

PB5635-S26

Low Capacitance ESD Protection

Voltage

5V

Features

- IEC61000-4-2(ESD) : $\pm 27\text{kV}$ Air, $\pm 16\text{kV}$ Contact
- IEC61000-4-4(EFT) : 55A (5/50ns)
- IEC61000-4-5(Lightning) : 6A (8/20uS)
- Low leakage current, maximum of 1uA at rated voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- Pb-Free/Halogen Free/BFR Free and RoHS Compliant

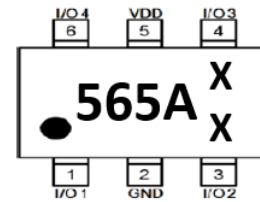
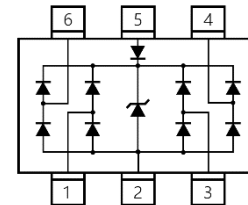
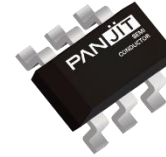
Mechanical Data

- Case : SOT-23 6L-1 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0142 grams

Applications

- Monitors and Flat Panel Displays
- USB2.0 Power and Data lines protection
- Video Graphics Cards
- Digital Visual Interface (DVI)
- Notebook and PC Computers

SOT-23 6L-1



Part Marking	Parameter
565A X	565A = Marking Code
X	X = Tracking Code

Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNITS
ESD IEC61000-4-2(Air)	V_{ESD}	± 27	kV
ESD IEC61000-4-2(Contact)		± 16	
Operating Junction Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

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Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 1)	V_{RWM}	VDD Pin to GND	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1\text{mA}$, I/O Pin to GND	6	-	10	V
Forward Voltage	V_F	$I_F = 15\text{mA}$, I/O Pin to GND	-	1	-	V
Reverse Leakage Current	I_R	$V_R = 5\text{V}$, I/O Pin to GND	-	0.5	1	μA
Clamping Voltage	V_{CL}	$I_{PP} = 5\text{A}$, $t_P = 8/20\mu\text{s}$, I/O pins to GND	-	8.5	9.5	V
Clamping Voltage TLP ^(Note 2)	V_{CL}	$I_{TLP} = 16\text{A}$, $t_P = 100\text{ns}$, I/O Pin to GND	-	10	-	V
Clamping Voltage TLP ^(Note 2)	V_{CL}	$I_{TLP} = 16\text{A}$, $t_P = 100\text{ns}$, VDD Pin to GND	-	8.5	-	V
Off State Junction Capacitance ^(Note 3)	C_J	VDD = 5V, $V_R = 2.5\text{V}$, $f = 1\text{MHz}$, I/O Pins to GND	-	0.65	0.85	pF
Off State Junction Capacitance ^(Note 3)	C_J	VDD = floating, $V_R = 2.5\text{V}$, $f = 1\text{MHz}$, I/O Pins to GND	-	1.15	1.35	pF

NOTES :

1. A transient suppressor is selected according to the working peak reverse voltage(V_{RWM}), which should be equal to or greater than the DC or continuous peak operation voltage level.
2. Testing using Transmission Line Pulse (TLP) conditions : $Z_0 = 50\Omega$, $t_P = 100\text{ ns}$.
3. This parameter is guaranteed by design.

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TYPICAL CHARACTERISTIC CURVES

