

Electrostatic Discharged Protection Devices (ESD) Data Sheet

Description

Brightking's SES08C15L04 has been designed to provide bi-directional protection for sensitive electronics from damage or latch-up due to ESD, lightning and other voltage-induced transient events. Each device will protect four data or I/O lines. It use to meet the immunity requirements of IEC61000 Level 4 (15KV air, 8KV contact discharge).

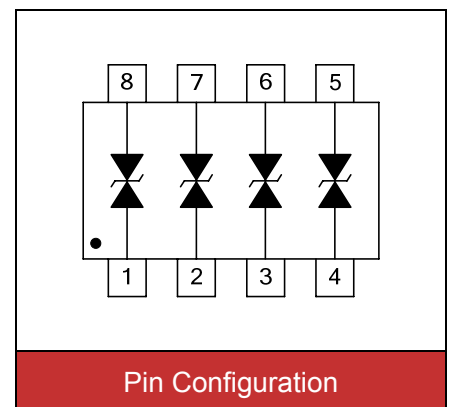


Contact : ±8kV
Air : ±15kV



Features

- IEC61000-4-2 ESD 15KV Air, 8KV contact compliance
- SOIC-08 surface mount package
- Protects four I/O lines
- Peak power dissipation of 500W under 8/20μs waveform
- Working voltage: 15V
- Low leakage current
- Low capacitance and clamping voltage
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature: Pure Tin-Sn, 260~270°C
- Flammability rating UL 94V-0
- Meets MSL level 1, per J-STD-020
- Marking: B SM15C



Applications

- RS-232 and RS-422 data line protection
- Microprocessor based equipment
- Audio/Video input protection
- Notebooks, desktops, servers
- Wireless network systems
- Set Top Box (STB)
- Series and parallel ports
- Instrumentation
- Peripherals

