

Features

- Low operating voltage: 5V
- Ultra low capacitance: 0.3pF typical (I/O to I/O)
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 25\text{kV}$
Contact discharge: $\pm 20\text{kV}$
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning):4.0A(8/20 μs)
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

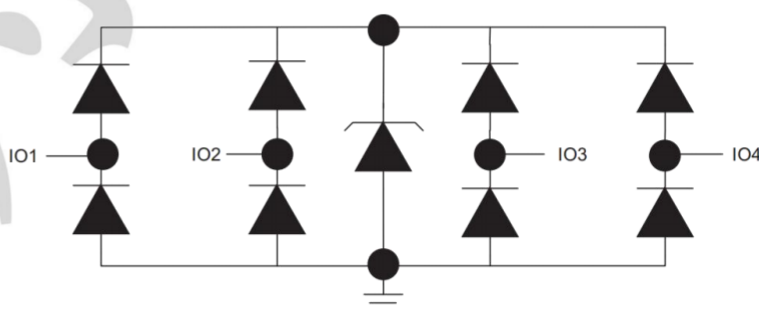
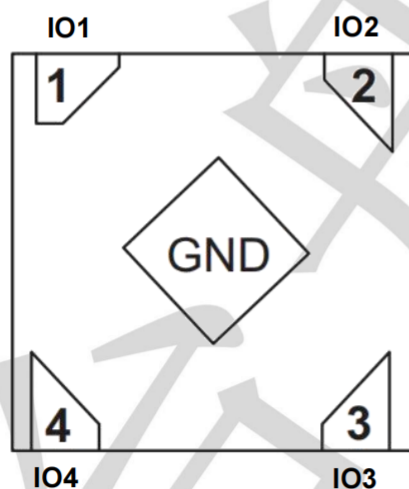
Mechanical Characteristics

- Package: DFN0808-4
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- - IEC 61000-4-2 (ESD) immunity test

Applications

- Cellular Handsets and Accessories
- HDMI 2.0 & Display Port
- USB 2.0 and USB3.0 power and data line
- Notebooks and Handhelds

Dimensions and Pin Configuration



Circuit and Pin Schematic

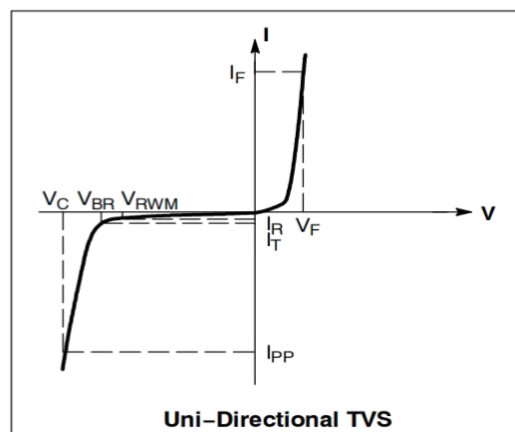
Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	150	W
Peak Pulse Current (8/20μs)	Ipp	4.0	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±25 ±20	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	Any I/O pin to ground
Breakdown Voltage	VBR	6.0	6.5	--	V	IT= 1mA,Any I/O pin to ground
Reverse Leakage Current	IR	--	0.08	--	uA	VRWM=5V,Any I/O pin to ground
Clamping Voltage	VC	--	--	10	V	Ipp=1A(8x 20us pulse), Any I/O pin to ground
Clamping Voltage	VC	--	--	12	V	Ipp=4A(8x 20us pulse), Any I/O pin to ground
Junction Capacitance	Cvo-GND	--	0.6	--	pF	VR=0V,f=1MHz, Any I/O to GND
	Ci/o- I/O	--	0.3	0.5	pF	VR=0V,f=1MHz, between I/O pins

Symbol	Parameter
Ipp	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ Ipp
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IF	Forward Current
VF	Forward Voltage @ IF
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

