

## Features

- ◆ Ultra low capacitance: 1.5pF(Max)
- ◆ Ultra low leakage: nA level
- ◆ Low operating voltage: 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

## Ordering Information

Part Number	Qty per Reel	Reel Size
HSP061-2M6	5000	7"

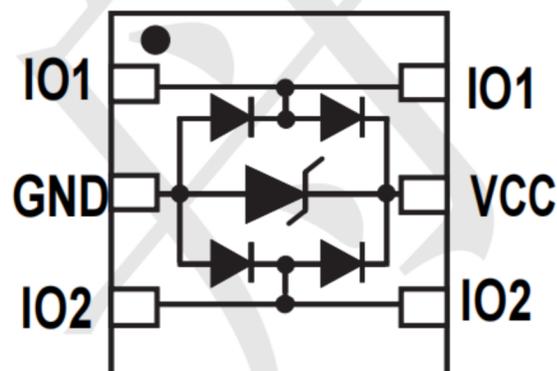
## Mechanical Characteristics

- ◆ Package: SON-6(1.45X1.0)
- ◆ 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...)

## Dimensions and Pin Configuration



**Marking: PF**

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

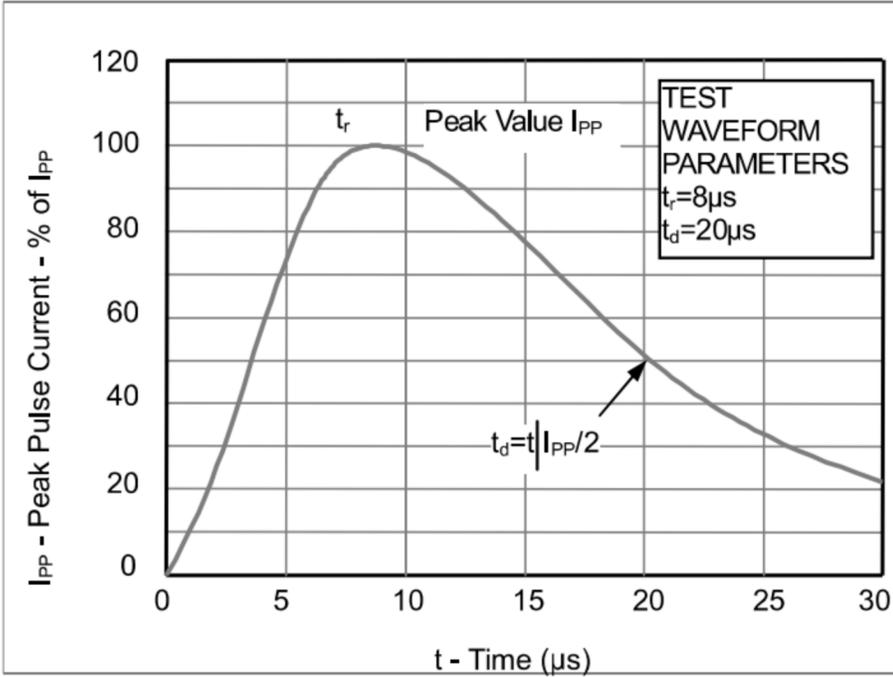
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	100	W
Peak Pulse Current (8/20μs)	Ipp	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±20 ±15	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

