

V_{WM}=5V, 0.8pF ESD Protection Array

FEATURES

- Meet IEC61000-4-2(ESD) ±17kV(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

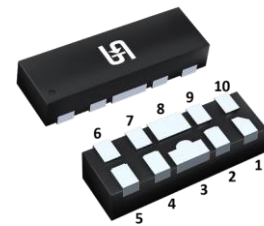
APPLICATIONS

- USB 2.0 / 3.0 / 3.1
- High Definition Multi-Media Interface(HDMI 1.3 / 1.4 / 2.0)

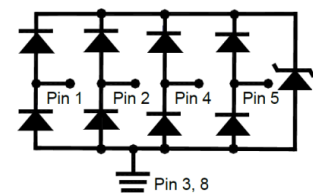
MECHANICAL DATA

- Case: 2510P10
- 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: 3.59 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
P _{PPSM}	95	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	19	V
Package	2510P10	
Configuration	Single dice	



1. I/O 2. I/O 3. GND 4. I/O 5. I/O
6. NC 7. NC 8. GND 9. NC 10. NC



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)			
PARAMETER	SYMBOL	TESD5V0V4UA	UNIT
Marking code on the device		24A	
Rated random recurring peak Impulse power dissipation (tp=8/20μs waveform)	P _{PPSM}	95	W
Peak impulse current (tp=8/20μs waveform)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±17	kV
ESD per IEC 61000-4-2 (Contact)		±12	
Junction temperature range	T _J	-55 to +125	°C
Storage temperature range	T _{STG}	-55 to +125	°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⁾	$V_R = 5 \text{ V}$ (any I/O pin to Ground)	I_R	-	-	1	μA
Clamping voltage ⁽²⁾	$I_{PP} = 1 \text{ A}$ (any I/O pin to Ground)	V_C	-	-	15	V
Clamping voltage ⁽²⁾	$I_{PP} = 5 \text{ A}$ (any I/O pin to Ground)	V_C	-	-	19	V
Junction capacitance	1 MHz, $V_R = 0 \text{ V}$ (any I/O pin to Ground)	C_J	-	-	0.8	pF
Junction capacitance	1 MHz, $V_R = 0 \text{ V}$ (between I/O pins)	C_J	-	-	0.4	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
TESD5V0V4UA (Note 1)	RD	G	2510P10	3K / 7" Reel

Notes:

1. Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TESD5V0V4UA RDG	TESD5V0V4UA	RD	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