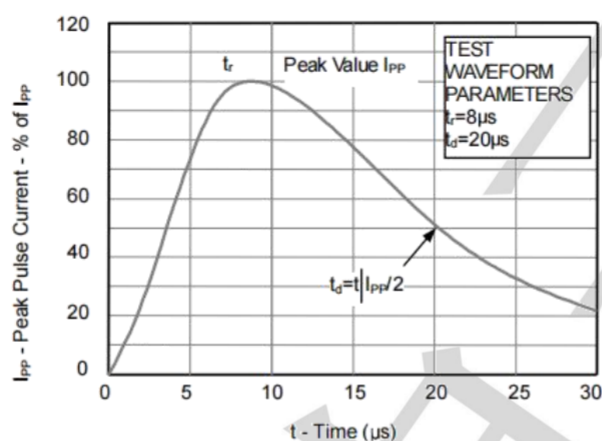


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

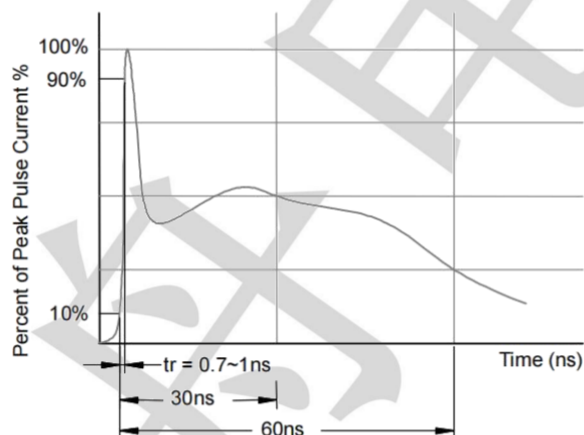
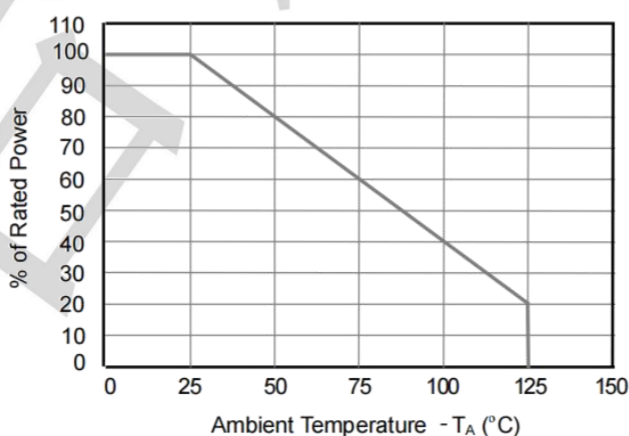
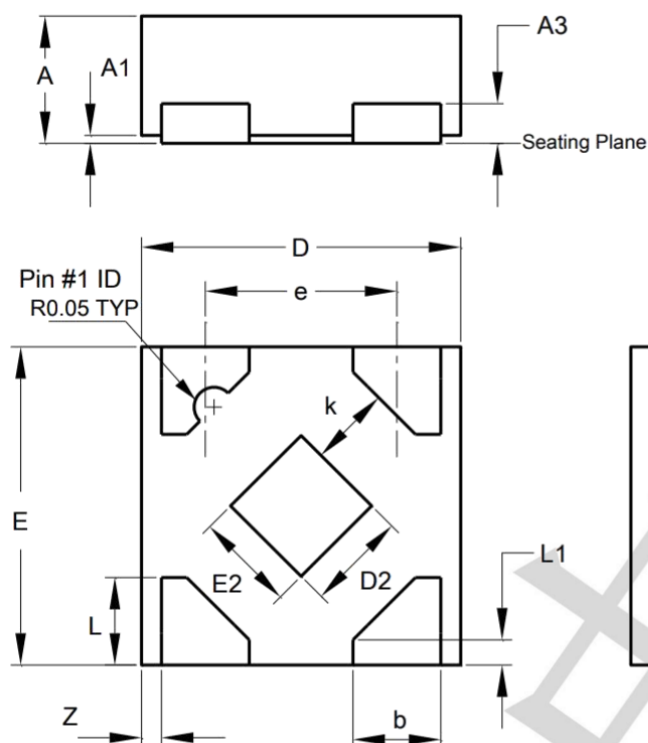


Fig3. Power Derating Curve



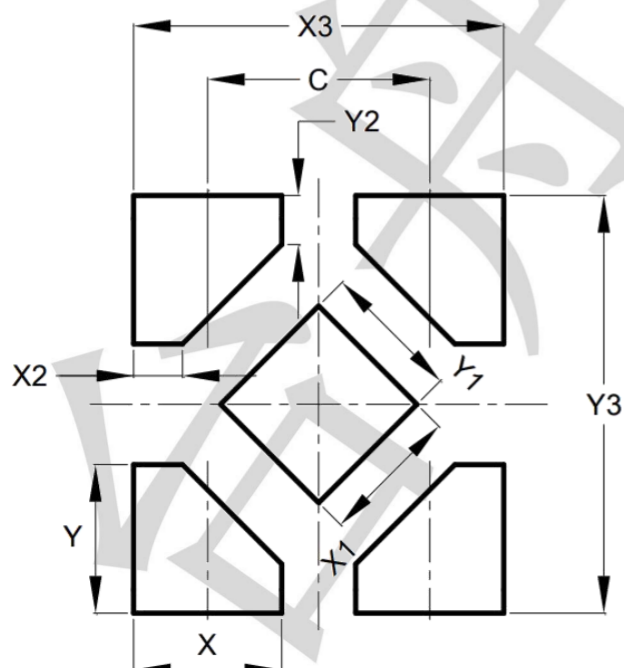
Package information (Unit: mm)

DFN0808-4 (unit: mm)



DFN0808-4			
Dim	Min	Max	Typ
A	0.25	0.35	0.30
A1	0	0.04	0.02
A3	-	-	0.13
b	0.17	0.27	0.22
D	0.75	0.85	0.80
D2	0.15	0.35	0.25
E	0.75	0.85	0.80
E2	0.15	0.35	0.25
e	-	-	0.48
k	0.20	-	-
L	0.17	0.27	0.22
L1	0.02	0.12	0.07
z	-	-	0.05
All Dimensions in mm			

Mounting Pad Layout (unit: mm)



Dimensions	Value
C	0.480
X	0.320
X1	0.300
X2	0.106
X3	0.800
Y	0.320
Y1	0.300
Y2	0.106
Y3	0.900