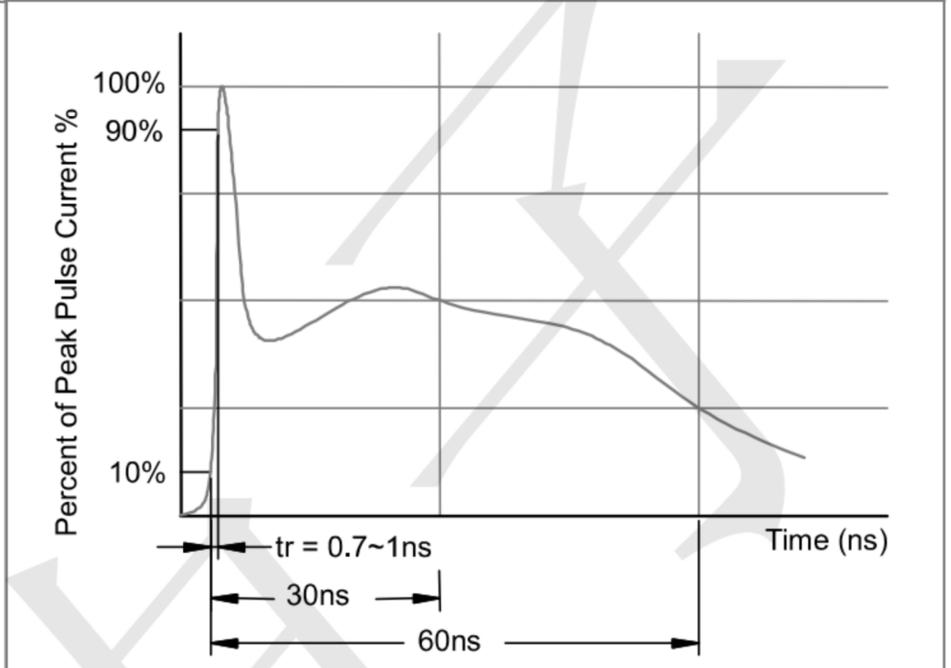
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6.5			V	IT = 1mA
Reverse Leakage Current	IR			0.08	uA	VRWM = 5V
Clamping Voltage	VC			10	V	Ipp = 1A (8 x 20μs pulse)
Clamping Voltage	VC			16	V	Ipp = 4A (8 x 20us pulse)
Junction Capacitance	CJ		0.8	0.9	pF	VR = 0V, f = 1MHz (IO to GND)
Junction Capacitance	CJ		0.3		pF	VR = 0V, f = 1MHz (IO to IO)

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

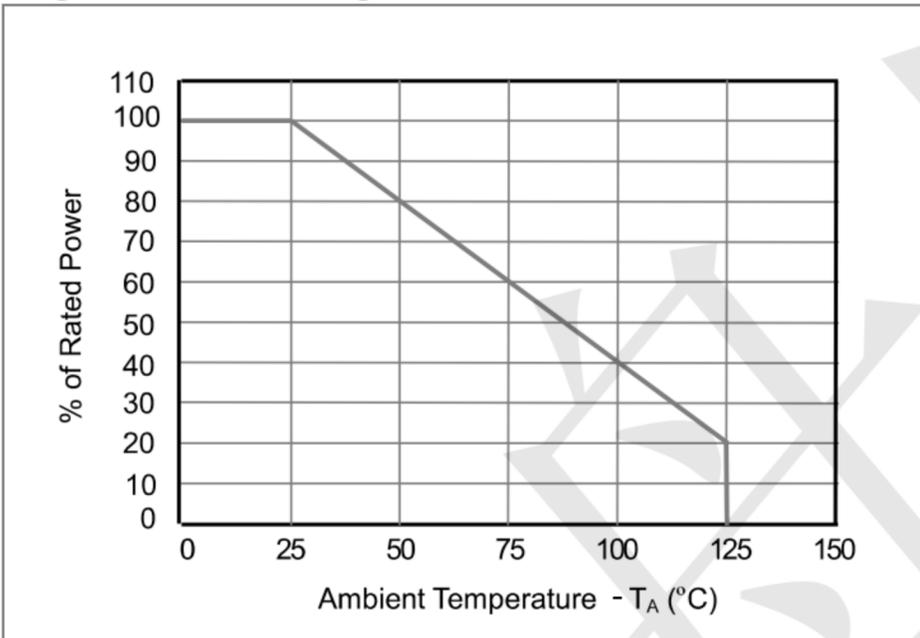
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



