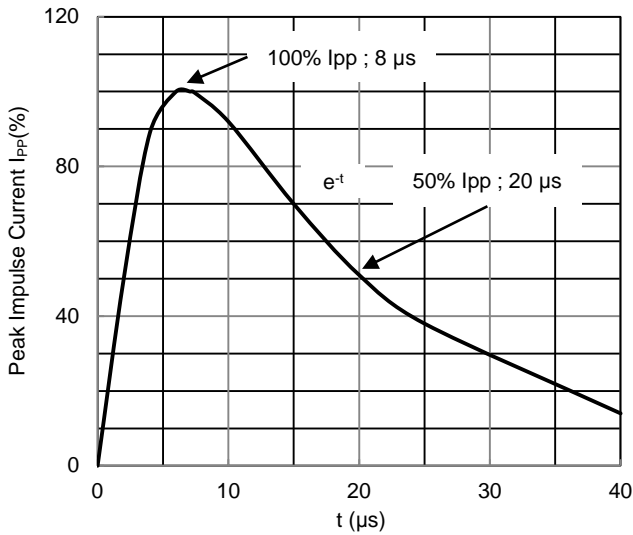


Fig.2 ESD pulse waveform according to IEC 6100-4-2

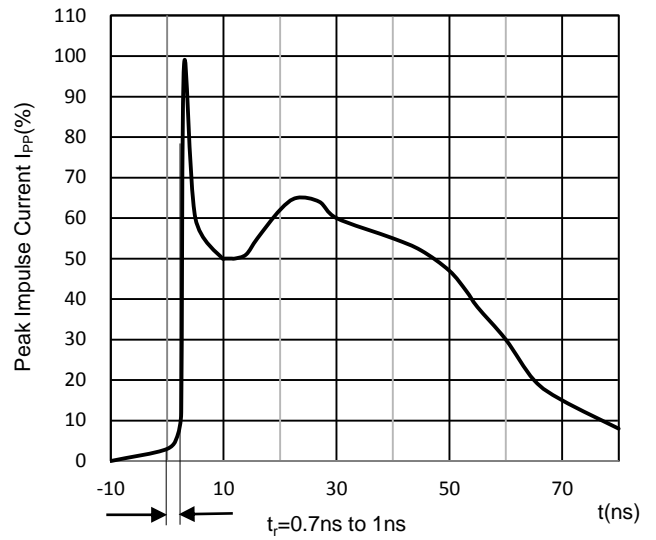


Fig.3 TLP I-V Curve

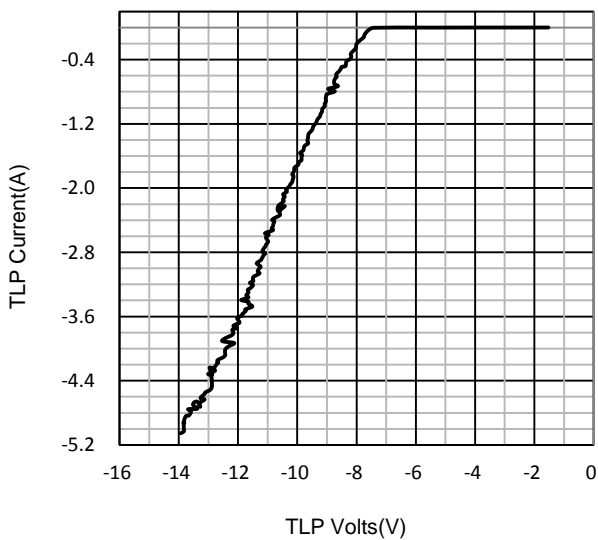
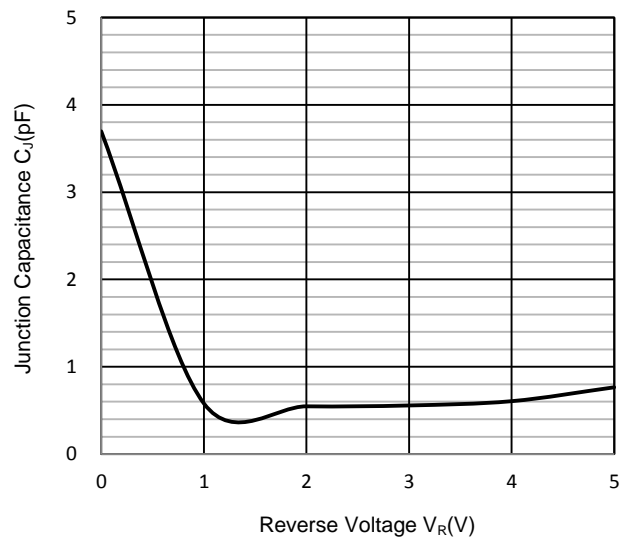


