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NZQA6V8AXV5T1G

Low-Capacitance Array with ±15-kV ESD Protection

www.sot23.com.tw

Features

- Ultra low capacitance: 3.5pF(Max)
- Ultra low leakage: nA level
- Low operating voltage: 5.5V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±20kV
    - Contact discharge: ±15kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
- ROHS Compliant

Mechanical Characteristics

- Package: SOT-5X3
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

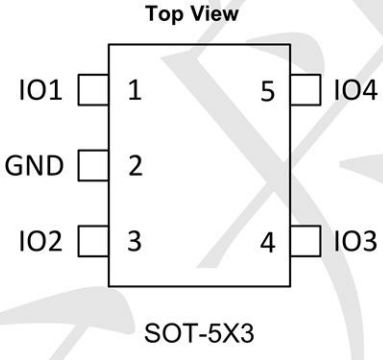
Applications

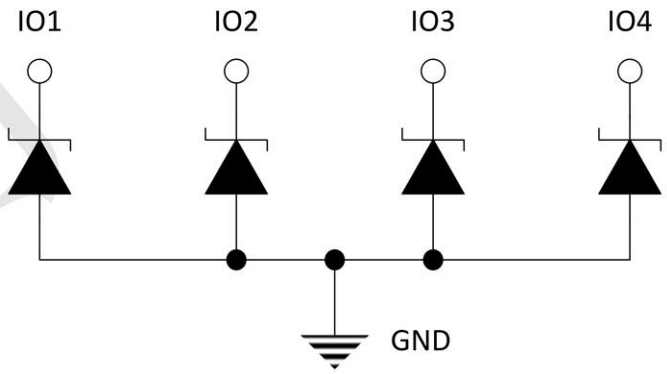
- USB 2.0 and USB 3.0 Ports
- USB OTG
- Digital video interface(DVI)
- Monitor and Flat Panel Displays
- PCI Express and Serial SATA Ports
- Gigabit Ethernet
- IEEE 1394 firewire ports
- Consumer products (STB, DVD, DSC, DVC…)

Ordering Information

Part Number	Qty per Reel	Reel Size
NZQA6V8AXV5T1G	4000	7″

Dimensions and Pin Configuration





Marking: 28S Or 68

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter		Symbol	Value	Unit
Operatingvoltage		V_{IO}	5	V
ESD Protection (per IEC 61000-4-2)	Air Discharge	WM	20	kV
	Contact Discharge	BR	15	

Parameter	Symbol	Min.	Nom.	Max.	Unit
Operating Temperature	T_J	-55	+25	+150	°C
Storage Temperature	T_{STG}	-55	+25	+150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter		Symbol	Min	Typ	Max	Unit
Working Peak Reverse Voltage		V_{WM}			5	V
Breakdown Voltage @ 1 mA		V_{BR}	6.5			V
Leakage Current @ V_{WM}		I_D			0.1	μA
Capacitance		$C_{j(SD)}$			3.5	pF
Forward Surge Rating (1/20 s@ 25 °C, $I_{F = 10\ mA}$)		V_F	0.6	0.8	1.2	V
Clamping Voltage (per IEC 61000-4-5) 8/20 μs)	@ I_{PP} = 1 A	V_C			10	V
	@ I_{PP} = 3A				12	

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Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20μs Pulse Waveform