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



**Fig3. Power Derating Curve**





**TECH PUBLIC**

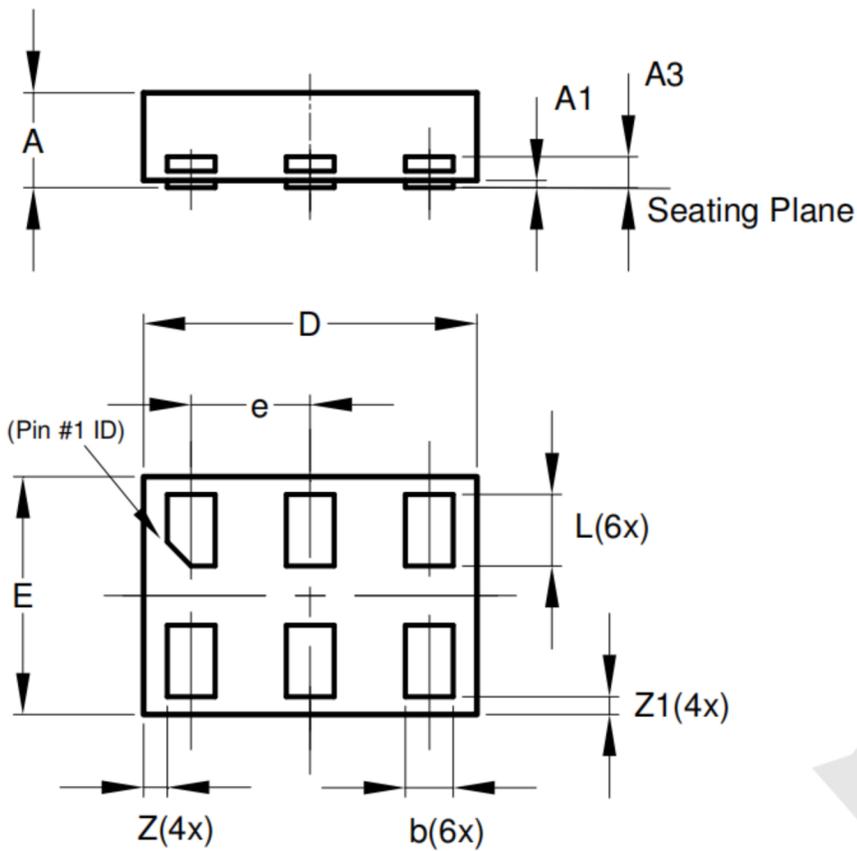
台舟电子

**HSP061-2M6**

Low-Capacitance 2-Channel double Rail-to-Rail ESD-Protection

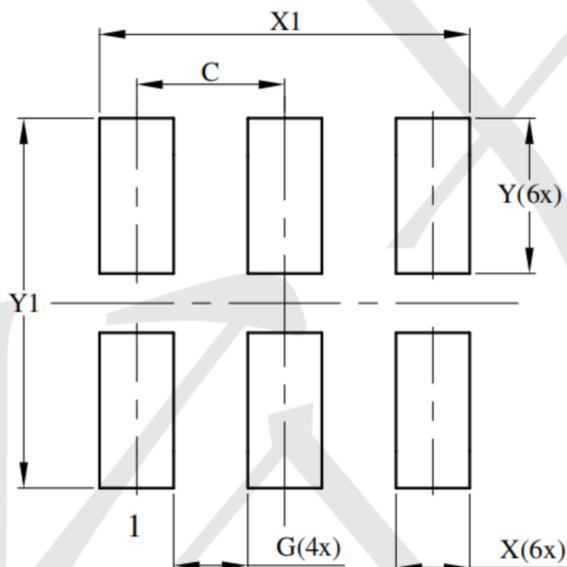
[www.sot23.com.tw](http://www.sot23.com.tw)

**SON-6(1.45x1) Package Outline Drawing**



X2-DFN1410-6			
Dim	Min	Max	Typ
A	—	0.40	0.39
A1	0.00	0.05	0.02
A3	—	—	0.13
b	0.15	0.25	0.20
D	1.35	1.45	1.40
E	0.95	1.05	1.00
e	—	—	0.50
L	0.25	0.35	0.30
Z	—	—	0.10
Z1	0.045	0.105	0.075
All Dimensions in mm			

**Suggested Land Pattern**



Dimensions	Value (in mm)
C	0.500
G	0.250
X	0.250
X1	1.250
Y	0.525
Y1	1.250