



Features

- 3600 Watts Peak Power ($t_p = 8/20\mu s$)
- Fast Response time: Typically $< 1ns$
- Excellent Clamping Capability
- Low Inductance
- Low profile package

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 100A (8/20 μs)

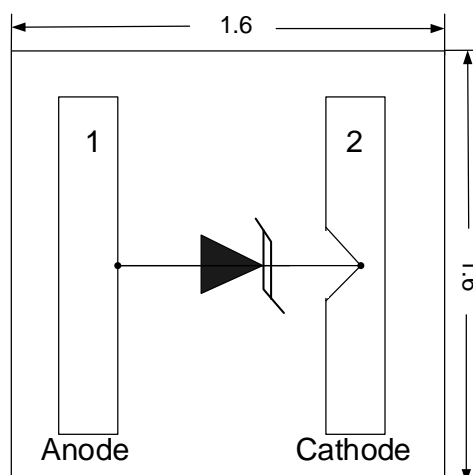
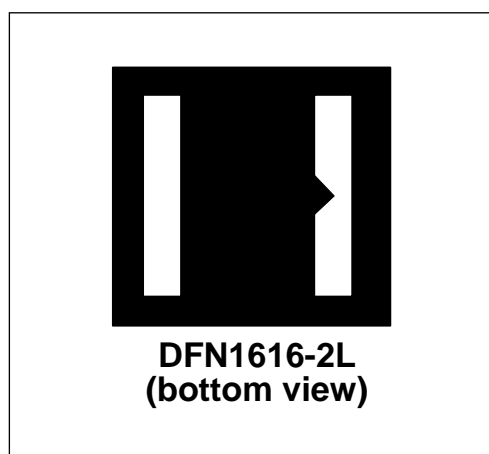
Mechanical Characteristics

- DFN1616-2L package
- Molding compound flammability rating: UL 94V-0
- Marking : Making Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computer & Consumer Electronics
- Industrial Electronics
- Microcontroller Input Protection

PIN Configuration



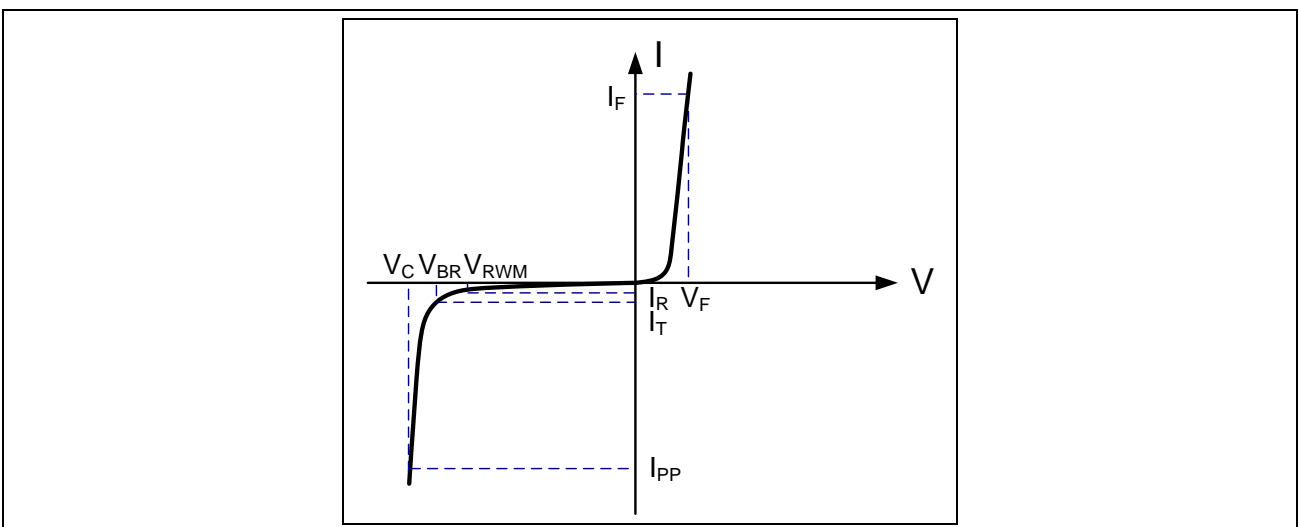
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Absolute Maximum Rating

| Rating | Symbol | Value | Units |
|--|-----------|-------------|-------------|
| Peak Pulse Power ($t_p=8/20\mu s$) | P_{PP} | 3600 | Watts |
| Peak Pulse Current ($t_p=8/20\mu s$) | I_{PP} | 100 | A |
| Operating Temperature | T_J | -55 to +125 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^{\circ}C$ |

