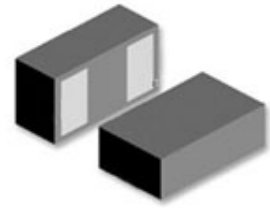
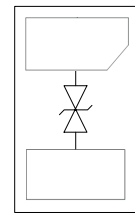


## Features

- Low capacitance: 0.45pF typical
- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge: ±30kV  
Contact discharge: ±30kV
  - IEC 61000-4-5 (Lightning) 10A (8/20µs)
- RoHS compliant



DFN0603



Schematic Diagram

## Applications

- Cellular handsets and accessories
- Display ports
- MDDI / MHL
- USB 2.0 / USB 3.0
- Digital visual interface (DVI)
- PCI express and serial SATA ports

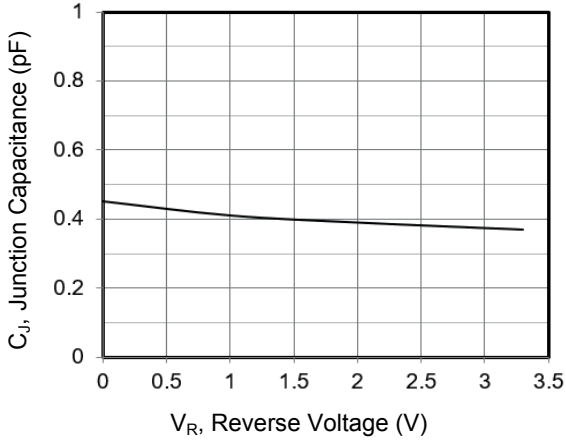
## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	P <sub>pk</sub>	60	W
Peak Pulse Current (8/20µs)	I <sub>pp</sub>	10	A
ESD Per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD Per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T <sub>J</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

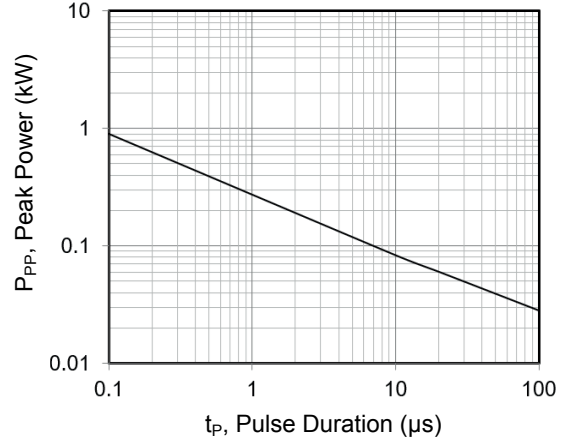
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>	-	-	-	3.3	V
Punch-Through Voltage	V <sub>PT</sub>	I <sub>PT</sub> =2µA	3.5	-	-	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>T</sub> =1mA	4	-	-	V
Snap-Back Voltage	V <sub>SB</sub>	I <sub>SB</sub> =50mA	2	-	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>RWM</sub> =3.3V	-	-	0.5	µA
Clamping Voltage	V <sub>C</sub>	I <sub>pp</sub> =10A (8 x 20µs pulse)	-	4	6	V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V, F=1MHz	-	0.45	0.55	pF

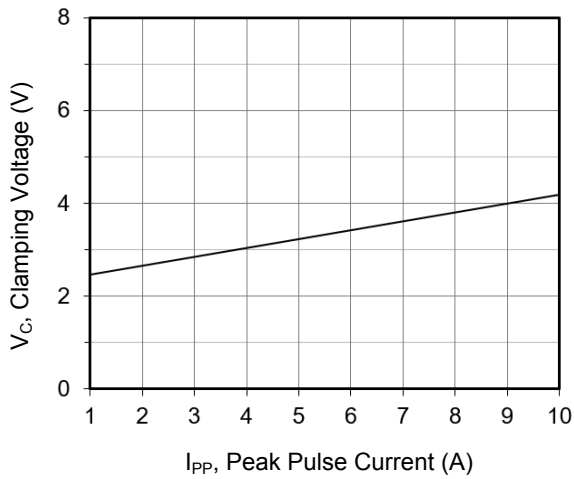
**Typical Performance Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise Specified)



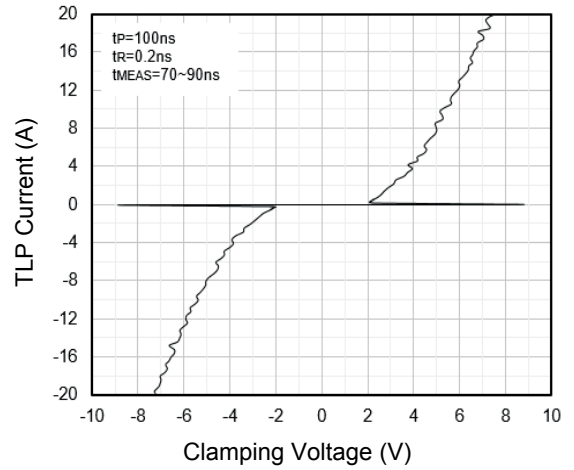
**Figure 1. Junction Capacitance vs. Reverse Voltage**



