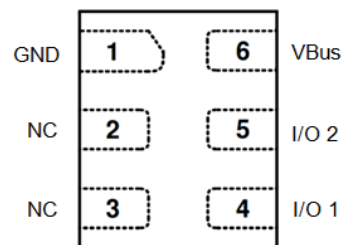


Features

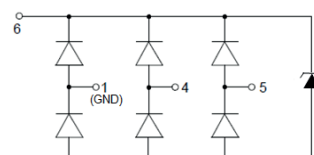
- Ultra low capacitance: 0.25pF typical (I/O to I/O)
- Ultra low leakage: nA level
- Low operating voltage: 5.5/6.5V
- Low clamping voltage
- 6-pin leadless package
- Protects two I/O lines and a power line
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
 - IEC61000-4-5 (Lightning) 3A (8/20 μs)
- RoHS compliant



DFN1210-6

Applications

- Cellular handsets and accessories
- USB ports
- Digital visual interface
- MMC/SD ports



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pk}	51	W
Peak Pulse Current (8/20 μs)	I _{PP}	3	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}	Pin 6 to GND	-	-	6.5	V
Breakdown Voltage	V _{BR}	I _T =1mA, Pin 6 to GND	7	-	12	V
Reverse Leakage Current	I _R	V _{RWM} =6.5V, Pin 6 to GND	-	-	0.5	μA
Clamping Voltage	V _C	I _{PP} =1A (8 x 20 μs pulse), any I/O pin to ground	-	-	12	V
		I _{PP} =3A (8 x 20 μs pulse), any I/O pin to ground	-	-	17	V
Junction Capacitance	C _J	V _R =0V, F=1MHz, any I/O pin to ground	-	0.5	-	pF
		V _R =0V, F=1MHz, between I/O pins	-	0.25	0.5	pF

