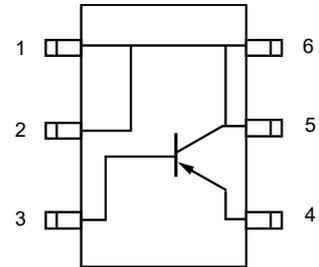


Feature

This device is Pb-Free, Halogen Free/BFR Free and RoHS compliant.

- Very low collector to emitter saturation voltage
- DC current gain >100
- 3.5A continuous collector current
- PNP epitaxial planar silicon transistor



Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 2 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

Electrical characteristics per line@25°C (unless otherwise specified)

| Parameter | Symbol | Conditions | Value | Units |
|-------------------------------------|---------------|----------------------|---------|-------|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_B=0$ $I_C=-10mA$ | -30 | V |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_E=0$ $I_C=-100uA$ | -30 | V |
| Emitter -Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_C=0$ $I_E=-100uA$ | -5 | V |
| Collector Current | I_C | | -3.5 | A |
| Collector Peak Current | I_{CM} | | -7 | A |
| Base Current | I_B | | -0.25 | A |
| Base Peak Current | I_{BM} | | -0.6 | A |
| Total Dissipation @25°C | P_{tot} | | 2.0 | W |
| Storage Temperature | T_{stg} | | -65~150 | °C |
| Max. Operating Junction Temperature | T_j | | 150 | °C |

Absolute maximum rating@25°C

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---------------------------------------|---------------|--------------------------------|------|------|-------|---------|
| DC Current Gain | h_{FE} | $I_C=-2.5A, V_{CE}=-3.0V$ | 100 | | | - |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-0.5A, I_B=-5mA$ | - | | -0.15 | V |
| | | $I_C=-1.2A, I_B=-20mA$ | - | | -0.25 | |
| | | $I_C=-2A, I_B=-200mA$ | - | | -0.5 | |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=-0.5A, I_B=-5mA$ | | | -1.1 | V |
| | | $I_C=-1.2A, I_B=-20mA$ | | | -1.1 | |
| | | $I_C=-2A, I_B=-20mA$ | | | -1.2 | |
| Collector Cut-off Current ($I_E=0$) | I_{CBO} | $V_{CB}=-30V$ | | | -0.1 | μA |
| | | $V_{CB}=-30V, T_C=125^\circ C$ | | | -20 | |
| Emitter Cut-off Current($I_C=0$) | I_{EBO} | $V_{EB}=-5V$ | | | -0.1 | μA |