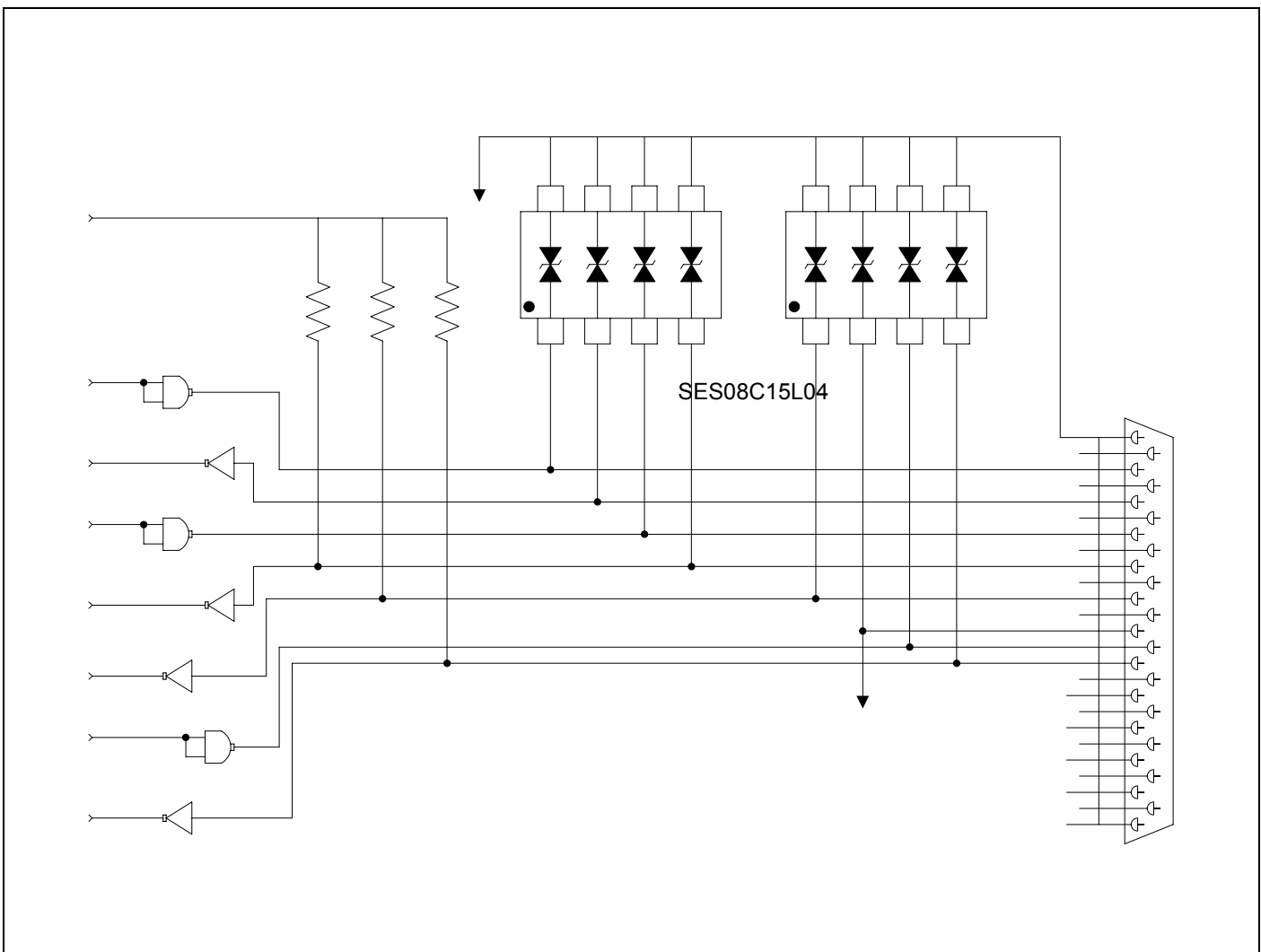
Maximum Ratings

| Rating | Symbol | Value | Unit |
|---------------------------------------|-----------------------------------|----------|------|
| Peak pulse power (tp=8/20μs waveform) | P _{PP} | 500 | W |
| ESD voltage (Contact discharge) | V _{ESD} | ±8 | kV |
| ESD voltage (Air discharge) | | ±15 | |
| Storage & operating temperature range | T _{STG} , T _J | -55~+150 | °C |

Electrical Characteristics ($T_J=25^{\circ}\text{C}$)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--|-----------|--|------|------|------|---------------|
| Reverse stand-off voltage | V_{RWM} | | | | 15 | V |
| Reverse breakdown voltage | V_{BR} | $I_{BR}=1\text{mA}$ | 16.7 | | | V |
| Reverse leakage current | I_R | $V_R=15\text{V}$ Each I/O pin | | | 1 | μA |
| Clamping voltage ($t_p=8/20\mu\text{s}$) | V_C | $I_{PP}=1\text{A}$ | | | 24 | V |
| Clamping voltage ($t_p=8/20\mu\text{s}$) | V_C | $I_{PP}=10\text{A}$ | | | 30 | V |
| Off state junction capacitance | C_J | 0Vdc, f=1MHz Between I/O pins and GND | | 80 | | pF |

