

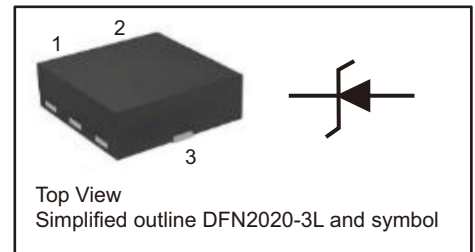
Transient Voltage Suppressors for ESD Protection

Features

- Ultra Low Capacitance: 400 pF Typ
- Low Clamping Voltage
- Working voltage:24V
- Low Leakage
- 5400 Watts peak pulse power (tp=8/20us)

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 3 | Cathode |
| 1,2 | Anode |

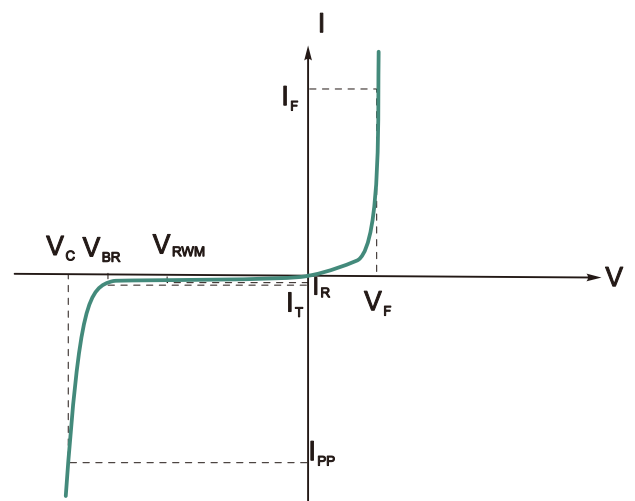


End Equipment

- Power lines
- Personal digital assistants (PDA's)
- Microprocessors based equipment
- Notebooks, Desktops, and Servers
- Cell phone Handsets and Accessories
- Portable Electronics
- Peripheral

Electronics Parameter

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





Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20uS) | P _{pk} | 5400 | W |
| Peak Pulse Current | I _{pp} | 120 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V _{ESD} | ±30 ±30 | KV |
| Operating Temperature Range | T _J | -40 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Minimum | Typical | Maximum | Units |
|--------------------------|------------------|----------------------------------|---------|---------|---------|-------|
| Reverse stand-offvoltage | V _{RWM} | | | | 24 | V |
| Breakdown Voltage | V _{BR} | I _T =1mA | 26 | 28 | 30 | V |
| Reverse Leakage Current | I _R | V=24V, Ta=25°C | | 0.01 | 1.0 | μA |
| Clamping Voltage | V _C | I _{pp} =50A, tp=8/20us | | 29 | 31 | V |
| | | I _{pp} =120A, tp=8/20us | | 43 | 45 | V |
| Junction Capacitance | C _j | V _R =0V, f=1MHz | | 400 | | pF |



