

Features

- Unidirectional Configuration
- Protects 2 I/O Ports & Power Supply
- Low Clamping Voltage
- Low Capacitance
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

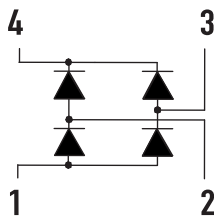
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C

| | |
|-----------------|----------------|
| MCC Part Number | Device Marking |
| SR70 | ASR70 |

| | | |
|----------------------------|-----------------|---------------|
| IEC61000-4-2(ESD) | Air Contact | ±15KV ±8KV |
| IEC 61000-4-5(Lightning) | | 1KV |
| Peak Pulse Current(8/20µs) | I _{PP} | 24A |

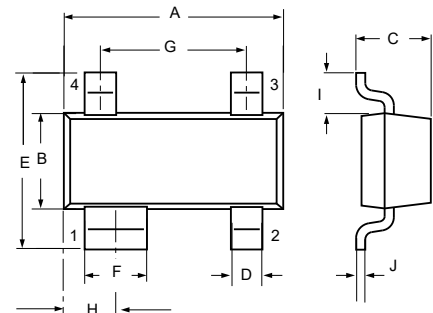
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



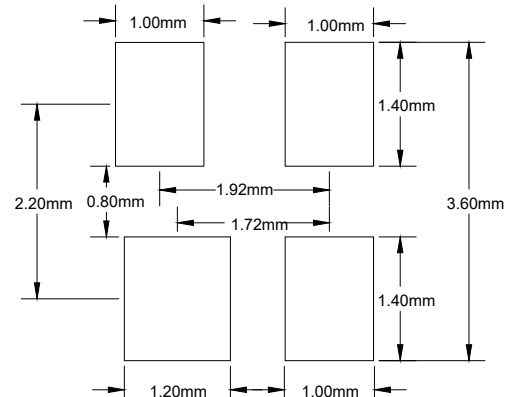
ESD Protection Device

SOT-143



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.110 | 0.120 | 2.80 | 3.04 | |
| B | 0.047 | 0.055 | 1.20 | 1.39 | |
| C | 0.031 | 0.048 | 0.80 | 1.22 | |
| D | 0.011 | 0.020 | 0.30 | 0.51 | |
| E | 0.082 | 0.104 | 2.10 | 2.64 | |
| F | 0.029 | 0.037 | 0.76 | 0.94 | |
| G | 0.070 | 0.080 | 1.78 | 2.03 | |
| H | 0.028 | 0.033 | 0.72 | 0.83 | |
| I | 0.015 | 0.024 | 0.40 | 0.60 | |
| J | 0.003 | 0.008 | 0.08 | 0.20 | |

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|--------------------------------|-----------|--|------|------|------|---------|
| Peak Reverse Stand-Off Voltage | V_{RRM} | | | | 70 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 50\mu A$ | 85 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 70V$ | | | 5 | μA |
| Forward Clamping Voltage | V_{FC} | $I_{PP} = 1A, t_p = 8/20\mu s$ | | | 1.5 | V |
| Forward Clamping Voltage | V_{FC} | $I_{PP} = 10A, t_p = 8/20\mu s$ | | | 3.3 | V |
| Forward Clamping Voltage | V_{FC} | $I_{PP} = 24A, t_p = 8/20\mu s$ | | | 7 | V |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz,$ Between I/O pin and Ground | | 5 | 10 | pF |
| Junction Capacitance | C_J | $V_R = 0V, f = 1MHz,$ Between I/O Pins | | 3 | | pF |

