GOOD-ARK
SEMICONDUCTOR

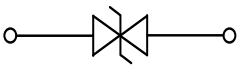
GSEY8B04
ESD Protection Diode

Features

- Low capacitance: 0.4pF typical
- Ultra low leakage: nA level
- Operating voltage: 8V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±30kV Contact discharge: ±30kV
  - IEC61000-4-5 (Lightning) 12A (8/20μs)
- RoHS Compliant

DFN1610

RoHS
OMPLIANT



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 (8/20μs)	P_{PK}	240	W
Peak Pulse Current (8/20μs)	I_{PP}	12	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	°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}	-	-	-	8	V
Breakdown Voltage	V_{BR}	I_T=1mA	8.5	-	-	V
Reverse Leakage Current	I_R	V_{RWM}=8V	-	-	0.2	μA
Clamping Voltage	V_C	I_{PP}= 1A (8x20μs pulse)	-	-	12	V
		I_{PP}=12A (8x20μs pulse)	-	-	20	V
Junction Capacitance	C_J	V_R=0V, f=1MHz	-	0.4	0.6	pF

Typical Characteristic Curves (T_A=25°C unless otherwise specified)

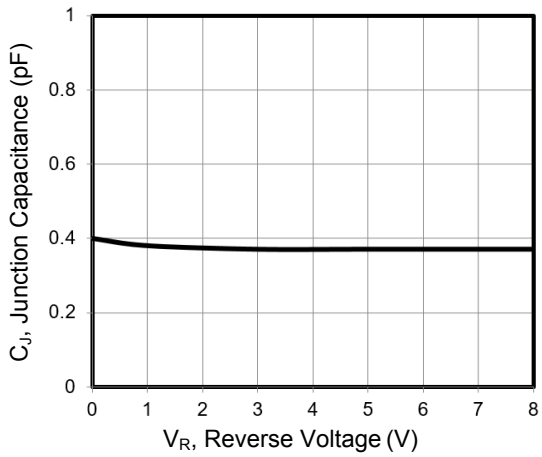


Figure 1. Junction Capacitance vs. Reverse Voltage

