

## V<sub>WM</sub>=5V, 0.6pF ESD Protection Array

### FEATURES

- Meet IEC61000-4-2(ESD) ±18kV(air) , ±12kV(contact)
- Working Voltage: 5V
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

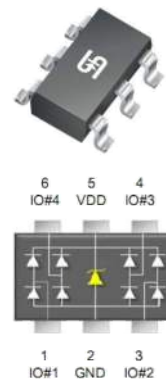
### APPLICATIONS

- 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
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 7.65 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
P <sub>PPSM</sub>	75	W
I <sub>PP</sub>	5	A
V <sub>WM</sub>	5	V
V <sub>(BR)</sub> at I <sub>R</sub> =1 mA	6	V
V <sub>C</sub> at I <sub>PP</sub> = 5 A	15	V
Package	SOT-26	
Configuration	Single die	



ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 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 <sub>PPSM</sub>	75	W
Peak impulse current (tp=8/20µs waveform)	I <sub>PP</sub>	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	±18 ±12	kV
Junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Reverse breakdown voltage <sup>(1)</sup>	$I_R = 1 \text{ mA}$	$V_{(BR)}$	6	-	-	V
Rated working standoff voltage		$V_{WM}$	-	-	5	V
Reverse current <sup>(1)</sup>	$V_R = 5 \text{ V}$	$I_R$	-	-	0.1	$\mu\text{A}$
Clamping voltage <sup>(2)</sup>	$I_{PP} = 1 \text{ A}$ (any I/O pin to Ground )	$V_C$	-	-	12	V
Clamping voltage <sup>(2)</sup>	$I_{PP} = 5 \text{ A}$ (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:**

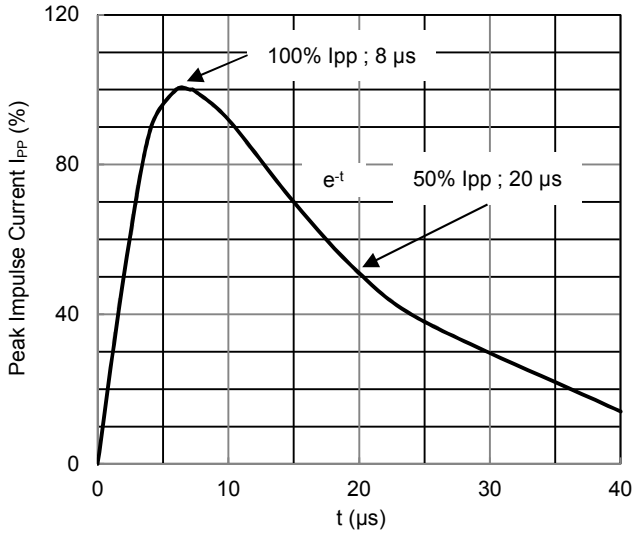
1. Pulse test with  $PW = 30 \text{ ms}$
2.  $t_p = 8/20 \mu\text{s}$  waveform

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>
TESD5V0V4UCX6 RFG	SOT-26	3K / 7" Reel

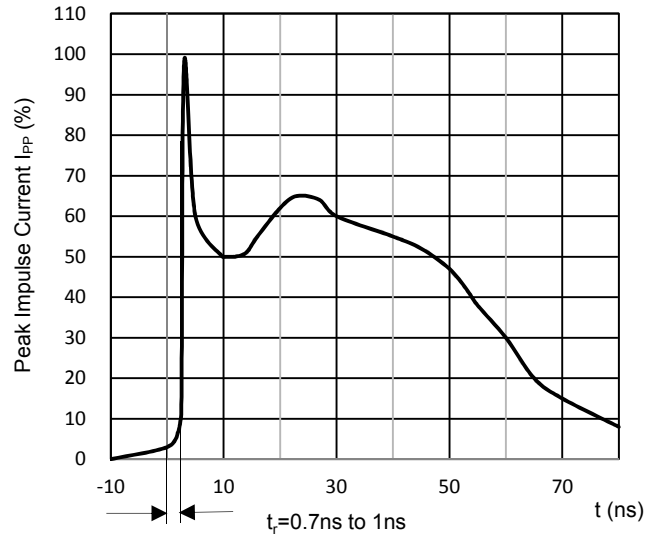
**CHARACTERISTICS CURVES**

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

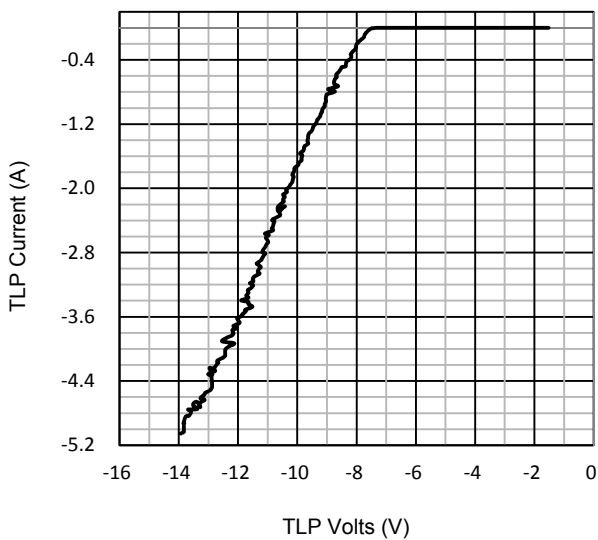
**Fig.1 8/20 $\mu\text{s}$  pulse waveform according to IEC 61000-4-5**