Electrical Parameters (T=25 $^{\circ}C$)

| Symbol | Parameter |
|-----------|-------------------------------------|
| I_{PP} | Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Reverse Stand-Off Voltage |
| I_R | Reverse Leakage Current @ V_{RWM} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| I_F | Forward Current |
| V_F | Forward Voltage @ I_F |



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Electrical Characteristics

| Parameter | Symbol | Conditions | Minimum | Typical | Maximum | Units |
|-------------------------------------|-----------|------------------------------------|---------|---------|---------|----------|
| Reverse Stand-Off Voltage | V_{RWM} | | | | 26 | V |
| Breakdown Voltage | VBR | $I_T=1mA$ | 28 | | 32 | V |
| Forward Voltage | V_F | $I_F=10 mA$ | 0.5 | | 1.0 | V |
| Reverse Leakage Current | I_R | $V_{RWM}=26V T=25\text{ }^\circ C$ | | | 100 | nA |
| Clamping Voltage ³ | V_C | $I_{PP}=100A, t_p=8/20\mu s$ | | 33 | 36 | V |
| Dynamic Resistance ^{1,2,3} | R_{DYN} | TLP=0.2/100ns | | 0.26 | | Ω |
| Junction Capacitance ³ | C_j | VR = 0V, f = 1MHz | | 300 | 450 | pF |

- Notes :
- 1、 TLP Setting : $t_p=100ns$, $t_r=0.2ns$, I_{TLP} and V_{TLP} sample window: $t_1=70ns$ to $t_2=90ns$.
 - 2、 Dynamic resistance calculated from $I_{PP}=4A$ to $I_{PP}=16A$ using “Best Fit”.
 - 3、 These specifications are guaranteed by design and characterization. Not FT item.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