Applications Information



Typical Characteristics Curves

Figure 1. Power Derating Curve

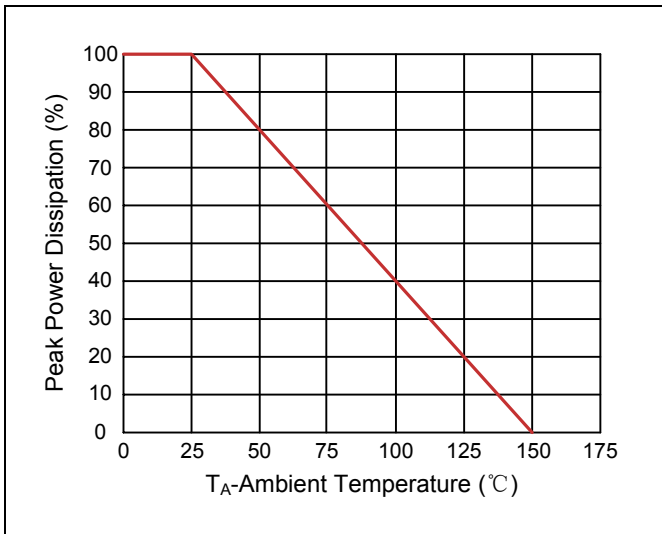


Figure 2. Pulse Waveforms

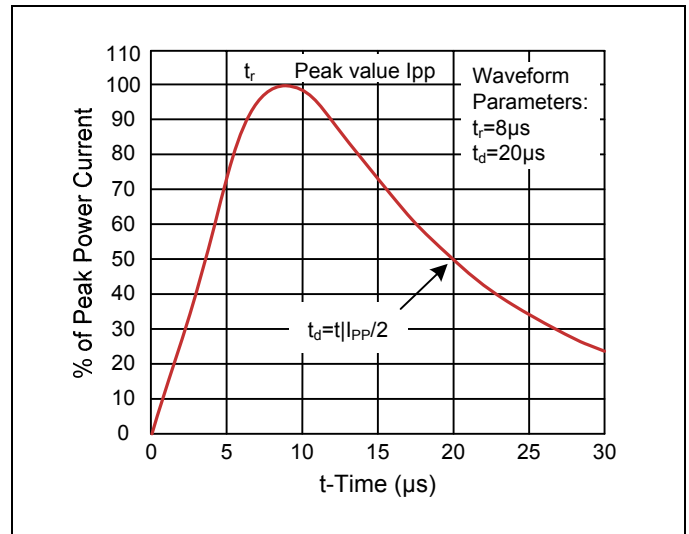
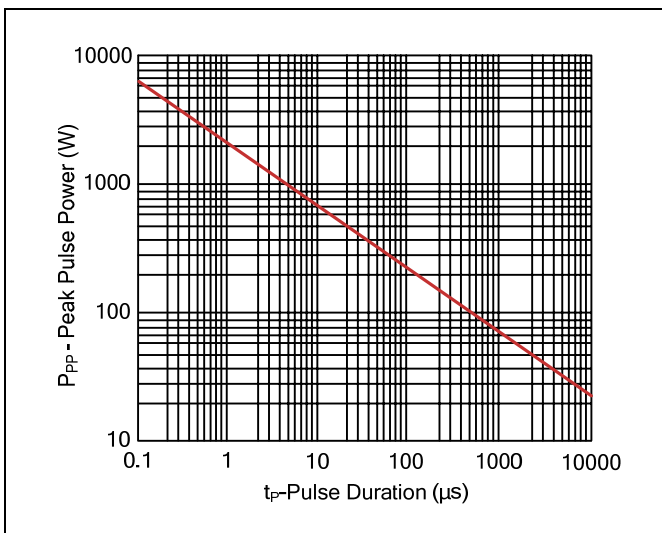
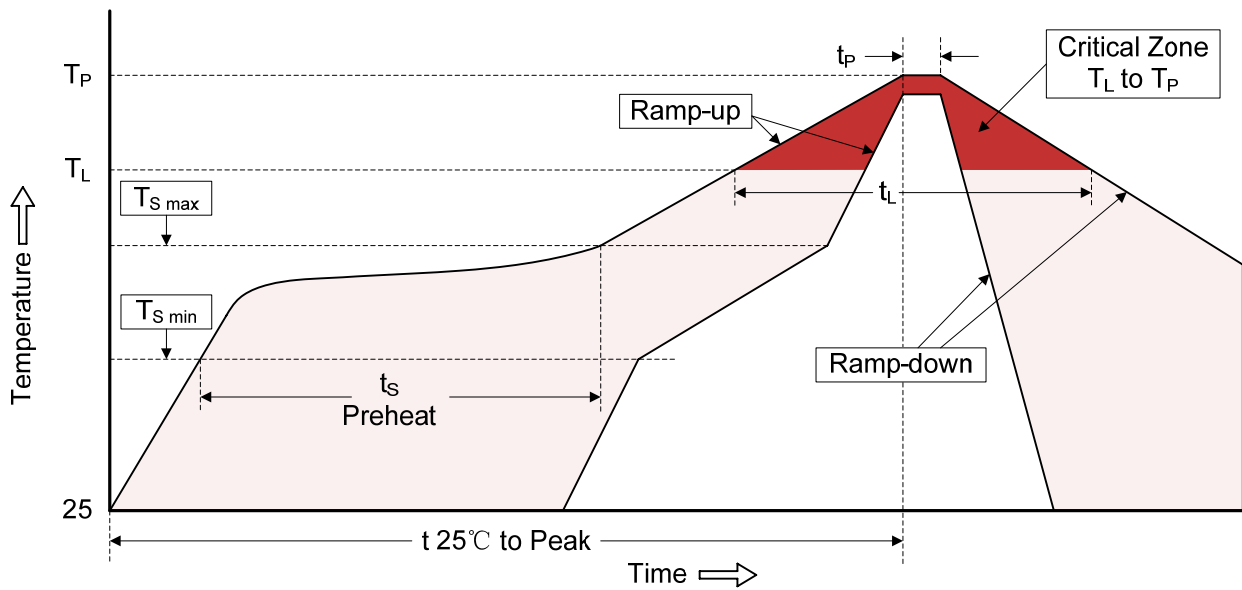