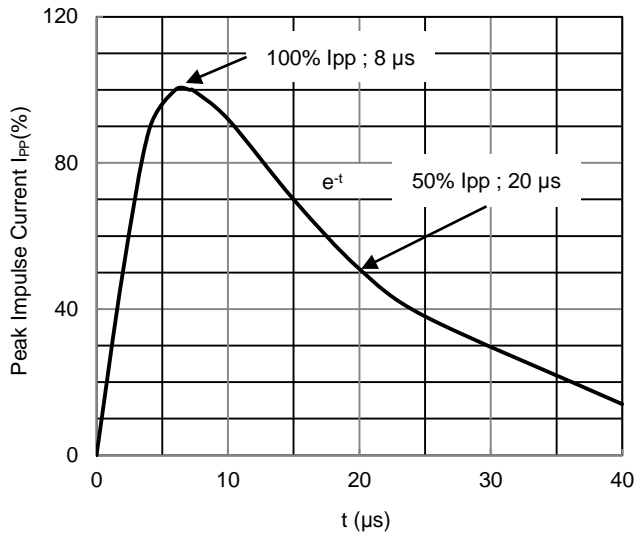


Fig. 2 ESD pulse waveform according to IEC 6100-4-2

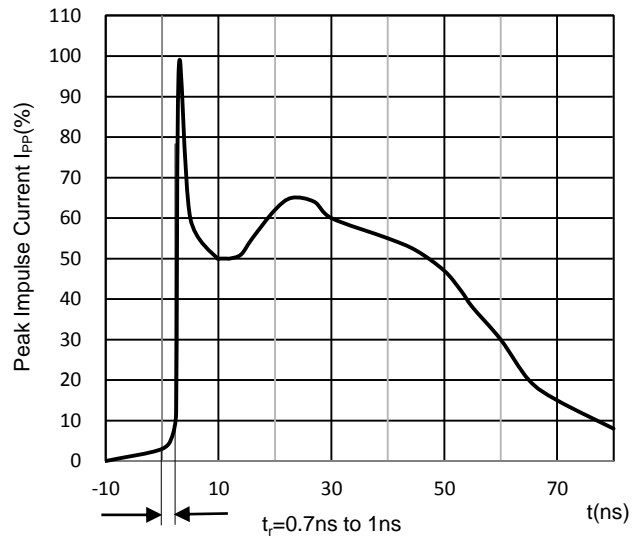


Fig. 3 TLP I-V Curve

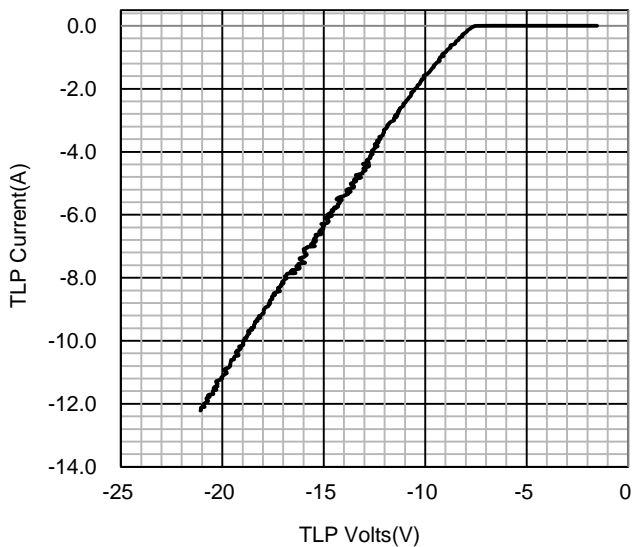
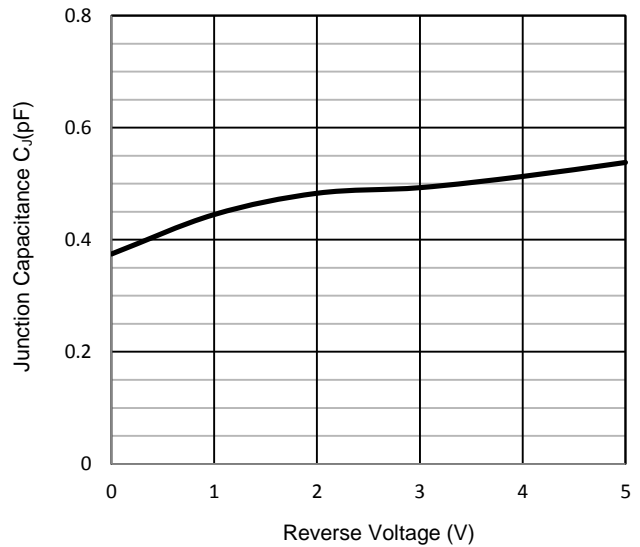


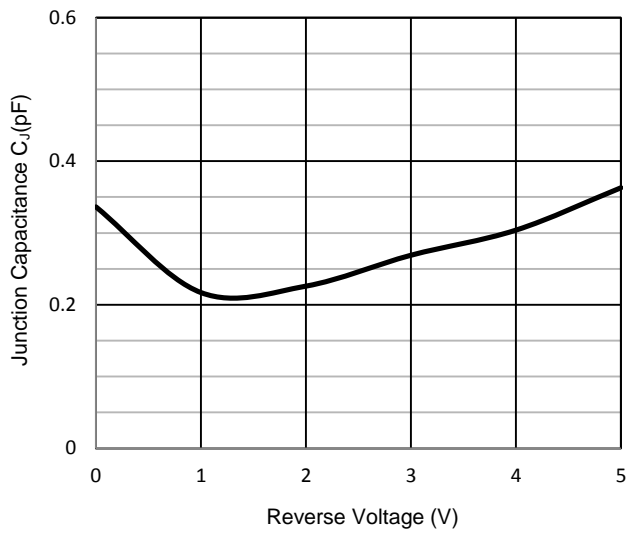
Fig. 4 Typical Junction Capacitance (any I/O pin to Ground)



CHARACTERISTICS CURVES

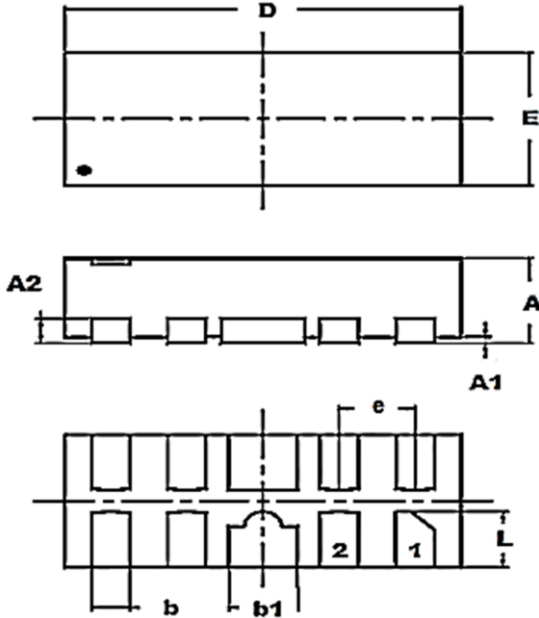
($T_A = 25^\circ\text{C}$ unless otherwise noted)

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



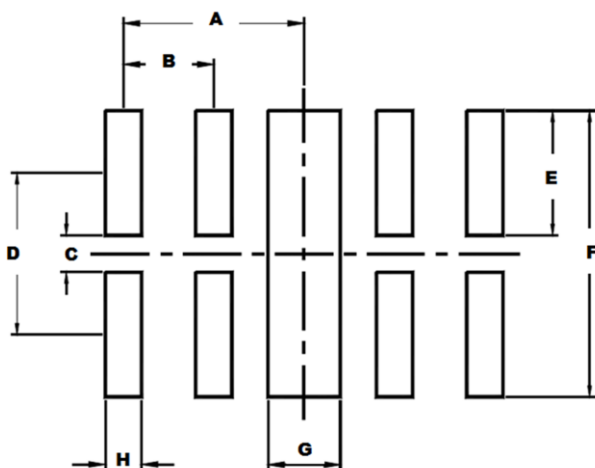
PACKAGE OUTLINE DIMENSION

2510P10



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.500	0.650	0.020	0.026
A1	0.000	0.050	0.000	0.002
A2	0.130		0.005	
b	0.150	0.250	0.006	0.010
b1	0.350	0.450	0.014	0.018
D	2.400	2.600	0.094	0.102
E	0.900	1.100	0.035	0.043
e	0.500		0.020	
L	0.300	0.425	0.012	0.017

SUGGESTED PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	1.000	0.039
B	0.500	0.020
C	0.200	0.008
D	0.875	0.034
E	0.675	0.027
F	1.550	0.061
G	0.400	0.016
H	0.200	0.008

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