TECH PUBLIC
台舟电子

TPESD0551Y-CSP
Low Capacitance Bidirectional TVS Diode

www.sot23.com.tw

Features

- Provides ESD Protection per IEC 61000-4-
  Air ± 20 kV, Contact ±20kV
  IEC6100-4-5(surge):3A (8/20us)
- Maximun working voltage Vrwm= 5V
- Ultra low capacitance =5.3pF (Typical)
- 1 Channel of ESD Protection
- Low Channel Input Capacitance
- **Totally Lead-Free & Fully RoHS Compliant**

Mechanical Characteristics

- Case: SLP0603 -2
- Case Material: Chip Scale Package
- Terminals: NiAu Bump. Solderable per MIL-STD-202, Method 208 e4
- Weight: 0.0002 grams (Approximate)

Applications

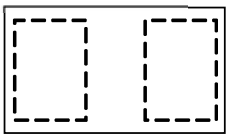
- Cellular Handsets
- Portable Electronics
- Computers and Peripheral

Ordering Information

Part Number	Qty per Reel	Reel Size
TPESD0551Y-CSP	15000	7″

Circuit Diagram

Pin Configuration



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PROTECTION PRODUCTS

Absolute Maximum Rating

(Temp=25℃ Unless Otherwise Specified)			
Parameter	**Symbol**	**Value**	**Unit**
Peak Pulse Power (tp=8/20μs waveform)	P_{PPP}	30	Watts
Peak Pulse Current(tp=8/20μs waveform)	I_{PP}	3	A
ESD Rating per IEC61000-4-2： Contact Air	4	20 20	KV
Lead Soldering Temperature	T_L	260 (10 sec.)	℃
Operating Temperature Range	T_J	-40 ~ 125	℃
Storage Temperature Range	T_{STG}	-60 ~ 150	℃

Electrical Characteristics

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Standoff Voltage	V_{RWM}	—	—	5	V	—
Channel Leakage Current (Note 6)	I_{RM}	—	1	100	nA	V_{RWM} = 5V
Snapback Voltage	V_{SNP}	5.3	—	—	V	—
Clamping Voltage, Positive Transients	V_{CL}	—	—	11.5	V	I_{PP} = 0.5A, t_P = 8/20μS
		—	—	12.8		I_{PP} = 1A, t_P = 8/20μS
Breakdown Voltage	V_{BR}	6	—	10	V	I_R = 1mA
Differential Resistance	R_{DYN}	—	2.0	—	Ω	TLP, 10A, t_P = 100ns
Channel Input Capacitance	C_{IN}	4	5.3	6	pF	V_R = 0V, f = 1MHz

Fig1. 8/20μs Pulse Waveform

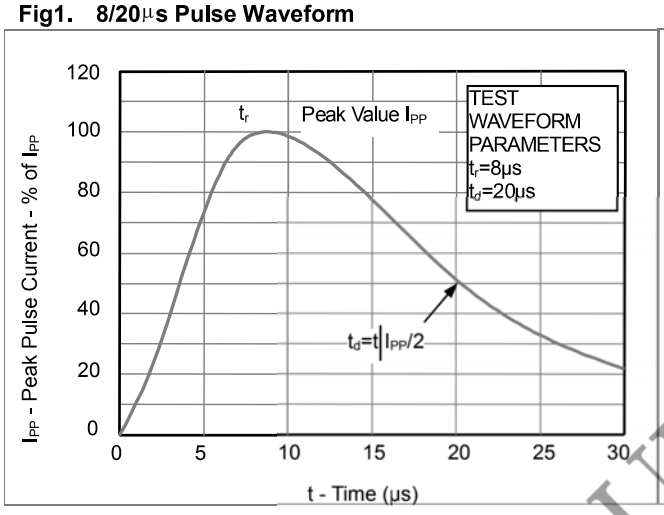


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

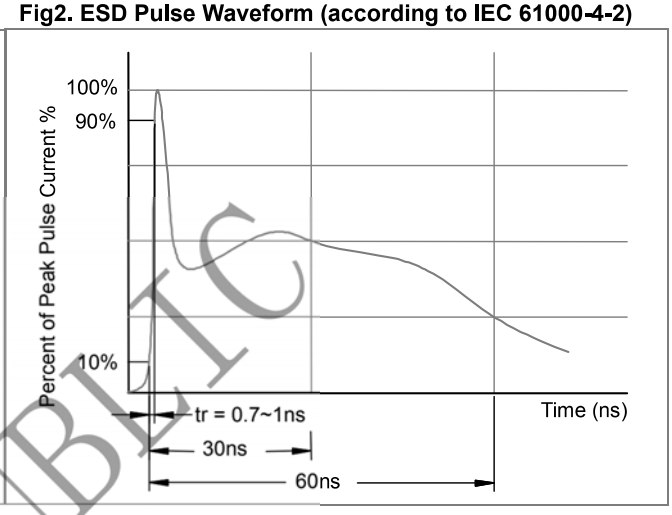
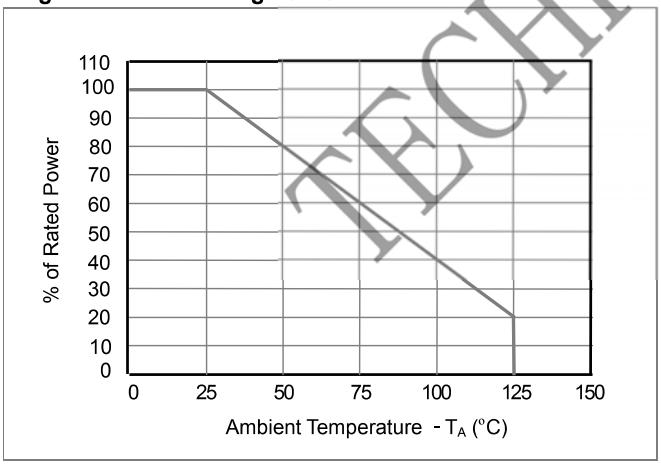
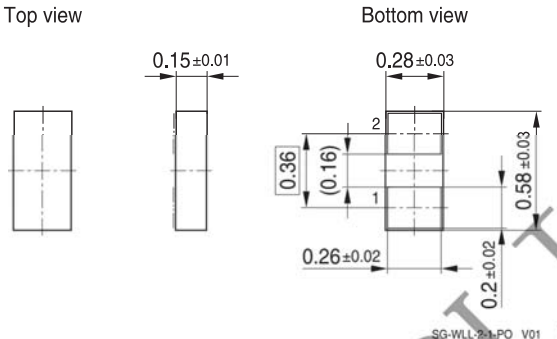


Fig3. Power Derating Curve



Outline Drawing -SLP0603-2



Land Pattern - SLP0603-2