Typical Characteristics

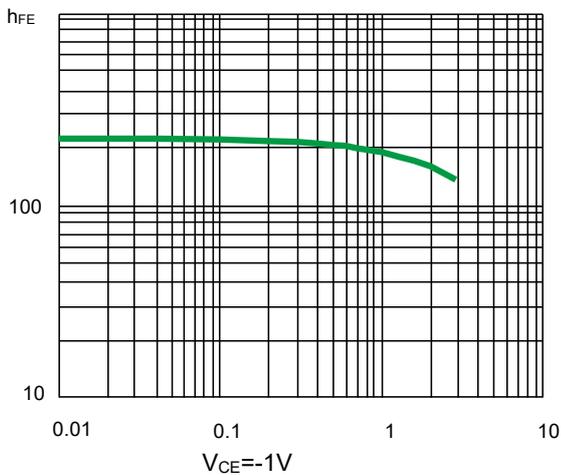


Fig1.DC Current Gain

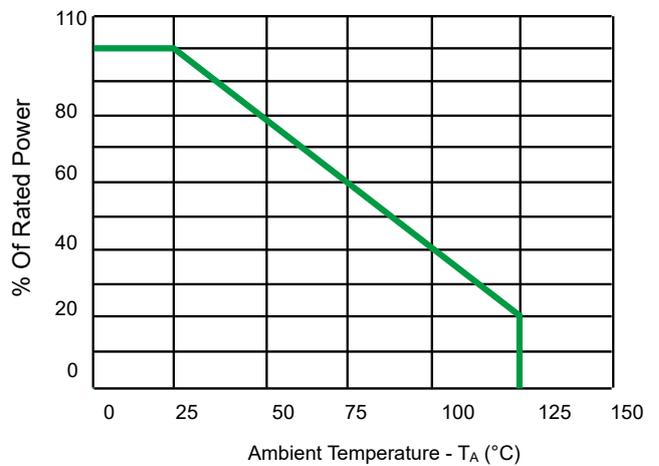


Fig2. Power Derating Curve

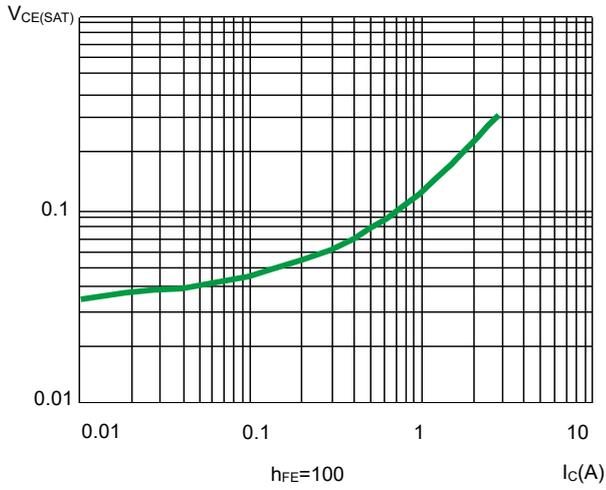


Fig 3. Collector-Emitter Saturation Voltage

