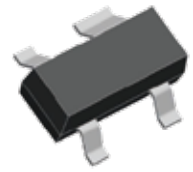


FEATURES

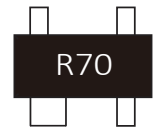
- | Array of surge rated, low capacitance diodes
- | Protects two I/O lines
- | Low clamping voltage
- | Low capacitance (1.5pF typical) for high-speed interfaces
- | Low leakage current

APPLICATIONS

- | ADSL Lines
- | I²C BUS Protection
- | Video Line Protection
- | T1/E1 secondary IC Side Protection
- | Portable Electronics
- | Microcontroller Input Protection
- | WAN/LAN Equipment



SOT-143



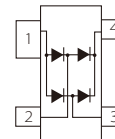
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

- | | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |



Schematic Symbol

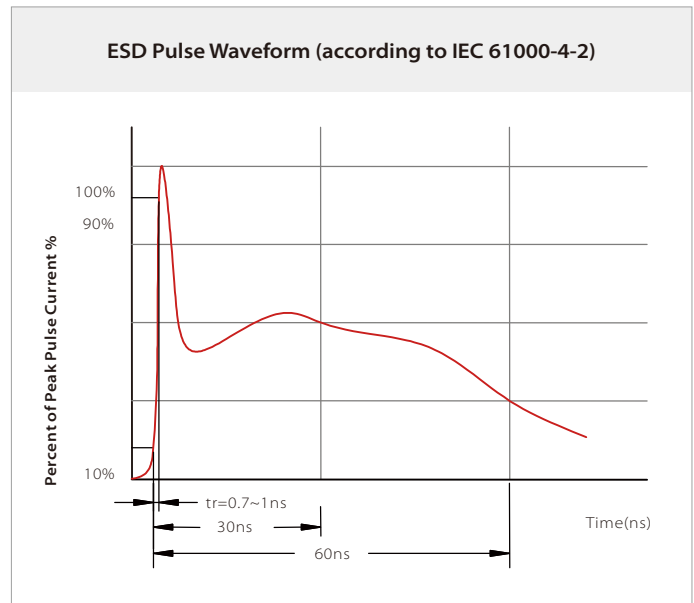
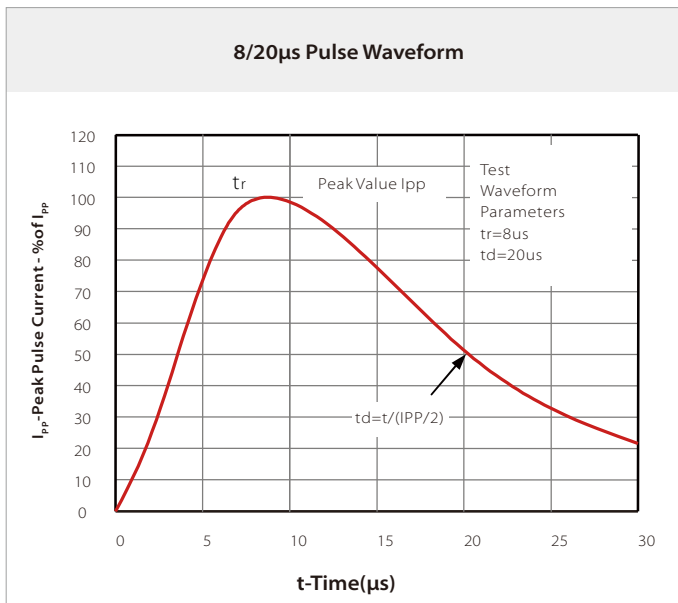
THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------|--|-------------|------|
| I_{PP} | Forward Peak Pulse Current (tp = 8/20us) | 21 | A |
| T_J | Operating Temperature Range | -55 to +150 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS

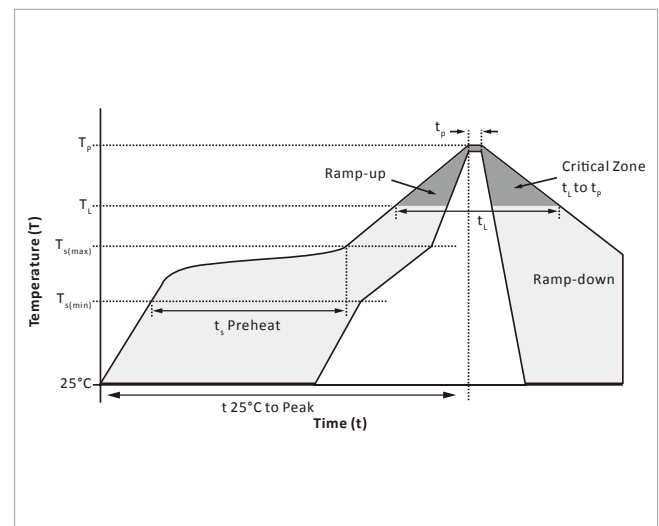
| Symbol | Parameter | Condition | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|-----------------------------|------|------|------|---------|
| V_{RWM} | Reverse Stand-off Voltage | | | | 70 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T=50\mu A$ | 85 | | | V |
| I_R | Reverse Leakage Current | $V_{RWM}=70V$ | | | 0.5 | μA |
| V_C | Clamping Voltage (Tp=8/20us) | $I_{pp}=1A, tp=8/20us$ | | | 3 | V |
| V_C | Clamping Voltage (Tp=8/20us) | $I_{pp}=10A, tp=8/20us$ | | | 9 | V |
| V_C | Clamping Voltage (Tp=8/20us) | $I_{pp}=21A, tp=8/20us$ | | | 16 | V |
| I_{PP} | Peak Pulse Current (Tp=8/20us) | tp=8/20us | | | 21 | A |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ I/O-I/O | | 1 | | pF |
| C_J | Off State Junction Capacitance | $V_R=0V, f=1MHz$ I/O-GND | | 1.5 | | pF |