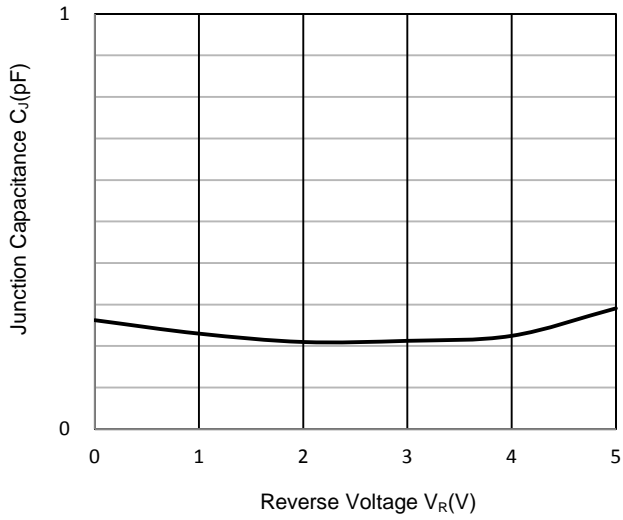
Fig.4 Typical Junction Capacitance (any I/O pin to Ground)



CHARACTERISTICS CURVES

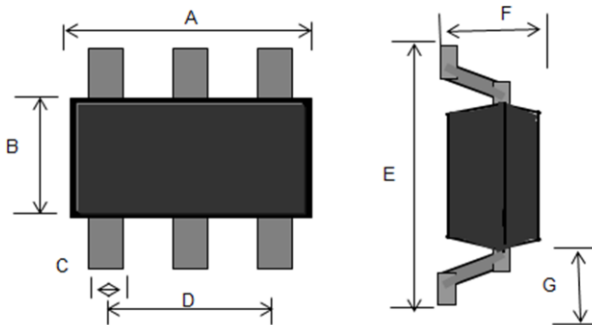
($T_A = 25^\circ\text{C}$ unless otherwise noted)

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



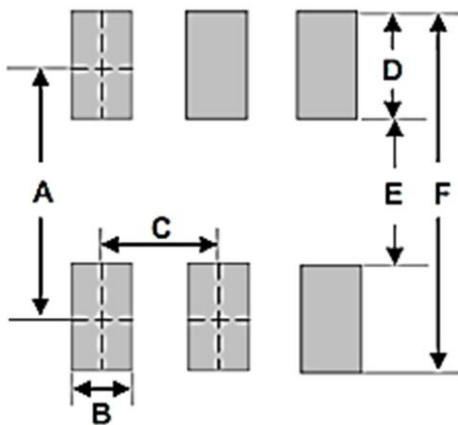
PACKAGE OUTLINE DIMENSION

SOT-26



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.800	3.100	0.110	0.122
B	1.500	1.750	0.059	0.069
C	0.250	0.500	0.010	0.020
D	1.800	2.000	0.071	0.079
E	2.650	2.950	0.104	0.116
F	0.900	1.450	0.035	0.057
G	0.475	0.725	0.019	0.029

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	2.50	0.098
B	0.60	0.024
C	0.95	0.037
D	1.10	0.043
E	1.40	0.055
F	3.60	0.142

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