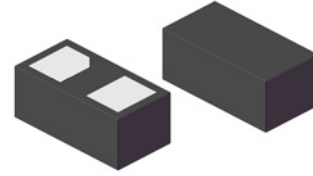
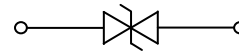


**Features**

- 60W peak pulse power ( $t_p = 8/20\mu s$ )
- DFN0603 package
- Bidirectional configurations
- R2R + Zener technology
- Low clamping voltage
- Low leakage current
- Ultra low capacitance ( $C_j=0.2pF$  typ.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 10kV$  contact  $\pm 18kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 3A (8/20 $\mu s$ )



**DFN0603**



**Schematic Diagram**

**Applications**

- USB3.0/3.1, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC

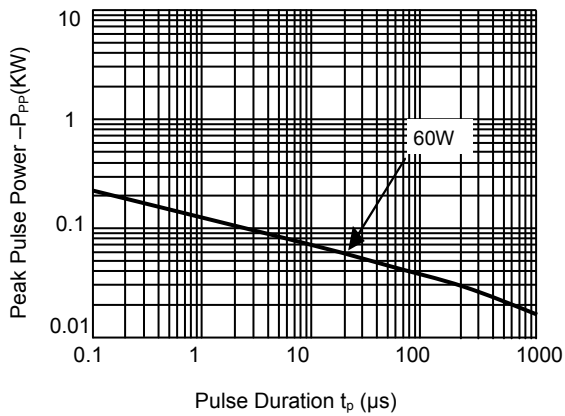
**Absolute Maximum Ratings** ( $T_A=25^\circ C$  unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P=8/20\mu S$ )	$P_{PP}$	60	W
ESD Contact/Air Discharge (IEC-61000-4-2)	$V_{ESD}$	10/18	kV
Peak Pulse Current ( $t_P = 8/20\mu S$ )	$I_{PP}$	3	A
Junction Temperature	$T_J$	-55 to +125	$^\circ C$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ C$

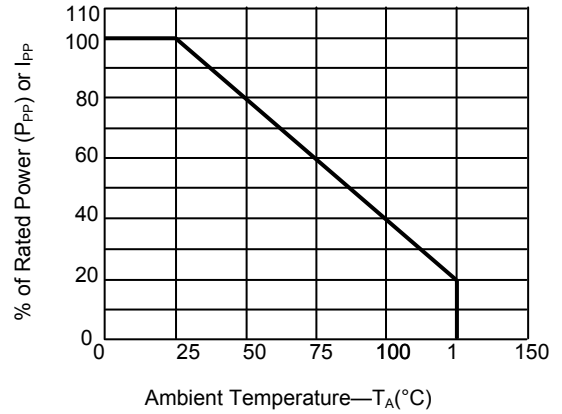
**Electrical Characteristics** ( $T_A=25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$	-	-	-	3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	5.0	6.5	-	V
Reverse Leakage Current	$I_R$	$V_R=3.3V$	-	5	100	nA
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=3A$	-	-	20.5	V
Clamping Voltage (IEC 61000-4-2)	$V_C$	$V_{ESD}=8kV, (I_{TLP}=16A)$	-	12	-	V
Dynamic Resistance	$R_{dyn}$	$I_{TLP}=0A -20A$	-	0.4	-	$\Omega$
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$	-	0.2	0.3	pF