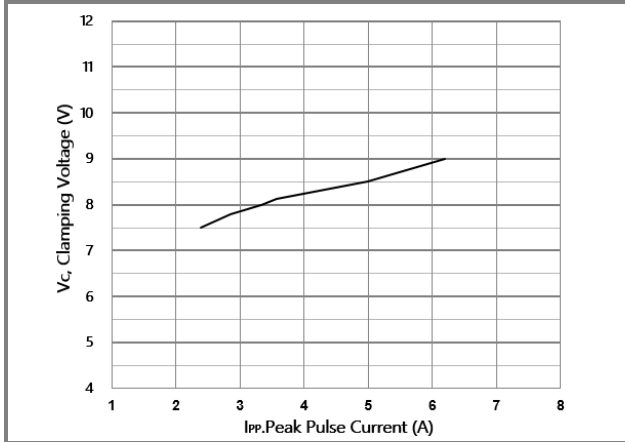


Fig.1 Typical Peak Clamping Voltage

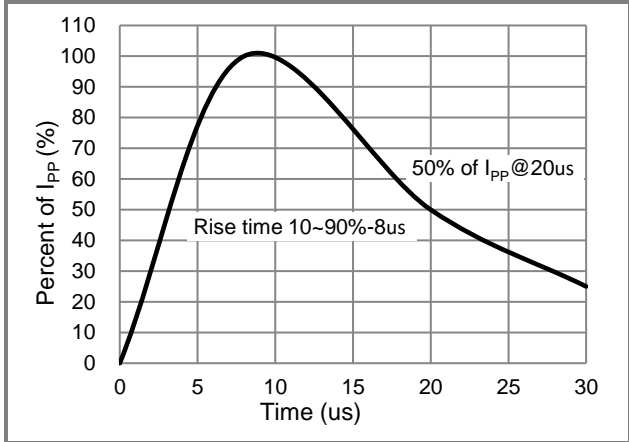


Fig.2 Pulse Waveform

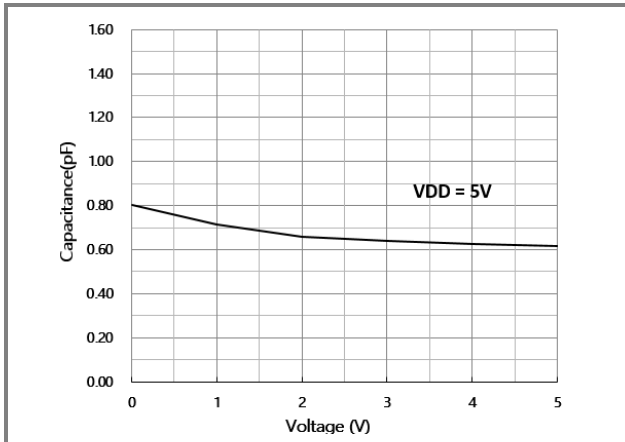


Fig.3 Typical Junction Capacitance

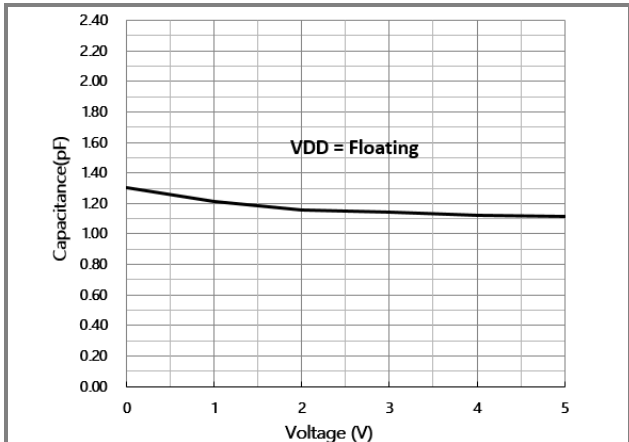


Fig.4 Typical Junction Capacitance

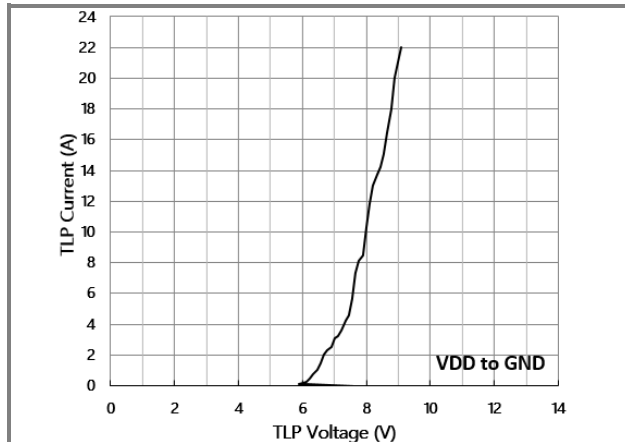


Fig.5 Positive TLP Measurement

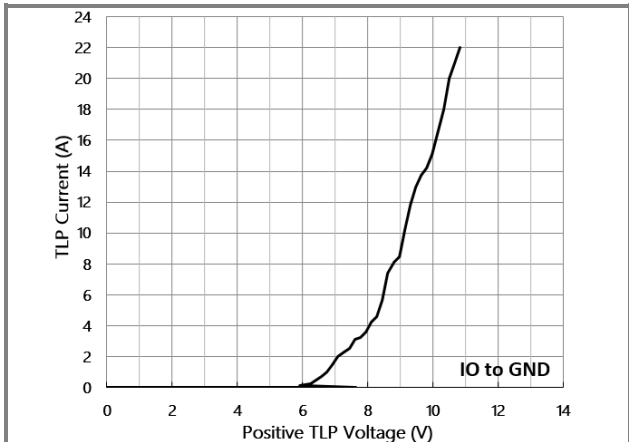


Fig.6 Positive TLP Measurement

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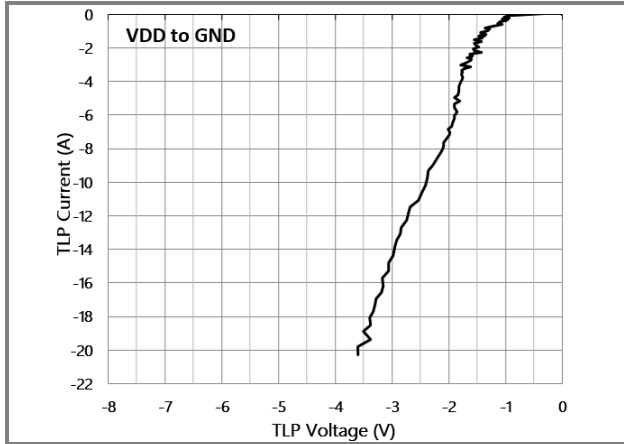