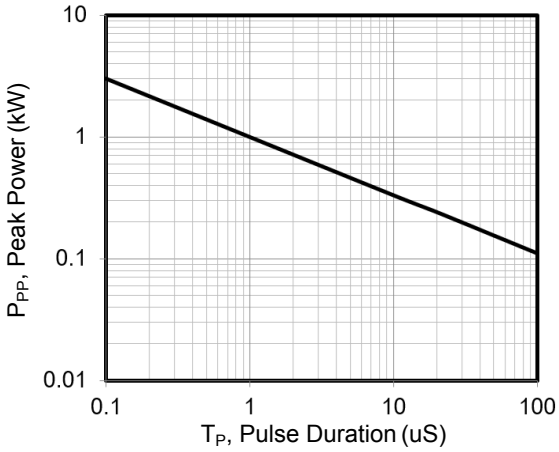


Figure 2. Peak Pulse Power vs. Pulse Time

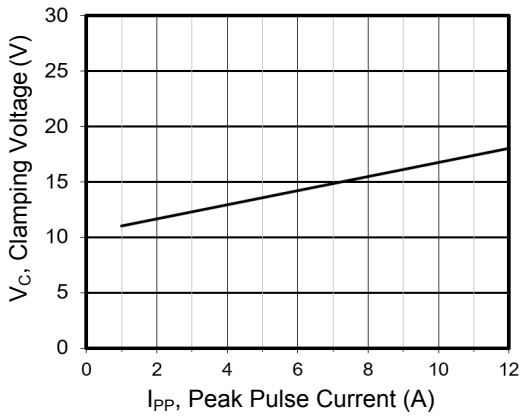


Figure 3. Clamping Voltage vs. Peak Pulse Current

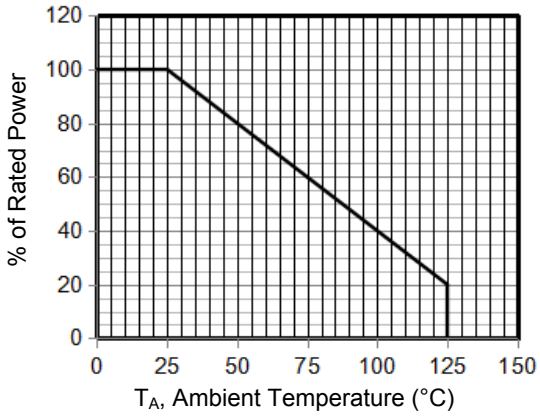


Figure 4. Power Derating Curve

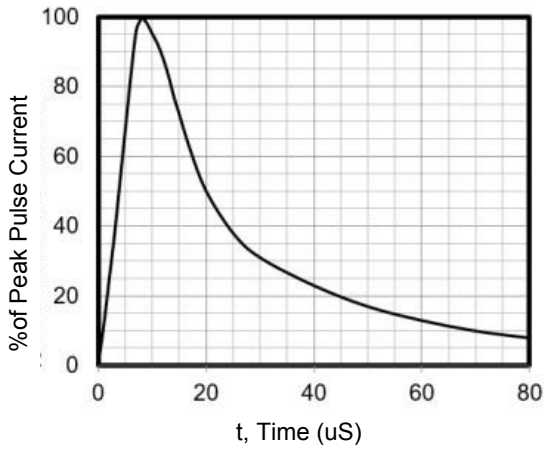
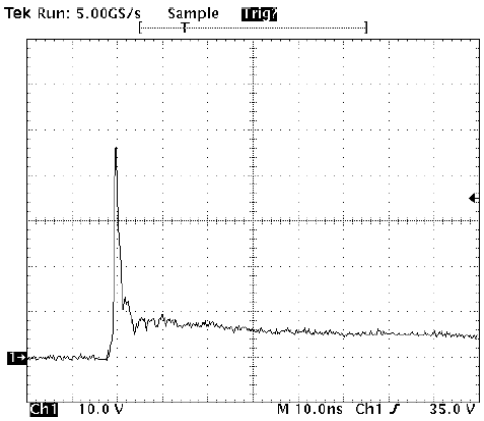


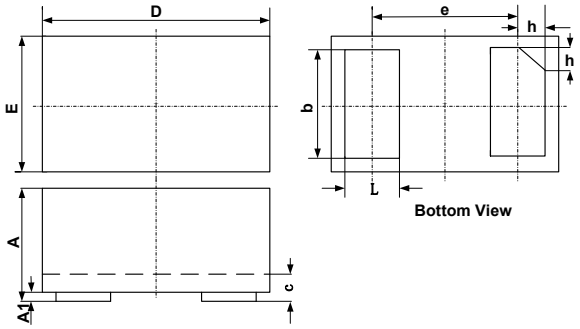
Figure 5. 8x20μs Pulse Waveform



Note: Data is taken with a 10x attenuator

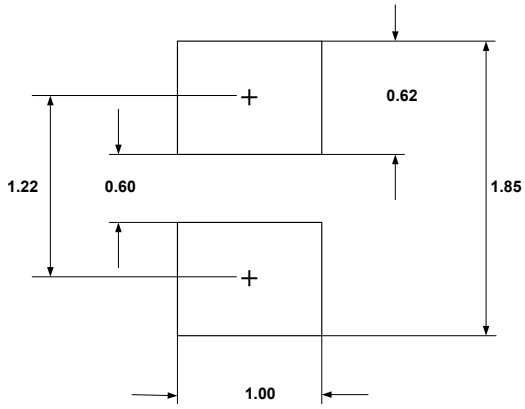
Figure 6. ESD Clamping Voltage 8 kV Contact per IEC61000−4−2

Package Outline Dimensions (DFN1610-2)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.450	0.550	0.018	0.022
A1	0.000	0.050	0.000	0.002
b	0.750	0.850	0.030	0.033
c	0.100	0.200	0.004	0.008
D	1.550	1.650	0.061	0.065
e	1.100 BSC		0.043 BSC	
E	0.950	1.050	0.037	0.041
L	0.350	0.450	0.014	0.018
h	0.150	0.250	0.006	0.010

Recommended Pad Layout



Unit:mm

Order Information

Device	Package	Marking	Quantity	Carrier
GSEY8B04	DFN1610	8P6	3,000 pcs / Reel	Tape & Reel