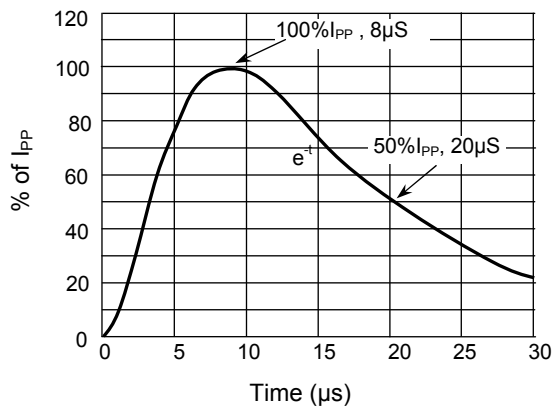
**Typical Characteristic Curves**



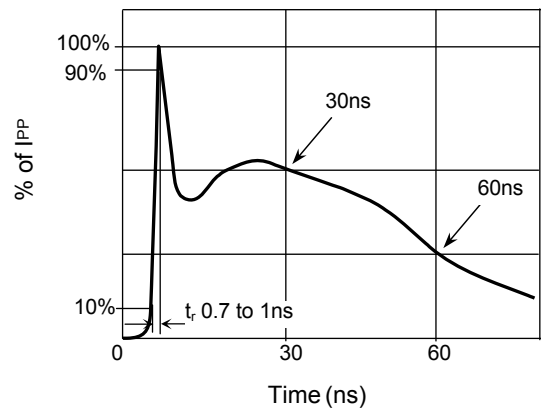
**Figure 1. Peak Pulse Power Rating Curve**



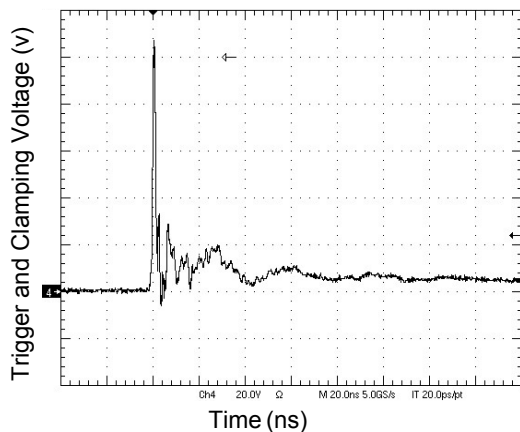
**Figure 2. Pulse Derating Curve**



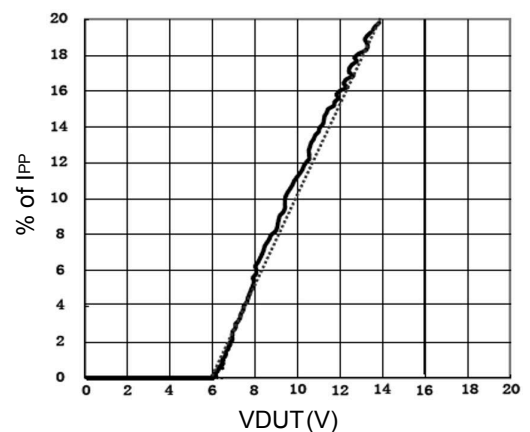
**Figure 3. Pulse Waveform-8/20μs**



**Figure 4. Pulse Waveform-ESD (IEC61000-4-2)**

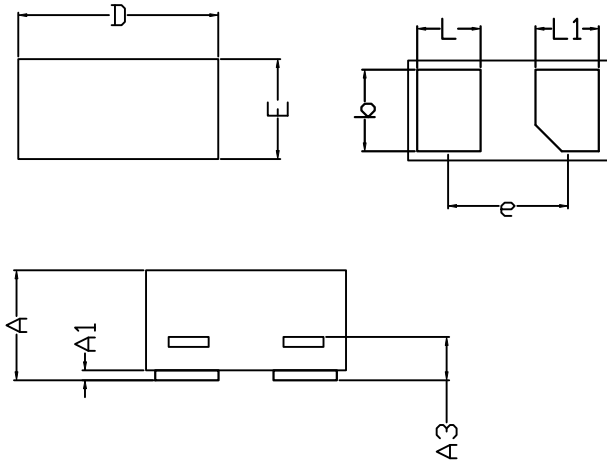


**Figure 5. IEC61000-4-2 +8kV Contact Discharge**



**Figure 6. Transmission Line Pulse ( $t_p=100ns$ )**

**Package Outline Dimensions (DFN0603)**



Symbol	Dimensions in millimeters		
	Min	N	Max
A	0.23	-	0.33
A1	0.00	-	0.05
A3	0.102 REF		
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.215	0.245	0.275
L	0.160	0.190	0.220
L1	0.160	0.190	0.220
e	0.355 BSC		

**Order Information**

Device	Package	Marking	Quantity	HSF Status
GSEN3B003	DFN0603	B	15000pcs / Reel	RoHS compliant