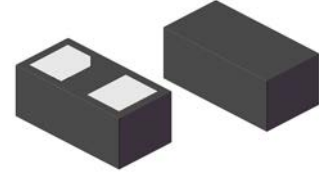
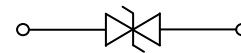


Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 7pF typical
- Ultra low leakage: nA level
- Low operating voltage: 7V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 IEC 61000-4-2 (ESD) immunity test
 Air discharge: $\pm 30\text{kV}$
 Contact discharge: $\pm 30\text{kV}$
 IEC 61000-4-5 (Lightning) 9A (8/20us)



DFN0603



Schematic Diagram

Applications

- Cellular handsets and accessories
- Personal digital assistants
- Notebook computers
- Digital cameras
- Portable GPS
- Audio players
- Keypads, Side keys, LCD displays

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu\text{S}$)	P_{PK}	150	W
Peak Pulse Current ($T_P=8/20\mu\text{S}$)	I_{PP}	9	A
ESD per IEC-61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC-61000-4-2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	-	-	-	8.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	9.0	10.0	-	V
Reverse Leakage Current	I_R	$V_{RWM}=8.0\text{V}$	-	-	0.5	μA
Clamping Voltage	V_C	$I_{PP}=5\text{A}$ (8x20us pulse)	-	-	16	V
Clamping Voltage	V_C	$I_{PP}=9\text{A}$ (8x20us pulse)	-	17	20	V
Junction Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$	-	7	12	pF

