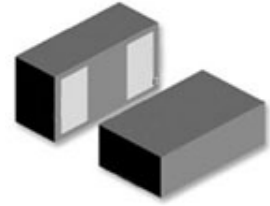


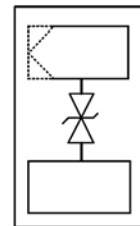
GSEN7B0015 ESD Protection Diode

Features

- Ultra small package: 0.6x0.3x0.3mm
- Ultra low capacitance: 0.2pF typical
- Operating voltage: up to 7V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 20\text{kV}$
 - IEC 61000-4-5 (Lightning) 2.5A (8/20 μs)



DFN0603



Schematic Diagram

Applications

- Cellular handsets and accessories
- Display ports
- MDDI ports
- USB ports
- Digital visual interface (DVI)
- PCI express and serial SATA ports

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pk}	37.5	W
Peak Pulse Current (8/20 μs)	I _{pp}	2.5	A
ESD Per IEC 61000-4-2 (Air)	V _{ESD}	± 25	kV
ESD Per IEC 61000-4-2 (Contact)		± 20	
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}	-	-	-	7	V
Breakdown Voltage	V _{BR}	I _T =1mA	8.5	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =7V	-	-	0.2	μA
Clamping Voltage	V _C	I _{pp} =1A (8 x 20 μs pulse)	-	10.5	13	V
Clamping Voltage	V _C	I _{pp} =2.5A (8 x 20 μs pulse)	-	13	15	V
Junction Capacitance	C _J	V _R =0V, f=1MHz	-	0.2	0.4	pF
Junction Capacitance	C _J	V _R =0V, f=3GHz	-	0.15	0.3	pF