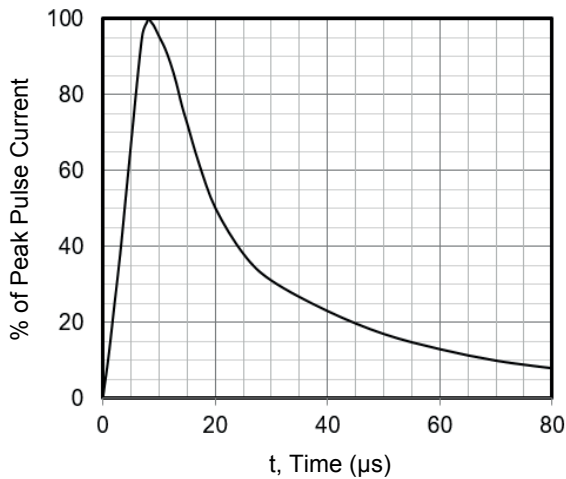
**Figure 2. Peak Pulse Power vs. Pulse Time**



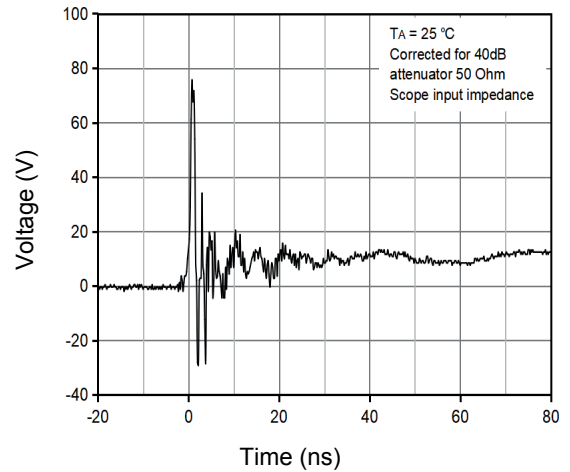
**Figure 3. Clamping Voltage vs. Peak Pulse Current**  
 $(t_p=8/20\mu\text{s})$



**Figure 4. TLP Curve**

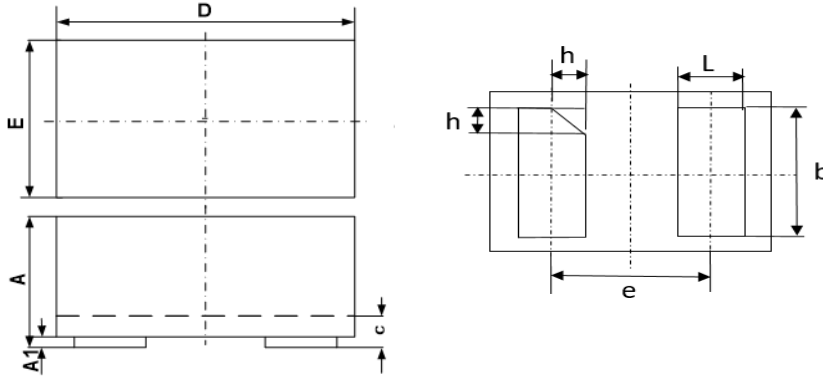


**Figure 5. 8 X 20 $\mu\text{s}$  Pulse Waveform**



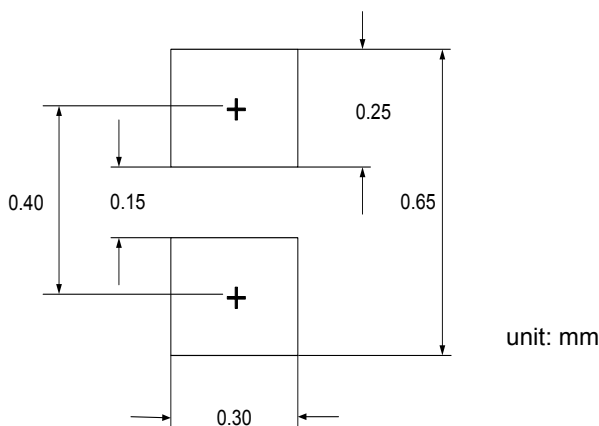
**Figure 6. ESD Clamping Voltage**  
**8kV Contact per IEC61000-4-2**

**Package Outline Dimensions (DFN0603)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.280	0.320	0.011	0.013
A1	0.000	0.050	0.000	0.002
b	0.200	0.300	0.008	0.012
c	0.050	0.150	0.002	0.006
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	0.130	0.240	0.005	0.009
h	0.050 BSC		0.002 BSC	

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
GSEN3B0045	DFN0603	4S	Tape & Reel	10,000 pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)