Typical Characteristic Curves

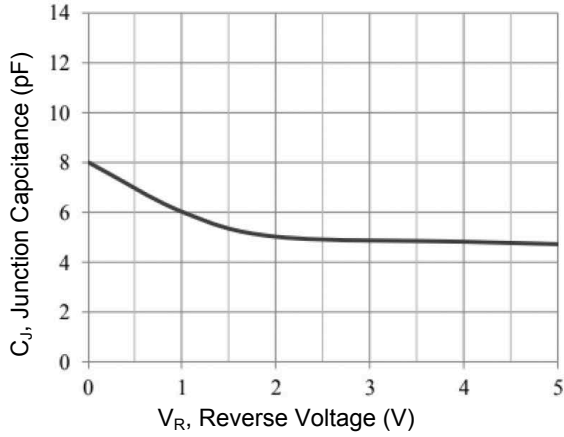


Figure 1. Junction Capacitance vs. Reverse Voltage

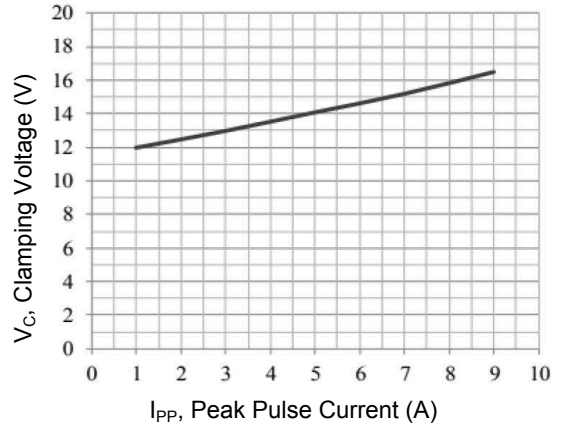


Figure 2. Clamping Voltage vs. Peak Pulse Current

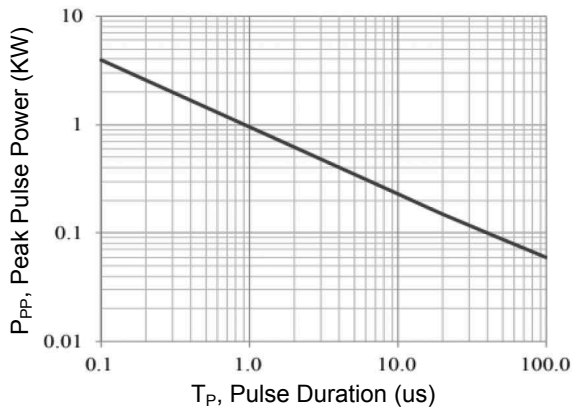


Figure 3. Peak Pulse Power Rating Curve

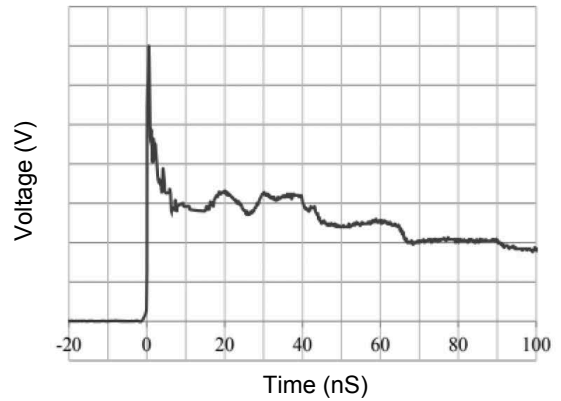


Figure 4. IEC61000-4-2 Pulse Waveform

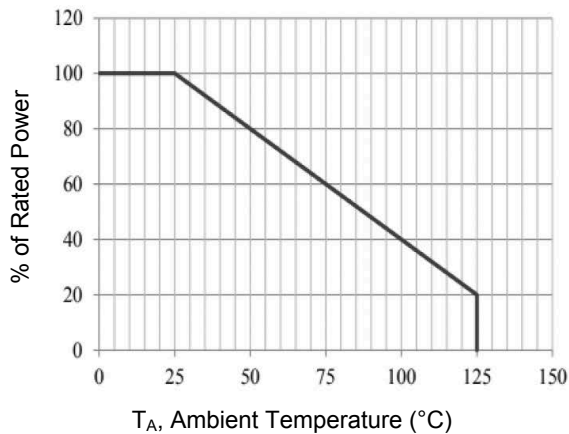


Figure 4. Power Derating Curve

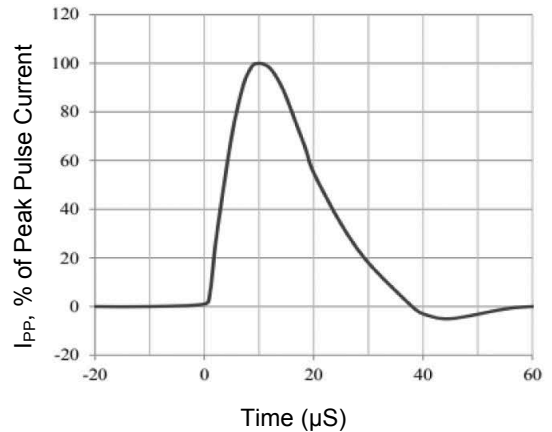
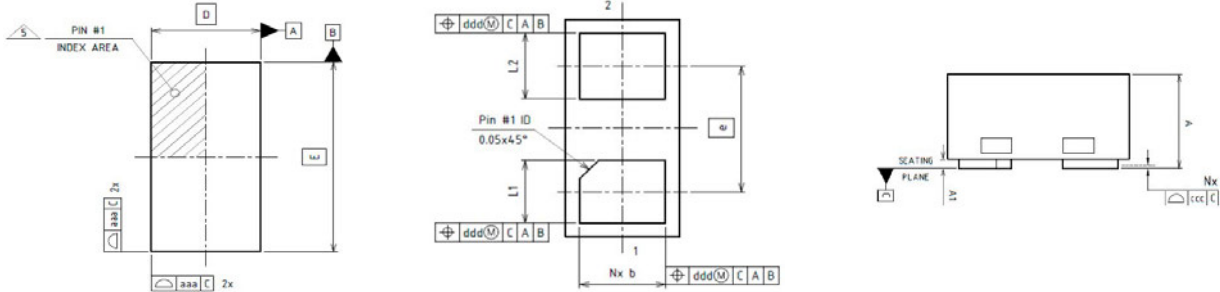


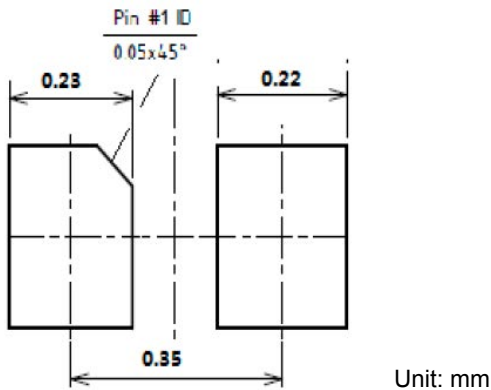
Figure 6. Pulse Waveform - 8x20 μS

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	0.180	0.280	0.007	0.011
D	0.300 BSC		0.012 BSC	
E	0.600 BSC		0.024 BSC	
e	0.350 BSC		0.014 BSC	
L1	0.120	0.220	0.005	0.009
L2	0.130	0.230	0.005	0.009
aaa	0.050		0.002	
ccc	0.030		0.001	
ddd	0.100		0.004	

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSEN8B070	DFN0603	R	Tape & Reel	15,000 pcs / Reel