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

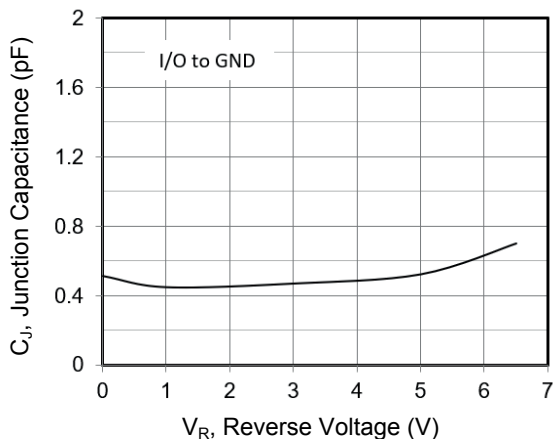


Figure 1. Junction Capacitance vs. Reverse Voltage

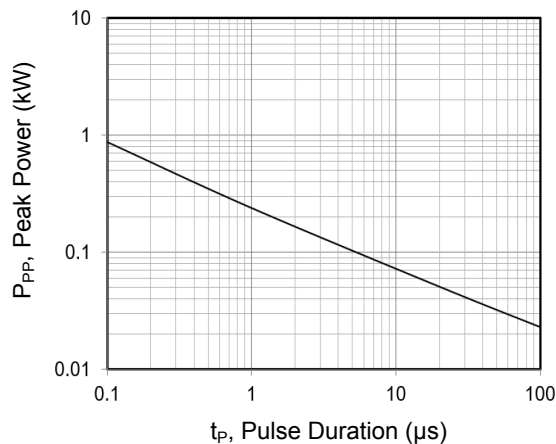


Figure 2. Peak Pulse Power vs. Pulse Time

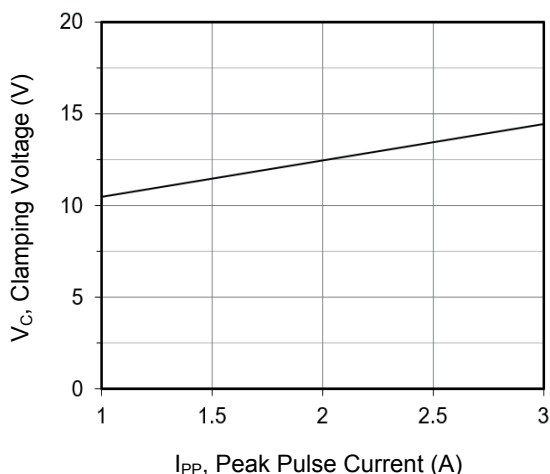


Figure 3. Clamping Voltage vs. Peak Pulse Current

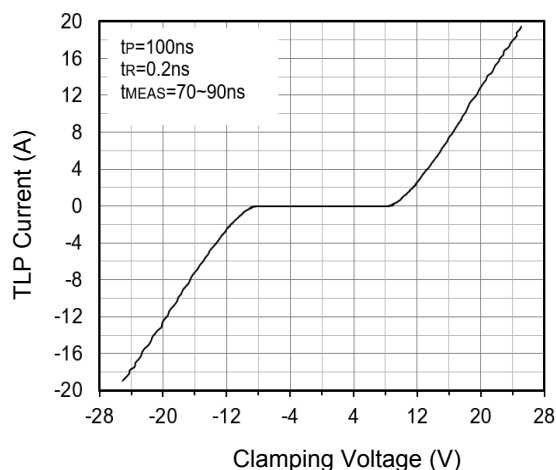


Figure 4. TLP Measurement

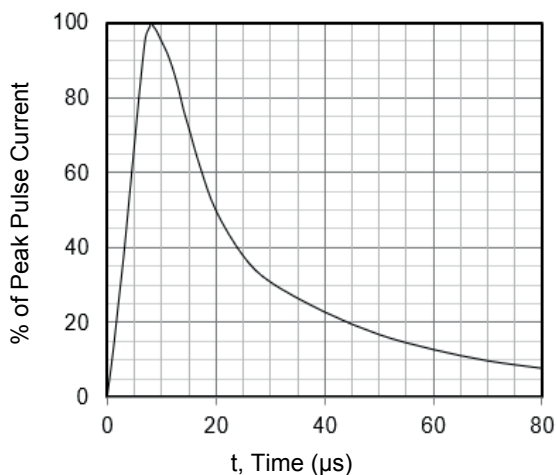


Figure 5. 8 X 20μs Pulse Waveform

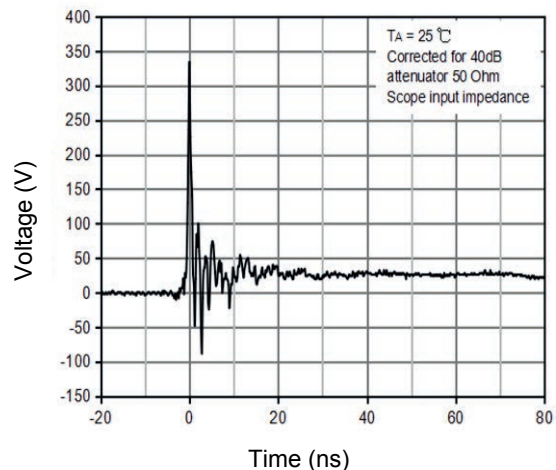
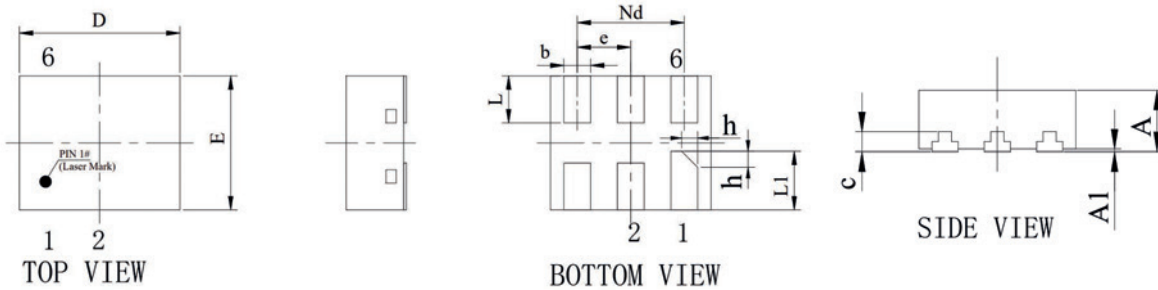


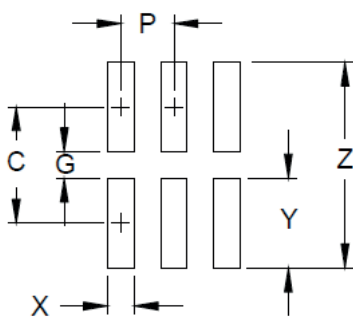
Figure 6. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Package Outline Dimensions (DFN1210-6)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.400	0.500	0.016	0.020
A1	0.000	0.050	0.000	0.002
b	0.150	0.250	0.006	0.010
c	0.152 REF		0.006 REF	
D	1.150	1.250	0.045	0.049
e	0.400 BSC		0.016 BSC	
Nd	0.800 BSC		0.031 BSC	
E	0.950	1.050	0.037	0.041
L	0.250	0.450	0.010	0.018
L1	0.338	0.538	0.013	0.021
h	0.070	0.170	0.003	0.007

Recommended Pad Layout



Symbol	Dimensions	
	Millimeters	Inches
C	0.875	0.034
G	0.20	0.008
P	0.40	0.016
X	0.20	0.008
Y	0.675	0.027
Z	1.55	0.061

Order Information

Device	Package	Marking	Carrier	Quantity
GSEFP5B005	DFN1210-6	53N	Tape & Reel	3,000pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com