Typical Characteristics

Fig.1 Pulse Waveform

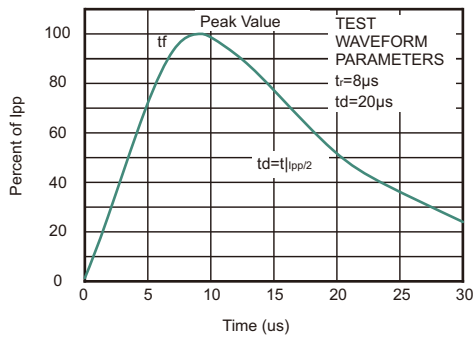
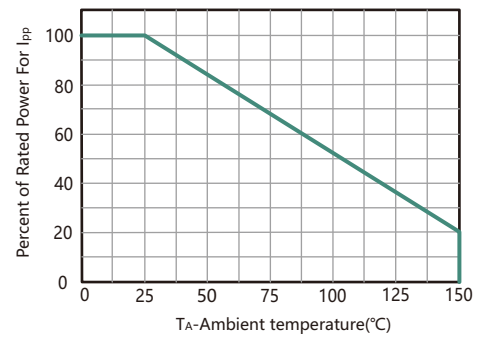
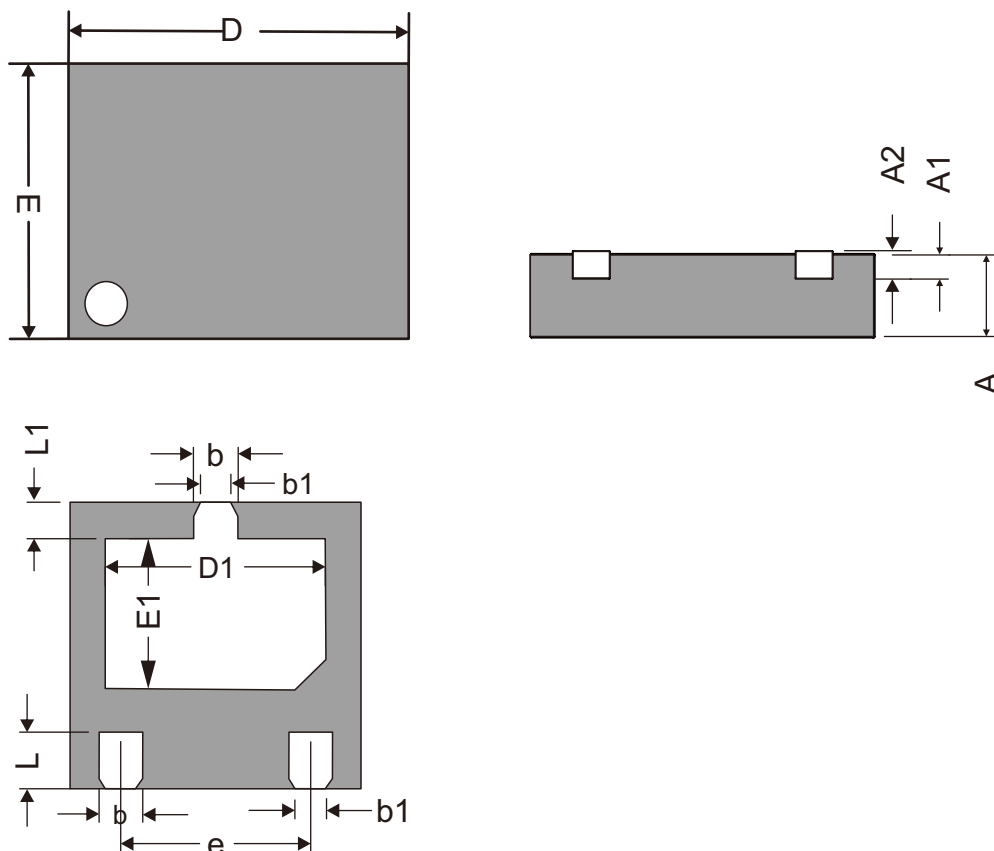


Fig.2 Power Derating Curve





DFN2020-3L Package Outline Dimensions



DFN2020-3L mechanical data

| UNIT | | A | A1 | A2 | b | b1 | D | D1 | E | E1 | e | L | L1 |
|------|-----|------|------|------|------|------|------|------|------|------|------|-------|------|
| mm | min | 0.45 | \ | 0.00 | 0.25 | \ | 1.95 | 1.45 | 1.95 | 1.00 | \ | 0.350 | 0.20 |
| | typ | 0.50 | 0.15 | 0.02 | 0.30 | 0.22 | 2.00 | 1.50 | 2.00 | 1.05 | 1.30 | 0.400 | 0.25 |
| | max | 0.55 | \ | 0.05 | 0.35 | \ | 2.05 | 1.55 | 2.05 | 1.10 | \ | 0.450 | 0.30 |
| mil | min | 17.7 | \ | 0.0 | 9.8 | \ | 76.8 | 57.1 | 76.8 | 39.4 | \ | 13.8 | 7.9 |
| | typ | 19.7 | 5.9 | 0.8 | 11.8 | 8.7 | 78.7 | 59.1 | 78.7 | 41.3 | 51.2 | 15.7 | 9.8 |
| | max | 21.7 | \ | 2.0 | 13.8 | \ | 80.7 | 61.0 | 80.7 | 43.3 | \ | 17.7 | 11.8 |

Marking

| Type number | Marking code |
|--------------|--------------|
| ESDB24V0D23A | T24 |



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