Fig.7 Negative TLP Measurement

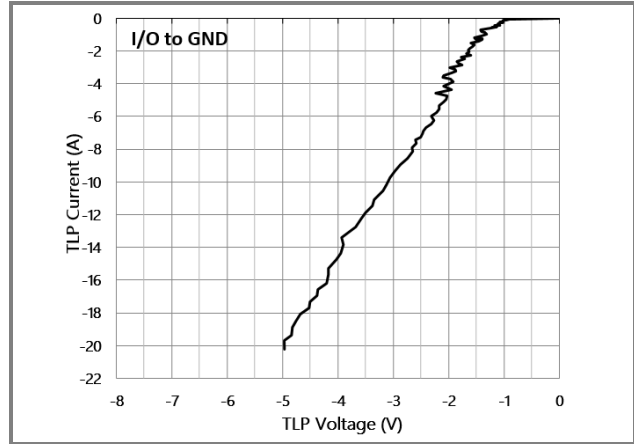


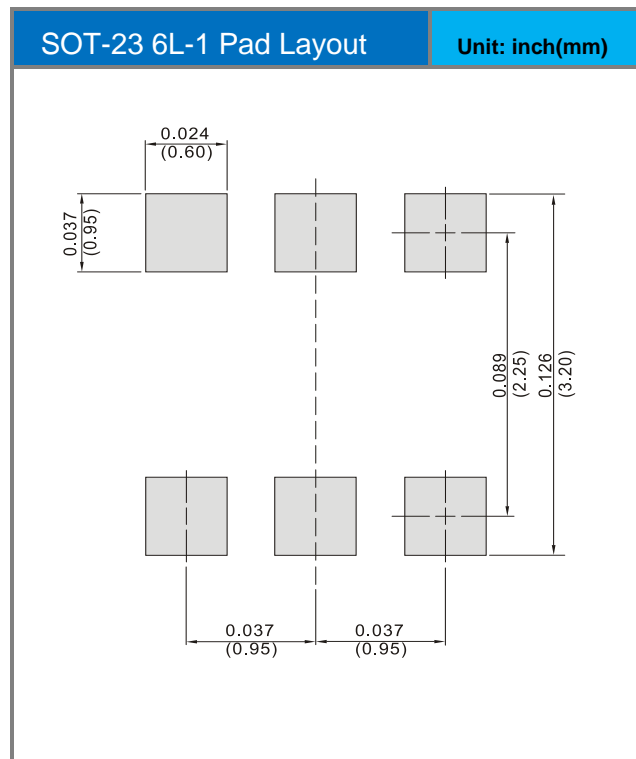
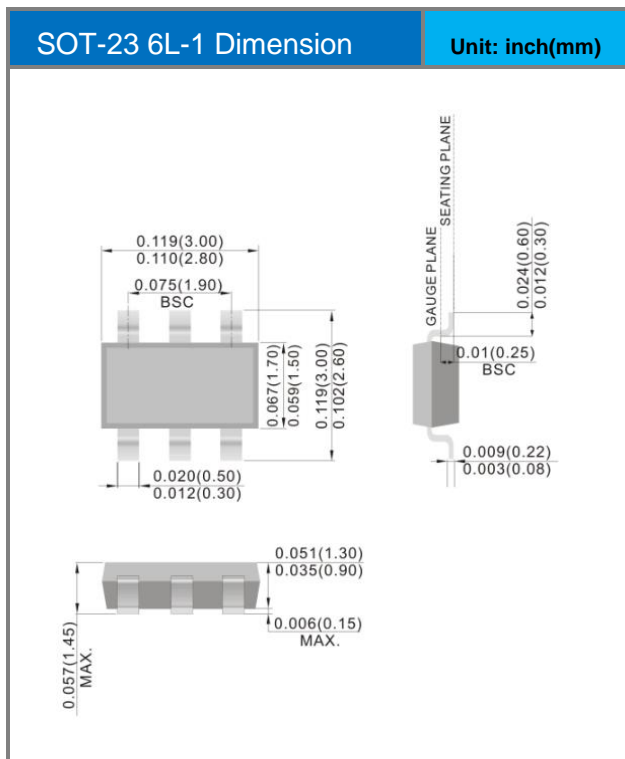
Fig.8 Negative TLP Measurement

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PB5635-S26	SOT-23 6L-1	3K pcs / 7" reel	565A

Packaging Information & Mounting Pad Layout



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