Figure 3. Non-Repetitive Peak Pulse vs. Pulse Time



Recommended Soldering Conditions

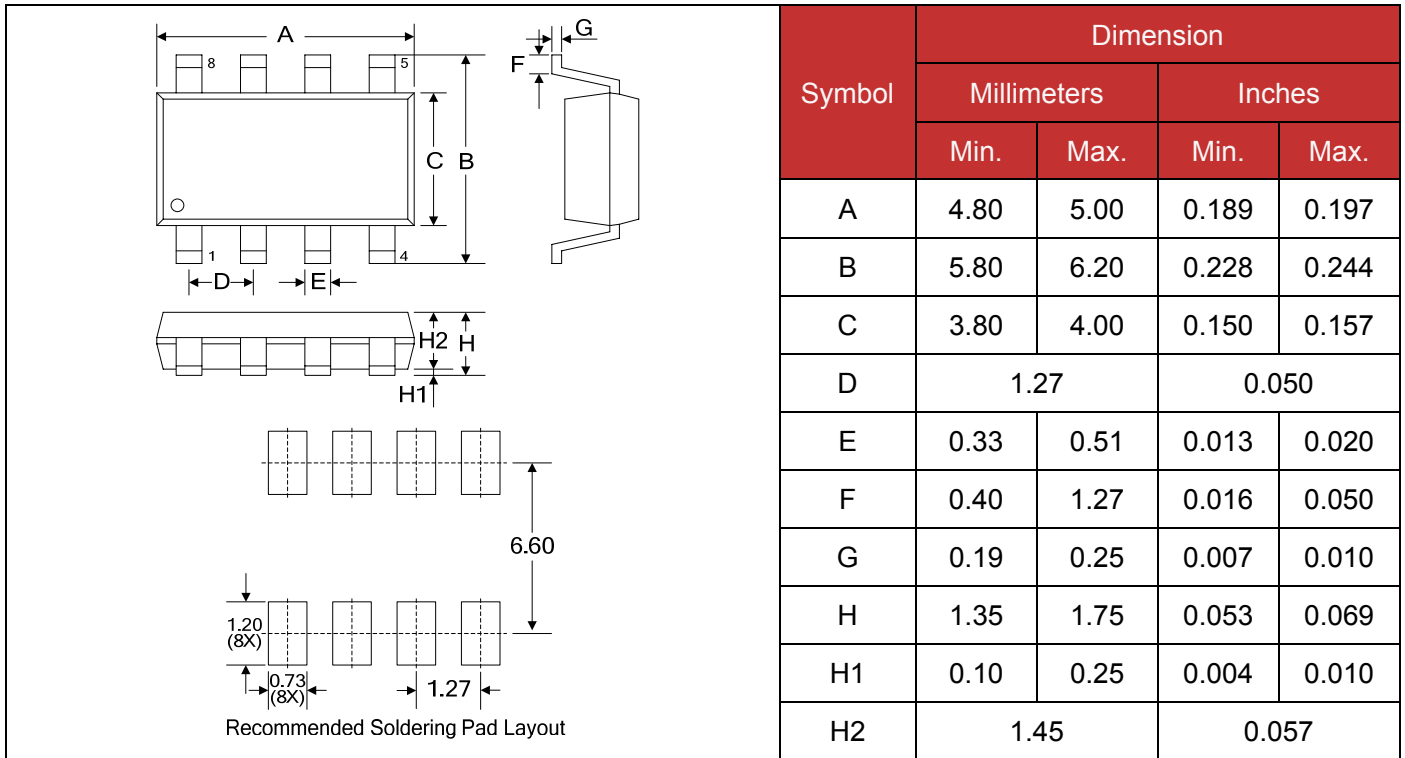
Reflow Soldering



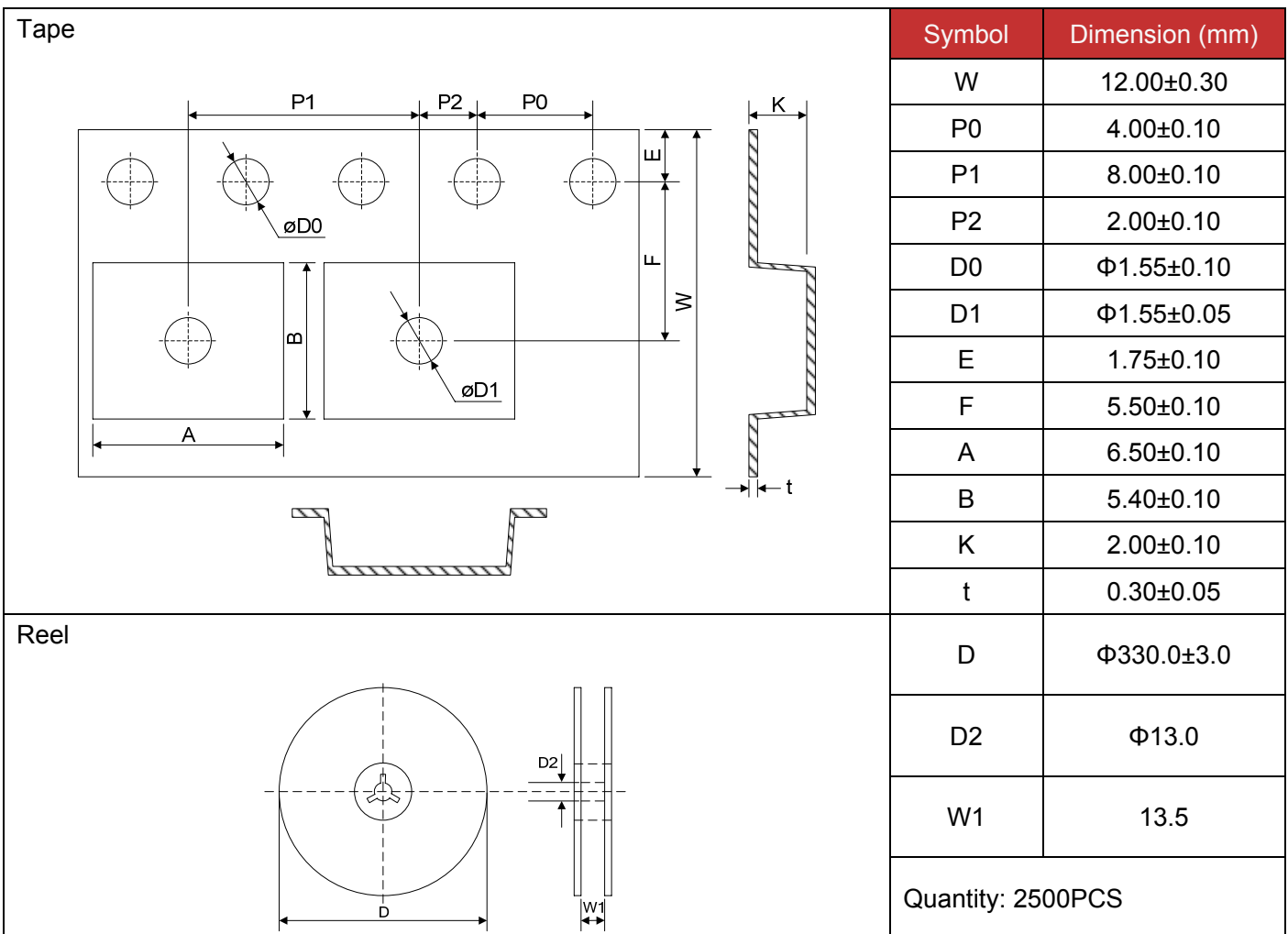
Recommended Conditions

| Profile Feature | Pb-Free Assembly |
|---|----------------------------------|
| Average ramp-up rate (T_L to T_P) | 3°C/second max. |
| Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s) | 150°C 200°C 60-180 seconds |
| $T_{S\ max}$ to T_L -Ramp-up Rate | 3°C/second max. |
| Time maintained above: -Temperature (T_L) -Time (t_L) | 217°C 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 | 8 minutes max. |

Dimensions (SOIC-08)



Packaging



单击下面可查看定价，库存，交付和生命周期等信息

[>>Brightking\(君耀电子\)](#)