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

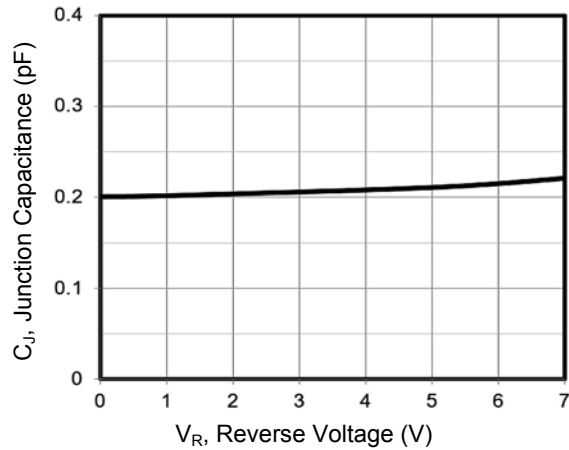


Figure 1. Junction Capacitance vs. Reverse Voltage

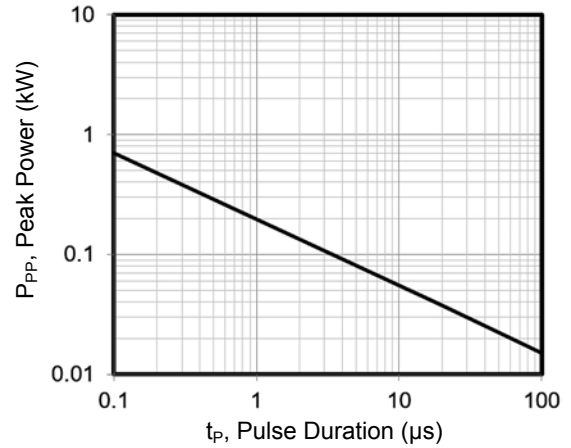


Figure 2. Peak Pulse Power vs. Pulse Time

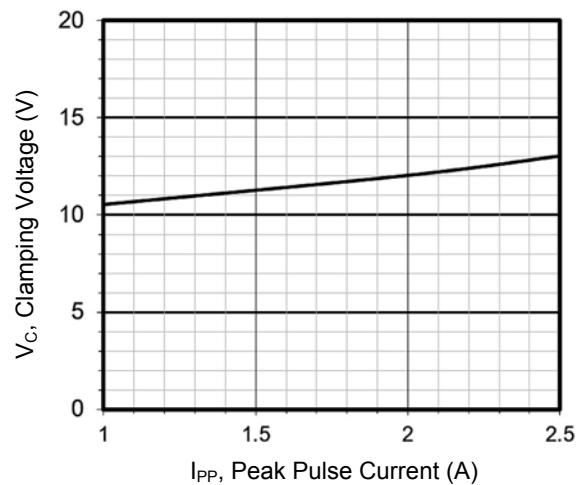


Figure 3. Clamping Voltage vs. Peak Pulse Current

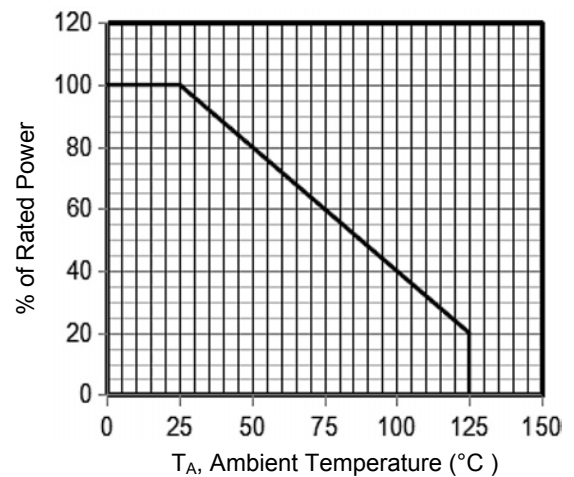


Figure 4. Power Derating Curve

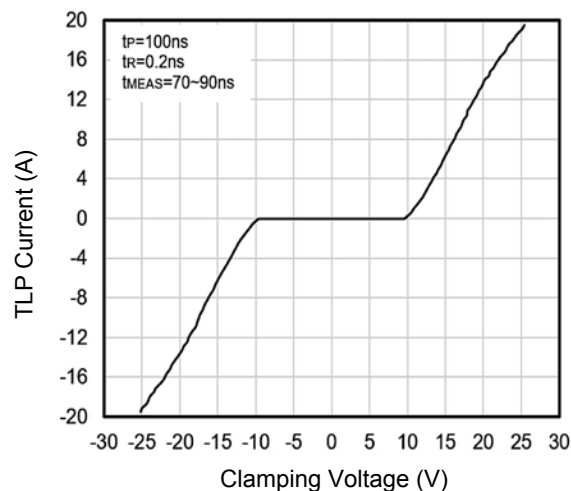


Figure 5. Transmission Line Pulse (TLP) Measurement

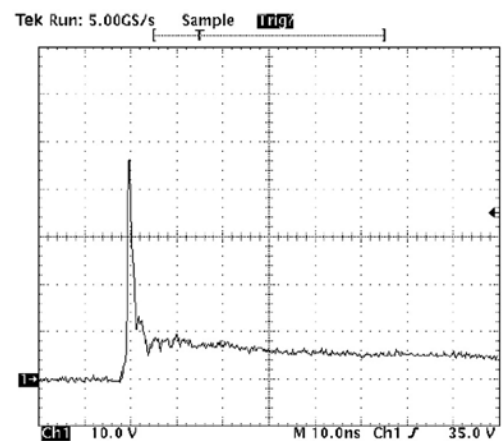
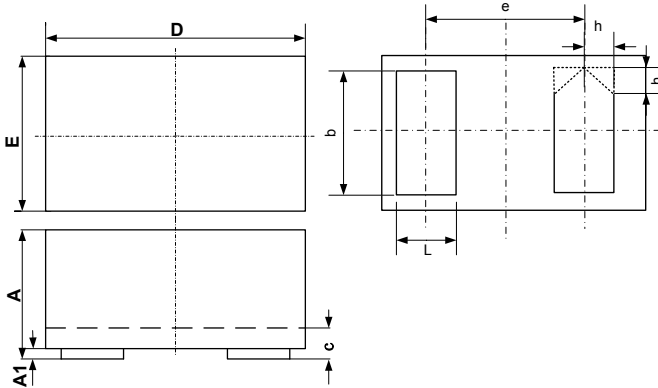


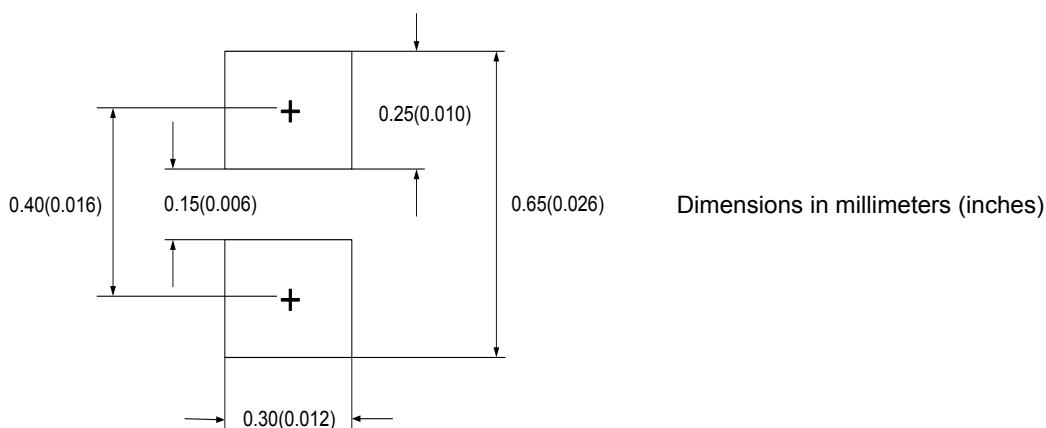
Figure 6. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

Package Outline Dimensions (DFN0603)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.230	0.330	0.009	0.013
A1	0.000	0.050	0.000	0.002
b	0.215	0.275	0.008	0.011
c	0.120	0.180	0.005	0.007
D	0.550	0.650	0.022	0.026
e	0.355 BSC		0.014 BSC	
E	0.250	0.350	0.010	0.014
L	0.160	0.220	0.006	0.009
h	0.079 BSC		0.003 BSC	

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSEN7B0015	DFN0603	L7	Tape & Reel	10,000 Pcs / Reel