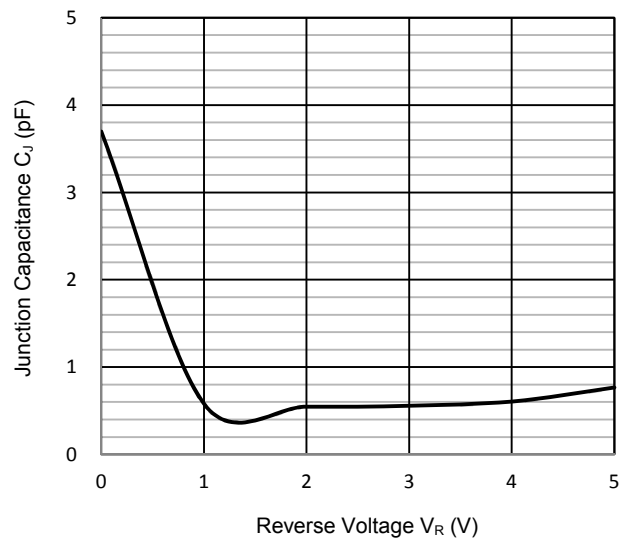
**Fig.2 ESD pulse waveform according to IEC 6100-4-2**



**Fig.3 TLP I-V Curve**



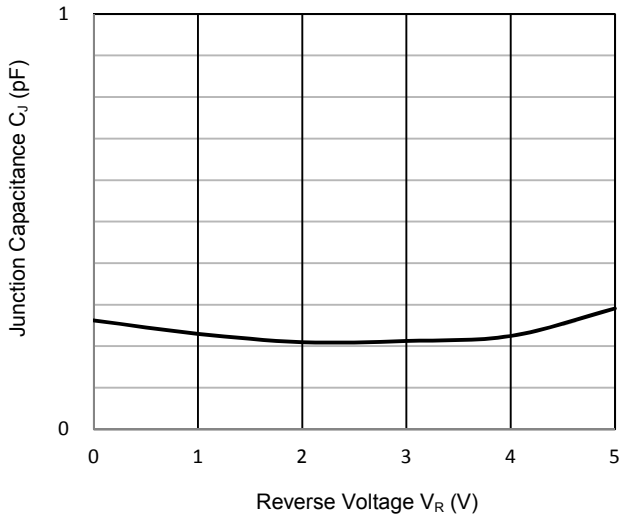
**Fig.4 Typical Junction Capacitance (any I/O pin to Ground)**



**CHARACTERISTICS CURVES**

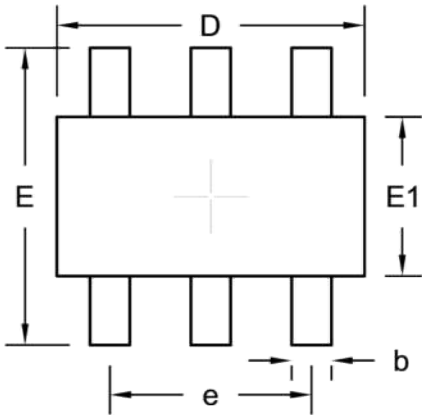
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

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

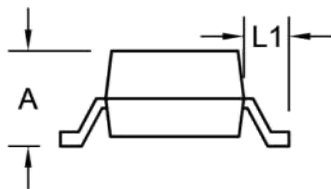


**PACKAGE OUTLINE DIMENSION**

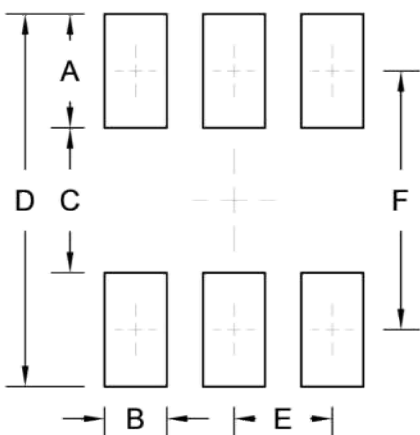
SOT-26



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	0.90	1.45	0.035	0.057
b	0.25	0.50	0.010	0.020
D	2.70	3.10	0.106	0.122
E	2.60	3.00	0.102	0.118
E1	1.30	1.70	0.051	0.067
e	1.70	2.10	0.067	0.083
L1	0.475	0.725	0.019	0.029



**SUGGESTED PAD LAYOUT**



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

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