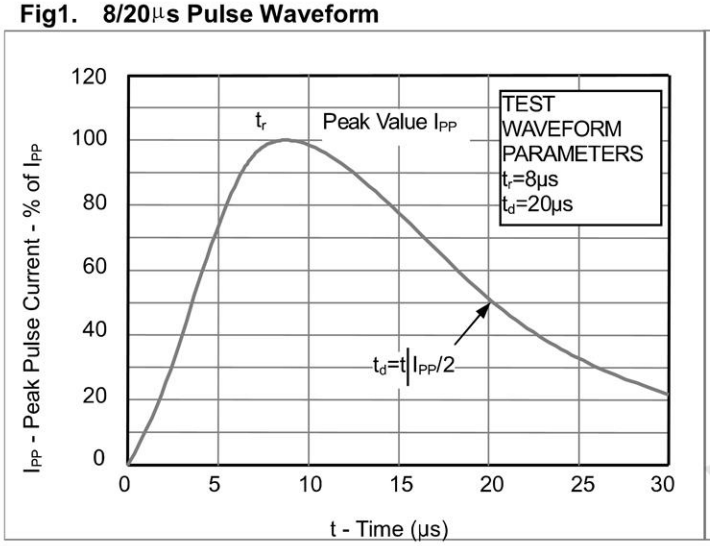


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

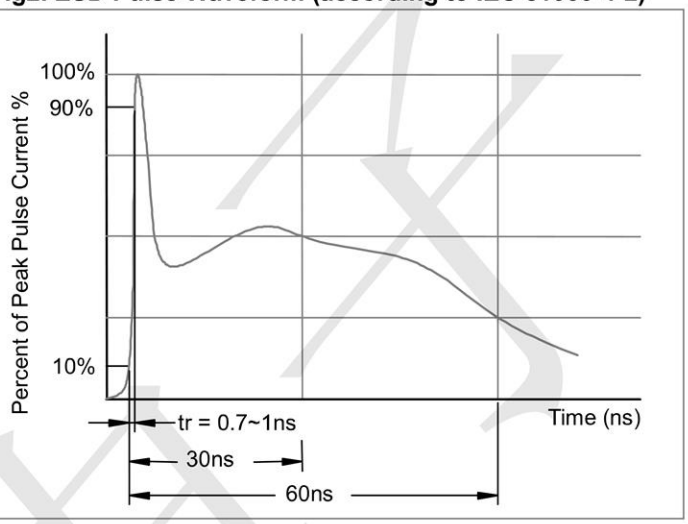
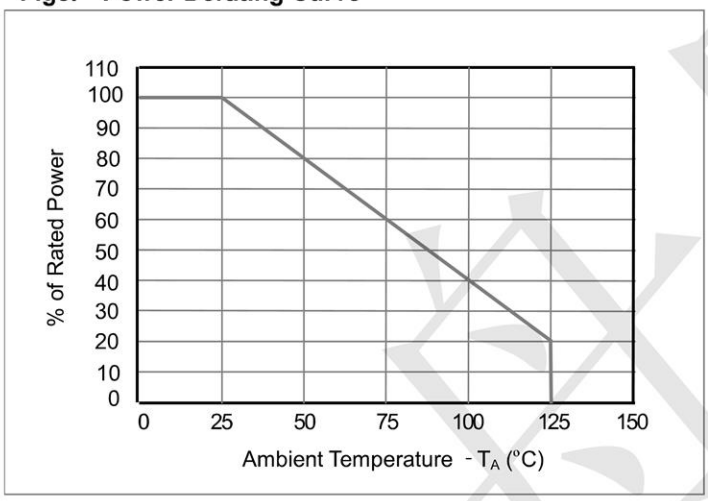
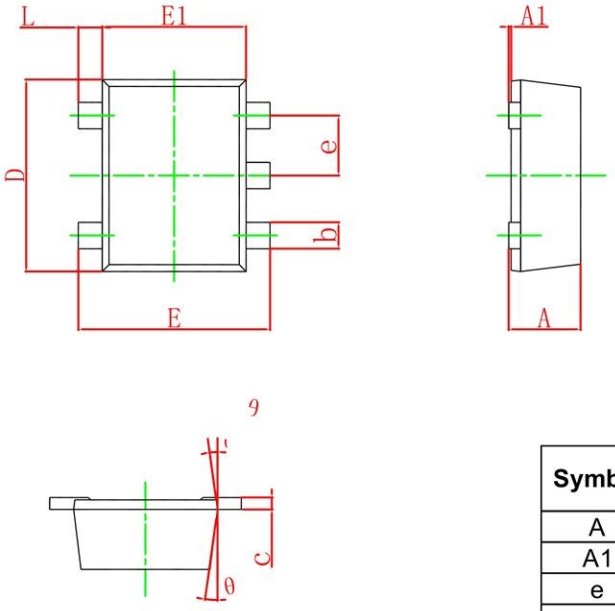


Fig3. Power Derating Curve

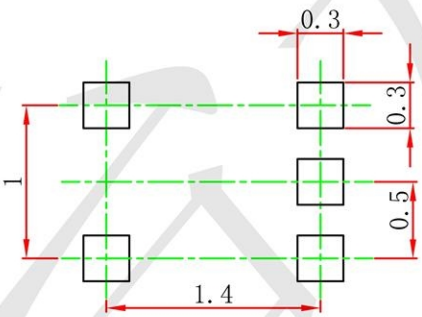


SOT-5X3 Package Outline Drawing



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
θ	7° REF.		7° REF.	

Suggested Land Pattern



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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BSN20W TPDMG6602SVT LTH7 TPAPX809S-31SA TPZXMP3A13FTA SN7002W TPADM809SAKSZ TPESD0504S6-A TPB1A30-123 TPGC12C-1 TPS7B6950DBVR-TP TPZVN3320FTA FDC6301N-TP IRFR2405TRPBF-TP SI3932DV TPESD0402G08V TPS3809L30DBVR-TP BV15C FDMS7670AS-TP TPB05A40-323 TPD1213A-02SM DDTA143ZCA DMP6350S TPWSB5557Z ESD5B5.0ST1G-P QM3003J-TP TPADM809LAKSZ TPESD5311N TPFMMT493 TPSPX3819M5-L-3-3