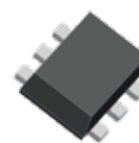


## FEATURES

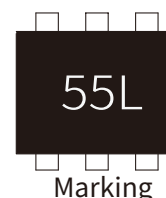
- | 60W Peak Pulse Power per Line (tp=8/20μs)
- | Protects five I/O lines
- | Low capacitance
- | Working voltages: 5V
- | Low leakage current
- | Low clamping voltage
- | Low capacitance for high-speed interfaces

## APPLICATIONS

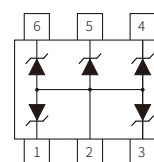
- | High Definition Multi-Media Interface (HDMI)
- | Digital Visual Interface (DVI)
- | Dual USB port
- | IEEE 1394 Firewire Ports
- | Notebooks & Handhelds
- | Projection TV & Monitors
- | Set-top box
- | Flat Panel Displays



SOT-563



Marking



Schematic Symbol

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±25kV (air), ±20kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

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

## THERMAL CONSIDERATIONS

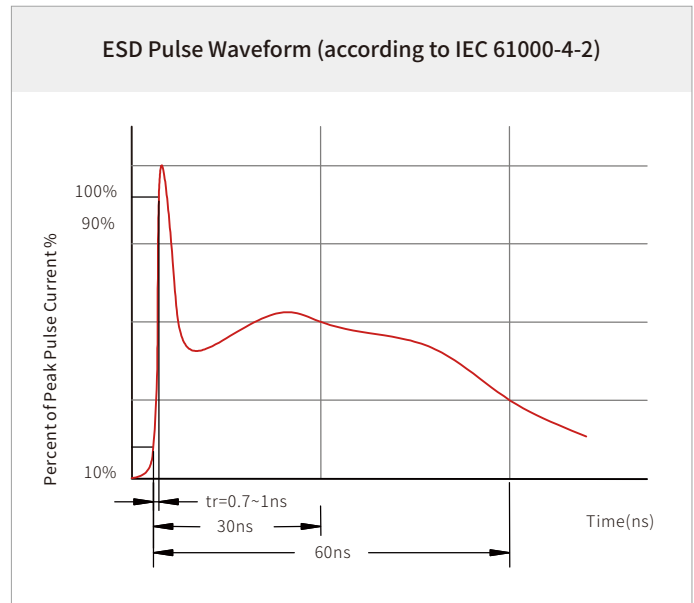
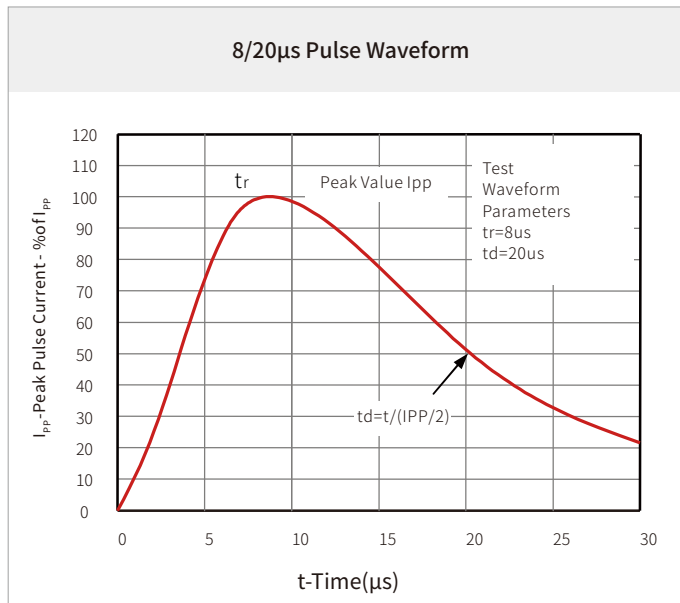
| Symbol    | Parameter                             | Value       | Unit  |
|-----------|---------------------------------------|-------------|-------|
| $P_{pp}$  | Peak Pulse Power (tp=8/20μs waveform) | 60          | Watts |
| $T_J$     | Operating Temperature Range           | -55 to +125 | °C    |
| $T_{STG}$ | Storage Temperature Range             | -55 to +150 | °C    |

## ELECTRICAL CHARACTERISTICS

| Symbol    | Parameter                      | Condition              | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|------------------------|------|------|------|------|
| $V_{RWM}$ | Reverse Stand-off Voltage      |                        |      |      | 5.0  | V    |
| $V_{BR}$  | Reverse Breakdown Voltage      | $I_T=1mA$              | 6.0  |      |      | V    |
| $I_R$     | Reverse Leakage Current        | $V_{RWM}=5V$           |      |      | 1    | μA   |
| $V_C$     | Clamping Voltage               | $I_{pp}=1A, tp=8/20μs$ |      |      | 10   | V    |
| $V_C$     | Clamping Voltage               | $I_{pp}=4A, tp=8/20μs$ |      |      | 15   | V    |
| $V_F$     | Forward Voltage                | $I_F=10mA$             |      |      | 1.2  | V    |
| $I_{PP}$  | Peak Pulse Current             | tp=8/20μs              |      |      | 4    | A    |
| $C_J$     | Off State Junction Capacitance | $V_R=0V, f=1MHz$       |      |      | 1.5  | pF   |

