

Low Capacitance ESD Protection

Voltage

5V

Features

• IEC61000-4-2(ESD): ±18kV Air, ±16kV Contact

• IEC61000-4-4(EFT): 40A (5/50ns)

• IEC61000-4-5(Lightning): 6.5A (8/20uS)

• Low leakage current, maximum of 1uA at rated voltage

• Ultra low clamping voltage

• Lead free in compliance with EU RoHS 2.0

• Green molding compound as per IEC 61249 standard

Mechanical Data

• Case: SOT-23 6L-1 Package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0142 grams

Applications

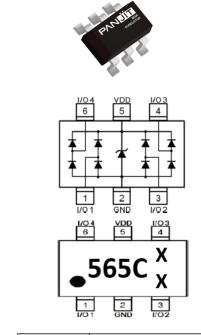
• USB 2.0 Power and Data lines protection

• Notebook/Desktop Computers

SIM ports

• Video Graphics Cards

SOT-23 6L-1



Part Marking		Parameter
FEEG	Х	565C = Marking Code
303C	X	X = Tracking Code

Maximum Ratings and Thermal Characteristics ($T_A = 25^{\circ}C$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS	
ESD IEC61000-4-2(Air)				
ESD IEC61000-4-2(Contact)	V _{ESD}	±16	kV	
Typical Thermal Resistance ^(Note 1)	$R_{\theta JA}$	350	°C/W	
Operating Junction Temperature Range	TJ	-55 to +125	°C	
Storage Temperature Range	T _{STG}	-55 to +150	°C	



Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 1)	V_{RWM}	I/O Pin to GND	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I _{BR} = 1mA, I/O Pin to GND	6	-	11	V
Forward Voltage	V_{F}	I _F = 15mA, I/O Pin to GND	-	1	-	V
Reverse Leakage Current	I _R	V _R = 5V, I/O Pin to GND	-	0.5	1	uA
Clamping Voltage	V _{CL}	I _{PP} = 6.5A, t _P =8/20μs, any I/O pins to GND	-	8	9	V
Clamping Voltage TLP(Note 2)	VcL	$I_{TLP} = 16A$, $t_P = 100$ ns, any I/O Pin to GND	-	10.5	-	V
Off State Junction Capacitance (Note 3)	CJ	$V_R = 2.5V$, $f = 1MHz$, I/O any pins to GND	-	0.4	0.5	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 : $Z0 = 50\Omega$, $t_P = 100$ ns.
- 3. This parameter is guaranteed by design.



TYPICAL CHARACTERISTIC CURVES

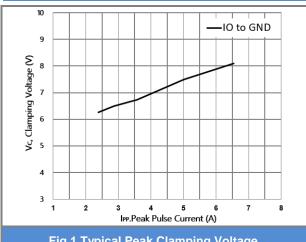
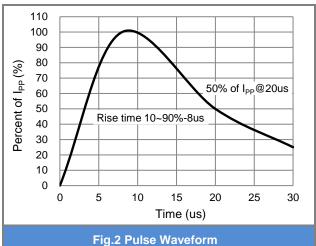
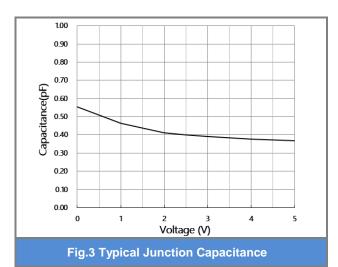


Fig.1 Typical Peak Clamping Voltage





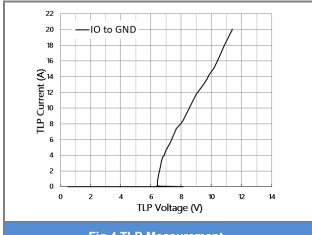


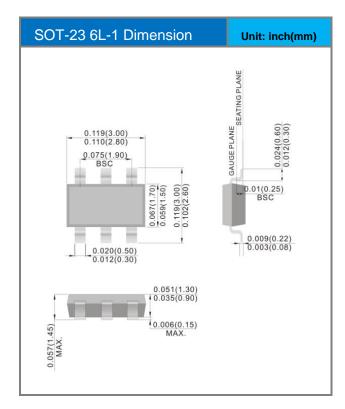
Fig.4 TLP Measurement

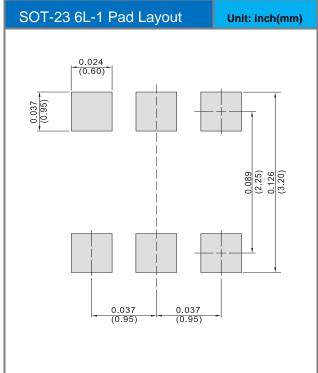


Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PB5615-S26	SOT-23 6L-1	3K pcs / 7" reel	565C

Packaging Information & Mounting Pad Layout







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