

Features

- Low Capacitance for High Speed Interfaces
- Ultra Low Leakage
- Low Operating Voltage
- Ultra Low Clamping Voltage
- Protects Two Lines in Common and Differential Mode
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

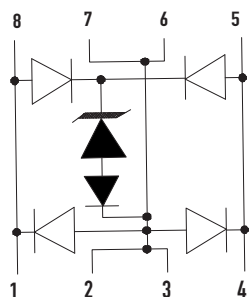
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C

| MCC Part Number | Device Marking |
|-----------------|----------------|
| LC03-3.3 | LC-3.3 |

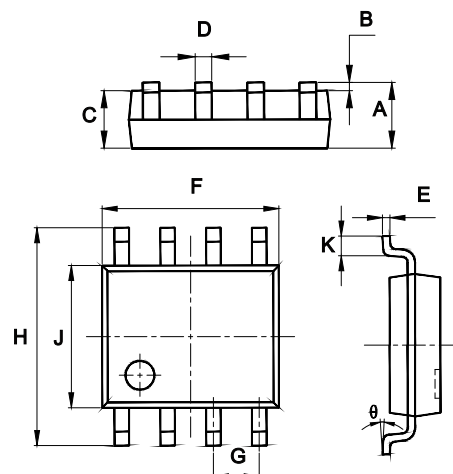
| | | |
|----------------------------|-----------------|----------------|
| IEC61000-4-2(ESD) | Air Contact | ±30KV ±30KV |
| Peak Pulse Current(8/20µs) | I _{PP} | 150A |
| Peak Pulse Power (8/20us) | P _{PK} | 7200W |

Circuit and Pin Schematic



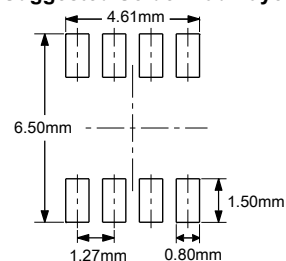
ESD Protection Device

SOP-8



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.053 | 0.069 | 1.35 | 1.75 | |
| B | 0.004 | 0.010 | 0.10 | 0.25 | |
| C | 0.053 | 0.061 | 1.35 | 1.55 | |
| D | 0.013 | 0.020 | 0.33 | 0.51 | |
| E | 0.007 | 0.010 | 0.17 | 0.25 | |
| F | 0.185 | 0.200 | 4.70 | 5.10 | |
| G | 0.050 | | 1.270 | | TYP. |
| H | 0.228 | 0.244 | 5.80 | 6.20 | |
| J | 0.150 | 0.157 | 3.80 | 4.00 | |
| K | 0.016 | 0.050 | 0.40 | 1.27 | |
| θ | 0° | 8° | 0° | 8° | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|-------------------------|-----------|--|------|------|------|---------|
| Reverse Working Voltage | V_{RWM} | | | | 3.3 | V |
| Punch-Through Voltage | V_{PT} | $I_T=2\mu A$ | 3.5 | | | V |
| Snap-Back Voltage | V_{SB} | $I_T=50mA$ | 2.8 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM}=3.3V$ | | | 0.5 | μA |
| Clamping Voltage | V_C | $I_{PP}=50A, t_p=8/20\mu s,$ Any I/O Pin to Ground | | | 15 | V |
| Clamping Voltage | V_C | $I_{PP}=50A, t_p=8/20\mu s,$ Between I/O Pins | | | 22 | V |
| Clamping Voltage | V_C | $I_{PP}=100A, t_p=8/20\mu s,$ Any I/O Pin to Ground | | | 28 | V |
| Clamping Voltage | V_C | $I_{PP}=100A, t_p=8/20\mu s,$ Between I/O Pins | | | 36 | V |
| Clamping Voltage | V_C | $I_{PP}=150A, t_p=8/20\mu s,$ Any I/O Pin to Ground | | | 38 | V |
| Clamping Voltage | V_C | $I_{PP}=150A, t_p=8/20\mu s,$ Between I/O Pins | | | 48 | V |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz,$ Between I/O Pins and Ground | | 13 | 16 | pF |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz,$ Between I/O Pins | | 6 | 9 | pF |

Note 1: I/O Pins are Pin 1, 4, 5 and 8

Curve Characteristics

Fig. 1 - 8 X 20μs Pulse Waveform

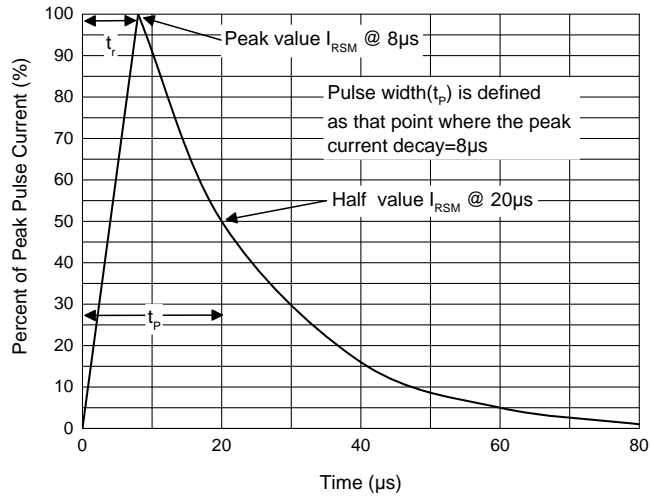
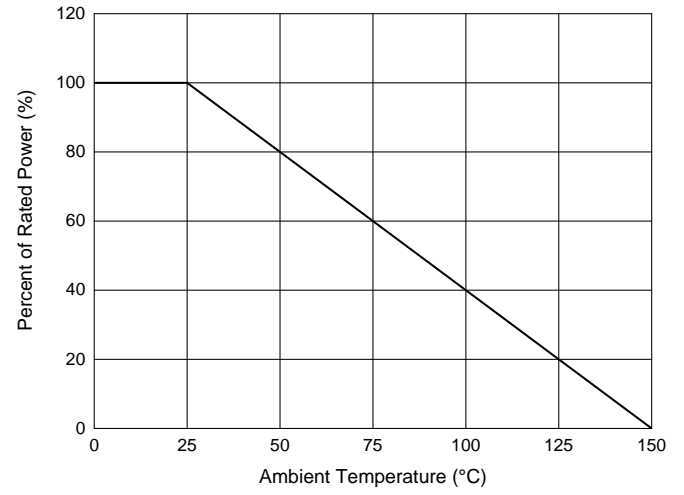


Fig. 2 - Pulse Derating Curve



Ordering Information

| Device | Packing |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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