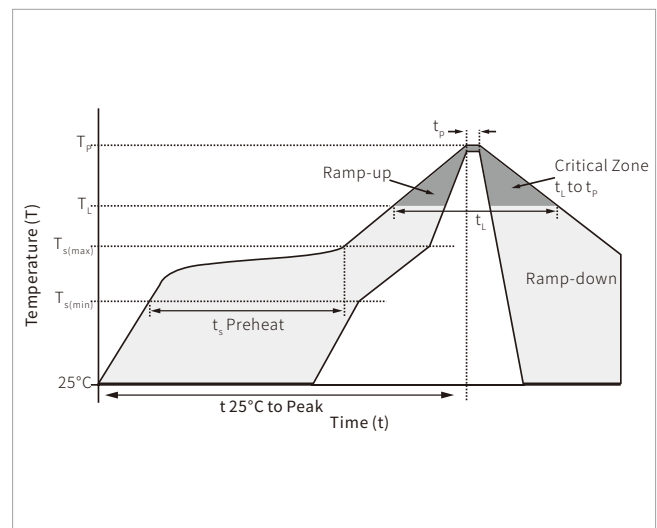
Note: I/O pins are pin 1,3,4,5,6

## CHARACTERISTIC CURVES

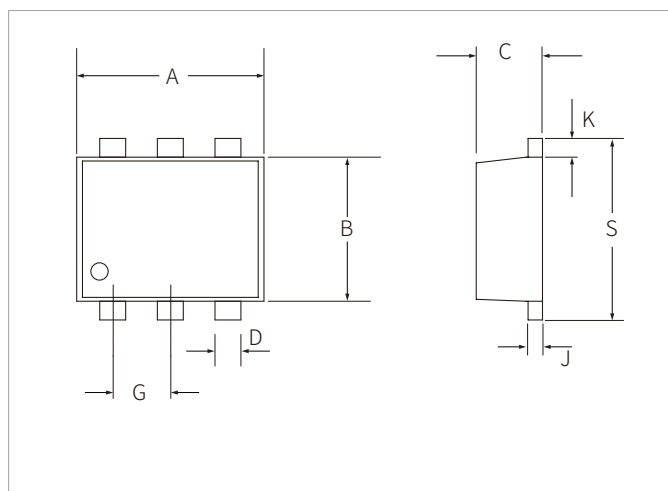


## SOLDERING PARAMETERS

| 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              |

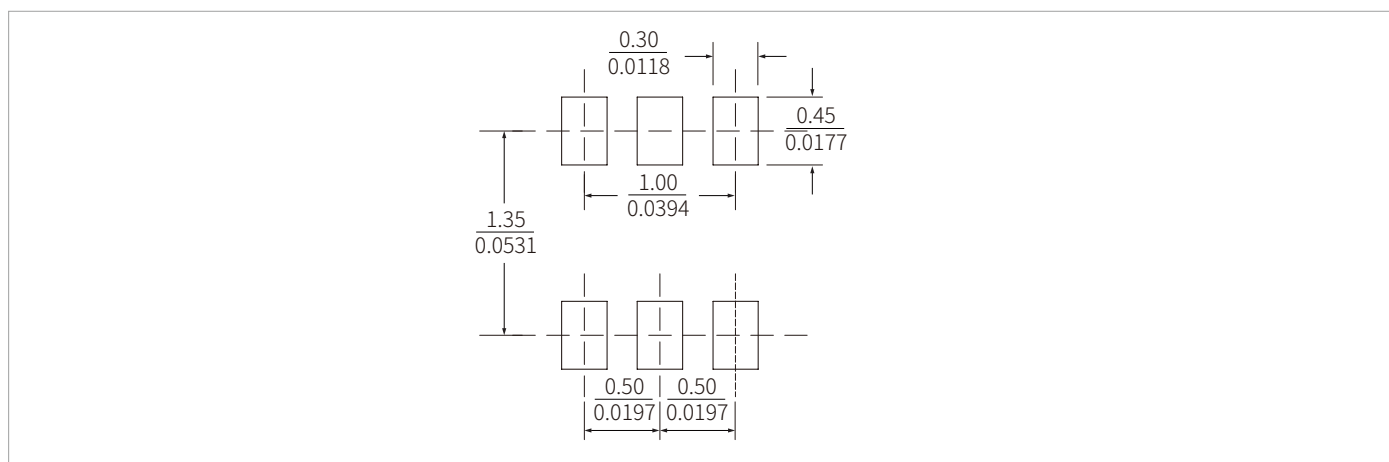


## SOT-563 PACKAGE INFORMATION



| Ref. | Millimeters |      | Inches   |       |
|------|-------------|------|----------|-------|
|      | Min         | Max  | Min      | Max   |
| A    | 1.50        | 1.70 | 0.059    | 0.067 |
| B    | 1.10        | 1.30 | 0.043    | 0.051 |
| C    | 0.45        | 0.65 | 0.018    | 0.026 |
| D    | 0.17        | 0.27 | 0.007    | 0.011 |
| G    | 0.50TYP     |      | 0.020TYP |       |
| J    | 0.08        | 0.18 | 0.003    | 0.007 |
| K    | 0.10        | 0.30 | 0.004    | 0.012 |
| S    | 1.50        | 1.70 | 0.059    | 0.067 |

## RECOMMENDED PAD LAYOUT DIMENSIONS



## ORDERING INFORMATION

| Part Number   | Component Package | QTY/Reel | Reel Size |
|---------------|-------------------|----------|-----------|
| SE65T06U5.0LE | SOT-563           | 3000PCS  | 7"        |

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Wechat

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