Curve Characteristics

Fig. 1 - 8 X 20µs Pulse Waveform

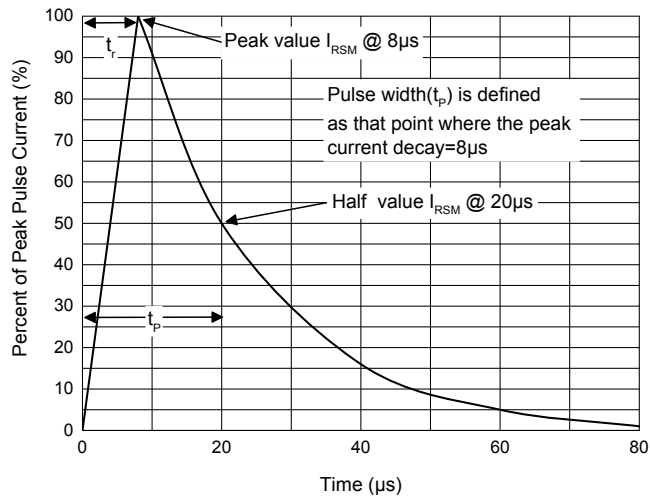


Fig. 2 - Pulse Derating Curve

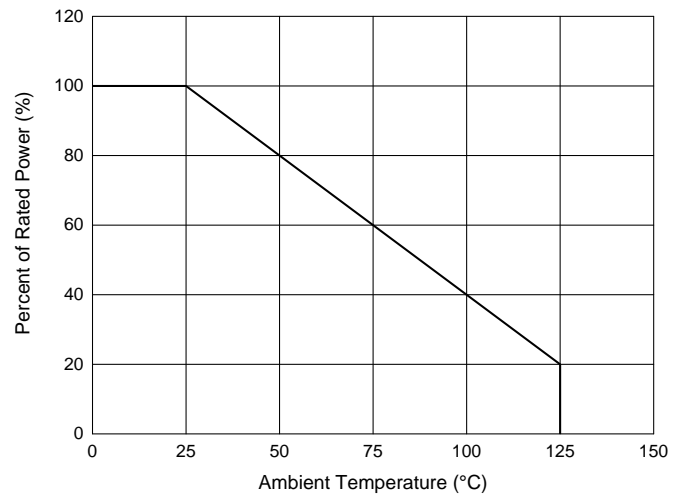


Fig. 3 - Forward Voltage Characteristics

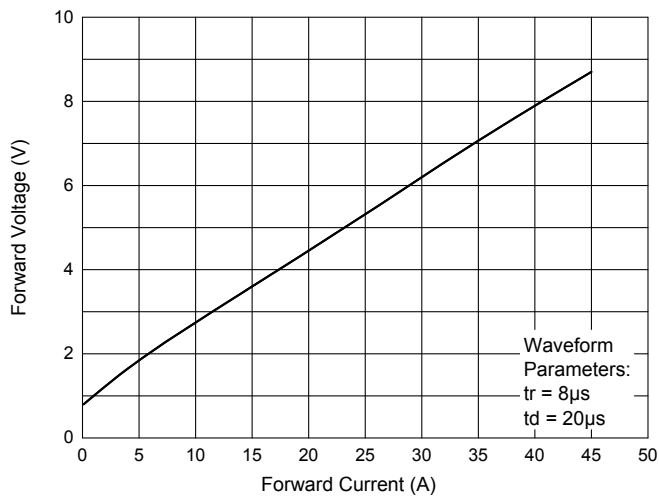
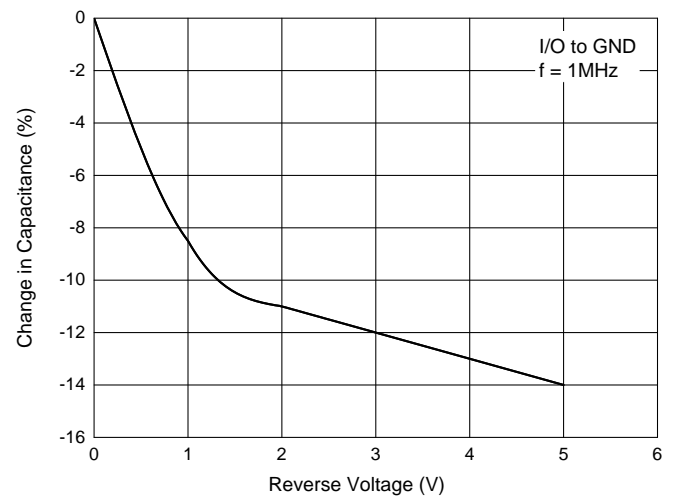


Fig. 4 - Change in Capacitance Characteristics



Ordering Information

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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