CHARACTERISTIC CURVES

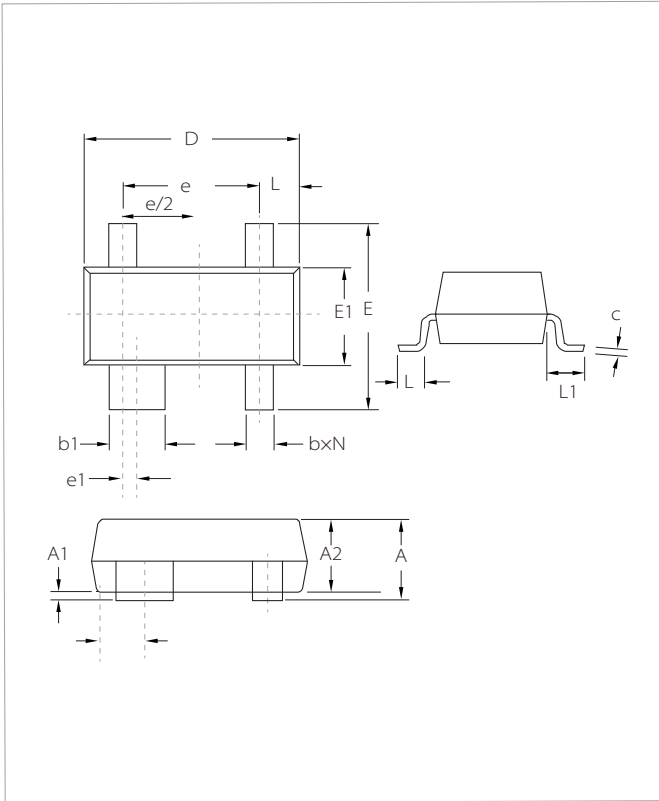


SOLDERING PARAMETERS

| Reflow Condition | | Lead-free assembly |
|--|----------------------------------|--------------------|
| Pre Heat | Temperature Max ($T_{s(min)}$) | 150°C |
| | Temperature Max ($T_{s(max)}$) | 200°C |
| | Time (min to max) (t_s) | 60 – 180 secs |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | | 3°C/second max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/second max |
| Reflow | Temperature (T_L) (Liquidus) | 217°C |
| | Time (min to max) (t_L) | 60 – 150 seconds |
| Peak Temperature (T_p) | | 260°C |
| Time within 5°C of actual peak Temperature (t_p) | | 20 – 40 seconds |
| Ramp-down Rate | | 6°C/second max |
| Time 25°C to peak Temperature (T_p) | | 8 minutes max. |
| Do not exceed | | 260°C |

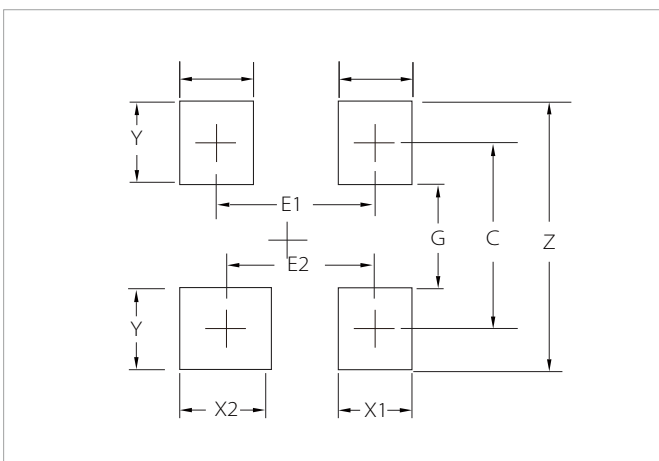


SOT-143 PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|---------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.80 | 1.22 | 0.031 | 0.048 |
| A1 | 0.013 | 0.15 | 0.000 | 0.008 |
| A2 | 0.75 | 1.07 | 0.029 | 0.042 |
| b | 0.30 | 0.51 | 0.011 | 0.020 |
| b1 | 0.76 | 0.94 | 0.029 | 0.037 |
| c | 0.06 | 0.20 | 0.002 | 0.008 |
| D | 2.80 | 3.04 | 0.110 | 0.120 |
| E | 2.10 | 2.64 | 0.082 | 0.104 |
| E1 | 1.20 | 1.40 | 0.047 | 0.055 |
| e | 1.92BSC | | 0.075 | |
| e1 | 0.20BSC | | 0.008 | |
| L | 0.40 | 0.60 | 0.015 | 0.024 |
| L1 | (0.54) | | (0.021) | |
| N | 4 | | 4 | |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | Inches |
|------|-------------|---------|
| C | (2.2) | (0.087) |
| E1 | 1.92 | 0.076 |
| E2 | 1.72 | 0.068 |
| G | 0.80 | 0.031 |
| X1 | 1.00 | 0.039 |
| X2 | 1.20 | 0.047 |
| Y | 1.40 | 0.055 |
| Z | 3.60 | 0.141 |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| SESR70 | SOT-143 | 3000PCS | 7" |

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