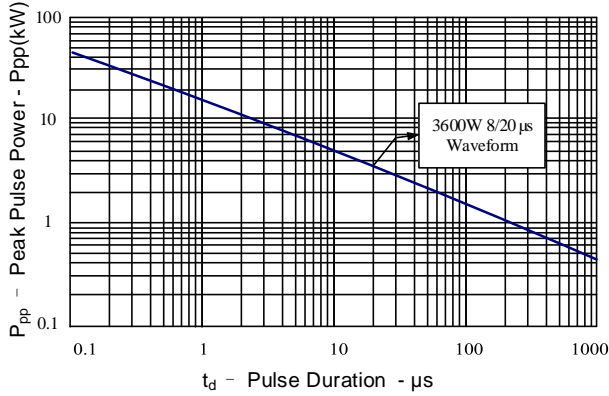


Figure 2: Power Derating Curve

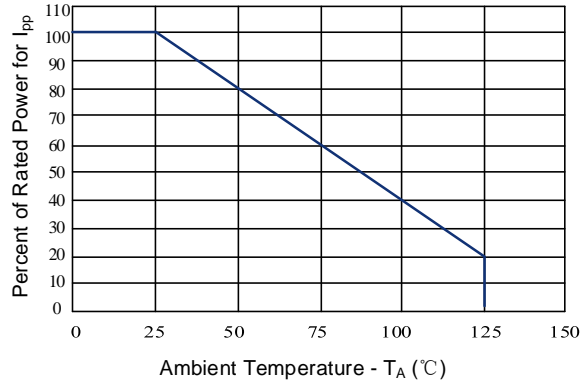


Figure 3: Clamping Voltage vs. Peak Pulse Current

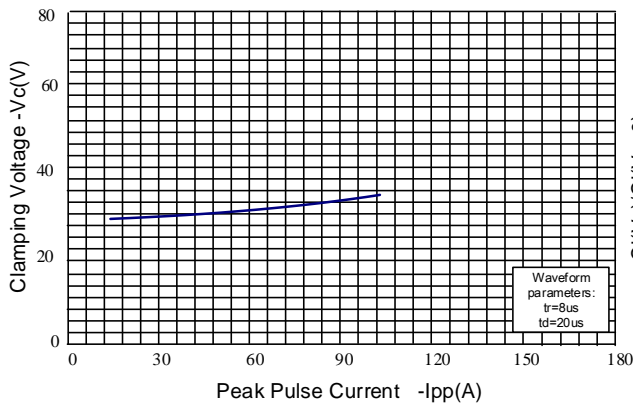


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

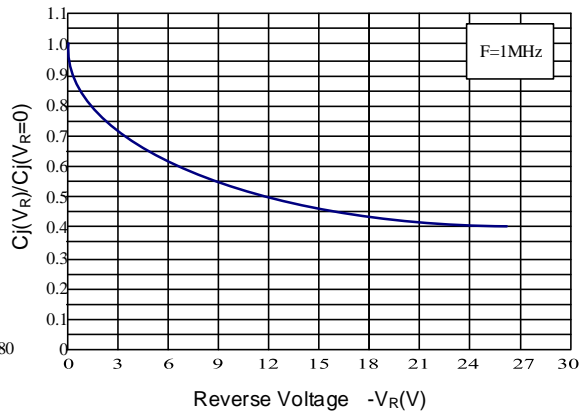


Figure 5: 8/20μs Pulse Waveform

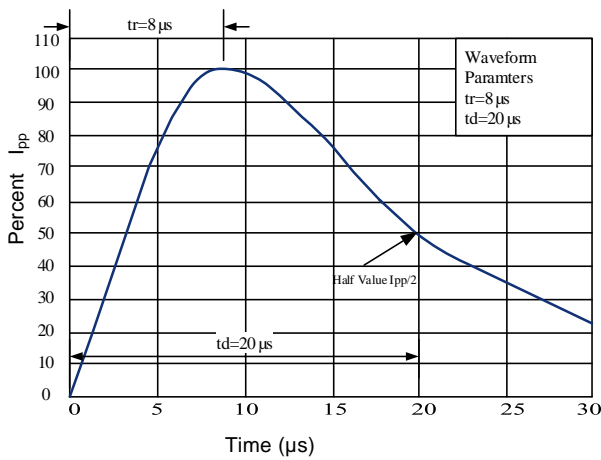
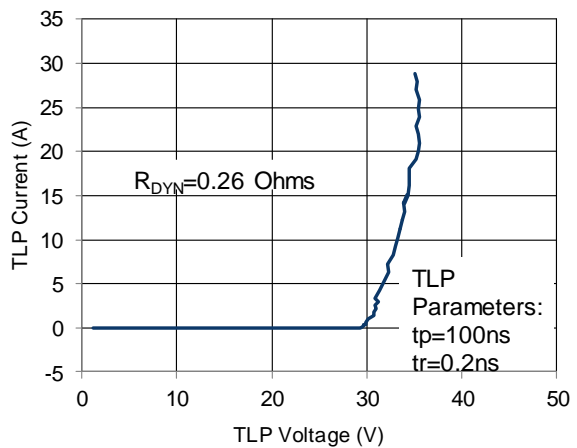


Figure 6: TLP I-V Curve



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Outline Drawing –DFN1616-2L

| PACKAGE OUTLINE | | | | |
|---|------------|-------------|------|------|
| <p>TOP VIEW</p> <p>BOTTOM VIEW</p> <p>SIDE VIEW</p> | DIMENSIONS | | | |
| | SYMBOL | MILLIMETER | | |
| | | MIN | NOM | MAX |
| | A | 0.70 | 0.75 | 0.80 |
| | A1 | 0.00 | 0.02 | 0.05 |
| | b | 0.25 | 0.30 | 0.35 |
| | c | 0.203REF | | |
| | D | 1.50 | 1.60 | 1.70 |
| | e | 1.00BSC | | |
| | E | 1.50 | 1.60 | 1.70 |
| | L | 1.25 | 1.30 | 1.35 |
| | X | 0.07 | 0.12 | 0.17 |
| | Y | 0.19 | 0.24 | 0.29 |
| | DIMENSIONS | | | |
| | DIM | MILLIMETERS | | |
| | P | 1.00 TYP | | |
| | M | 0.50 | | |
| | N | 1.50 | | |
| <p>Notes</p> <p>1. Dimensioning and tolerances per ANSI Y14.5M, 1985.</p> <p>2. Controlling Dimension: Millimeter.</p> <p>3. Dimensions are exclusive of mold flash and metal burrs.</p> | | | | |

Marking Codes

| Part Number | Marking Code |
|-------------|--------------|
| ES26P4M | |

Package Information

Qty: 3k/Reel

Revision History

| NO. | Version | Date | Revision Item | Revision History |
|-----|---------|------------|-----------------|------------------|
| 1 | 1.0 | 2018-02-20 | Release Version | |
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