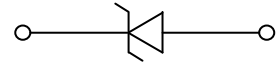


Features

- 1800W peak pulse power (tp=8/20µs)
- DFN1610 package
- Fast response time, typically<1 ns
- Excellent clamping voltage
- Low leakage current
- IEC 61000-4-2 ±30kV (Air) ESD protection
- IEC 61000-4-2 ±30kV (Contact) ESD protection
- IEC 61000-4-5 75A (8/20us) SURGE protection
- IEC 61000-4-4 40A (5/50ns) EFT protection
- RoHS compliant



DFN1610



Schematic Diagram

Applications

- USB Vbus
- Power line
- Power management

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

| Parameter | Symbol | Value | Unit |
|-----------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20µs) | P _{PP} | 1800 | W |
| Peak Pulse Current (8/20µs) | I _{PP} | 75 | A |
| 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 Stand-Off Voltage | V _{RWM} | - | - | - | 12 | V |
| Reverse Breakdown Voltage | V _{BR} | I _T =1mA | 13.3 | - | - | V |
| Reverse Leakage Current | I _R | V _R =12V | - | - | 0.5 | µA |
| Clamping Voltage ¹ | V _C | I _{PP} =75A | - | - | 25 | V |
| Junction Capacitance | C _J | V _R =0V, F=1MHz | - | 440 | - | pF |

Notes:

1. IEC61000-4-5

Typical Characteristic Curves

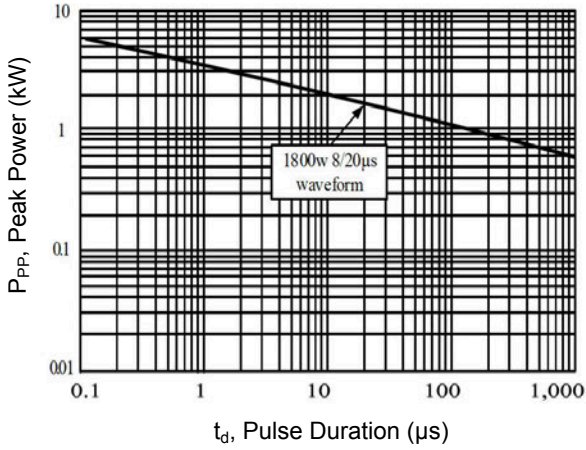


Figure 1. Peak Pulse Power vs. Pulse Time

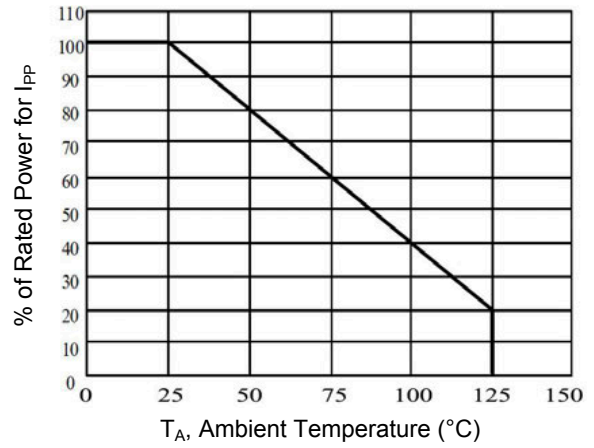


Figure 2. Power Derating Curve

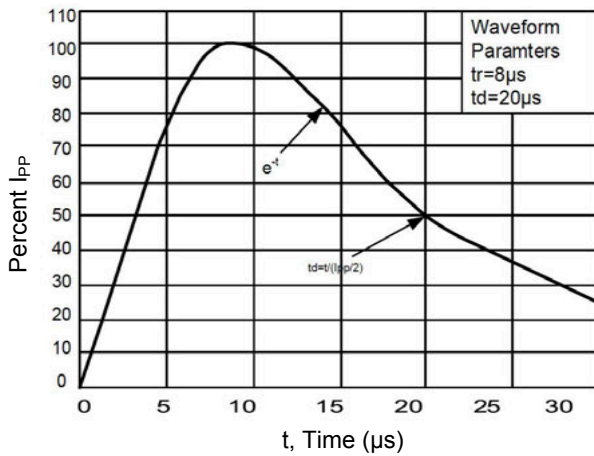


Figure 3. Pulse Waveform

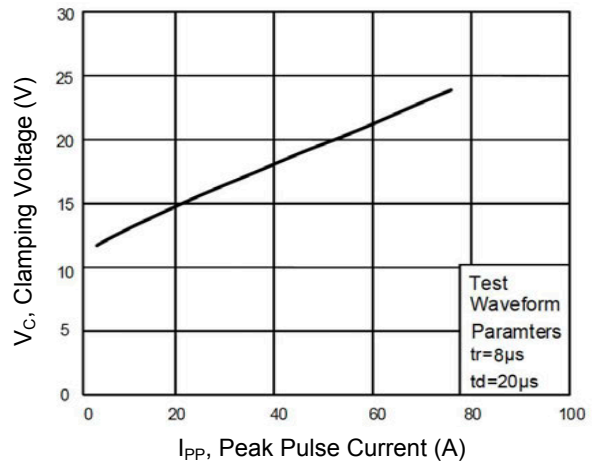
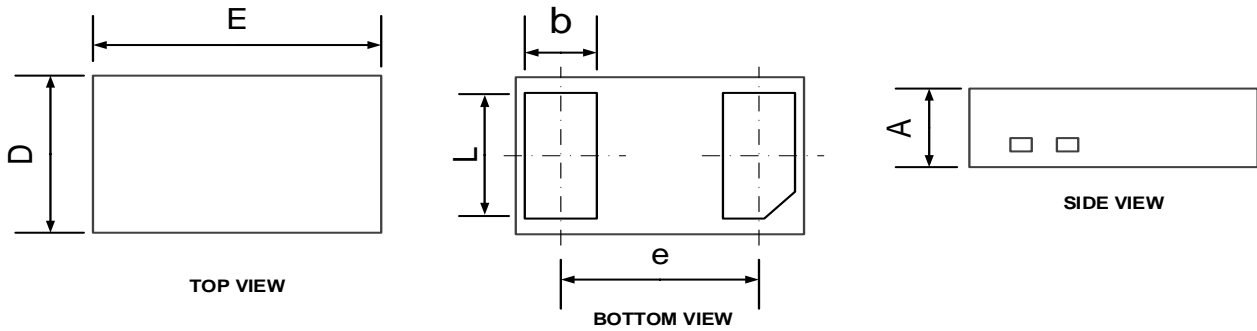


Figure 4. Clamping Voltage vs. Peak Pulse Current

Package Outline Dimensions (DFN1610)



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.450 | 0.550 | 0.018 | 0.022 |
| D | 0.950 | 1.050 | 0.037 | 0.041 |
| E | 1.550 | 1.650 | 0.061 | 0.065 |
| b | 0.350 | 0.450 | 0.014 | 0.018 |
| e | 1.100 BSC | | 0.043 BSC | |
| L | 0.750 | 0.850 | 0.030 | 0.033 |

Order Information

| Device | Package | Marking | Carrier | Quantity |
|-------------|---------|---------|-------------|------------------|
| GSEY12U4400 | DFN1610 | 12HA | Tape & Reel | 10,000pcs / Reel |