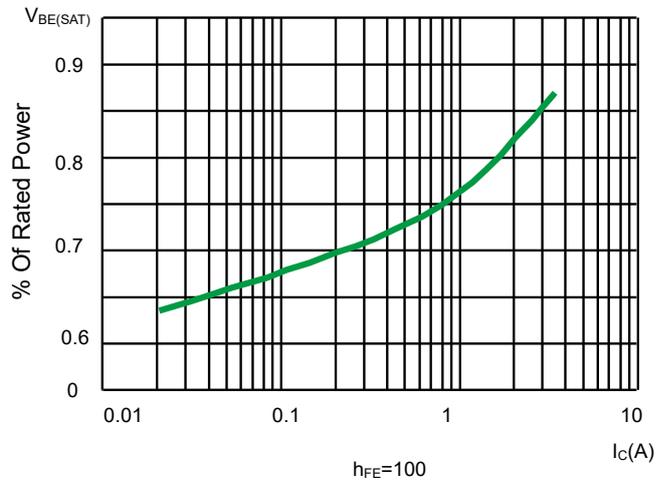


Fig 4. Base-Emitter Saturation Voltage

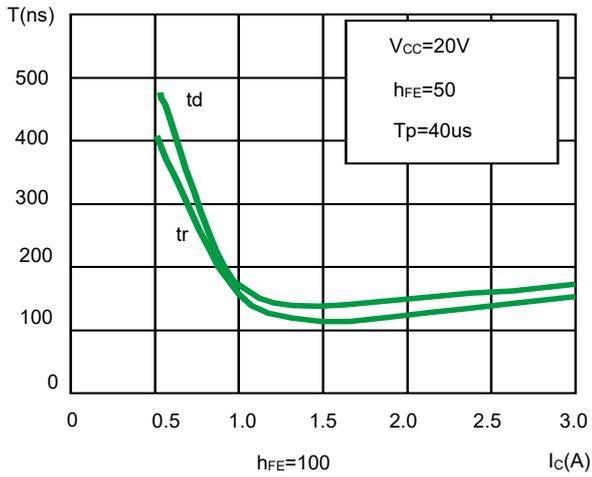


Fig 5. Switching Times Resistive Load

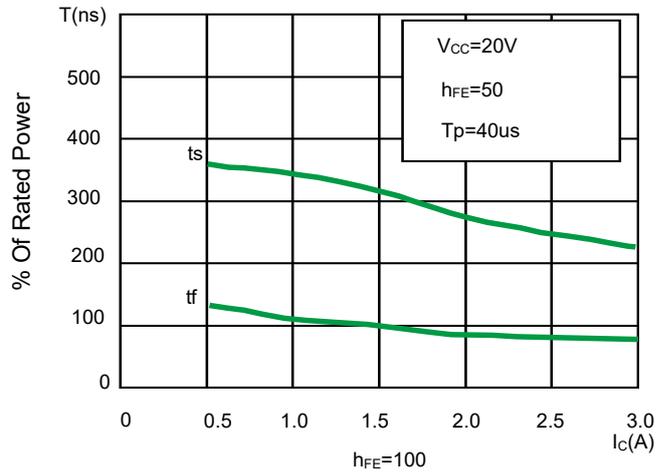
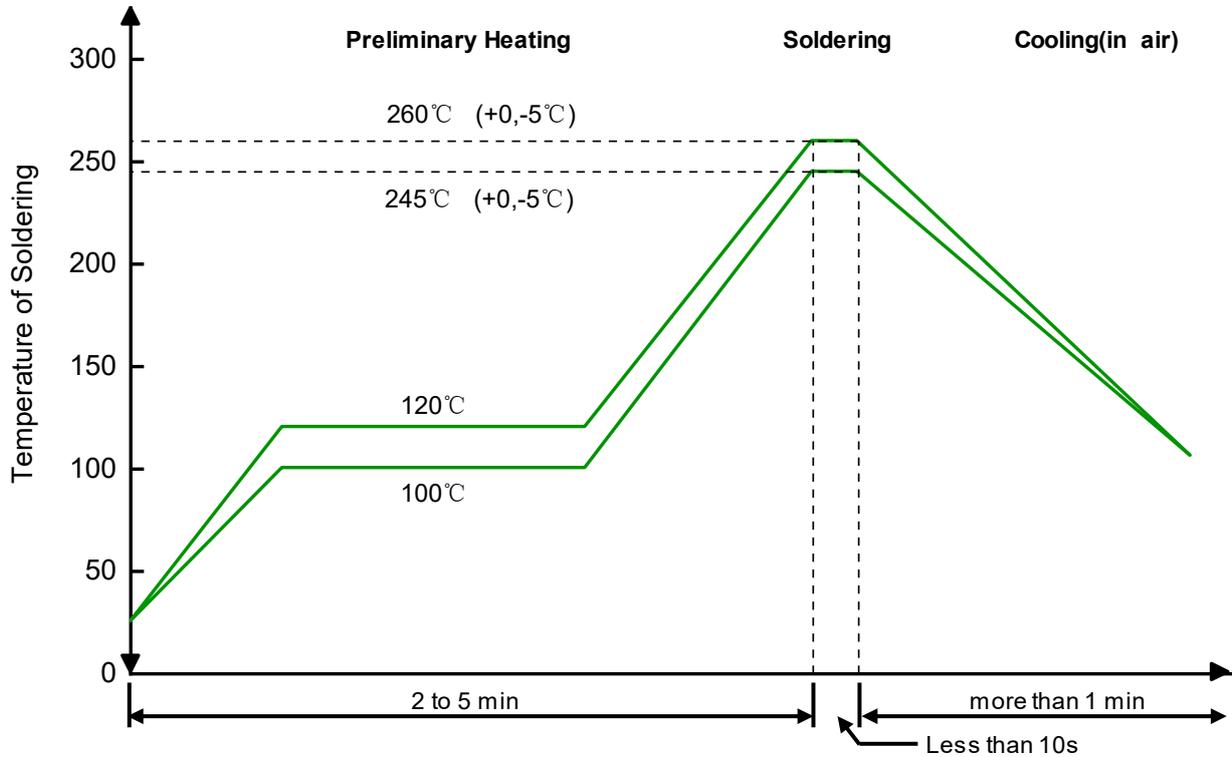


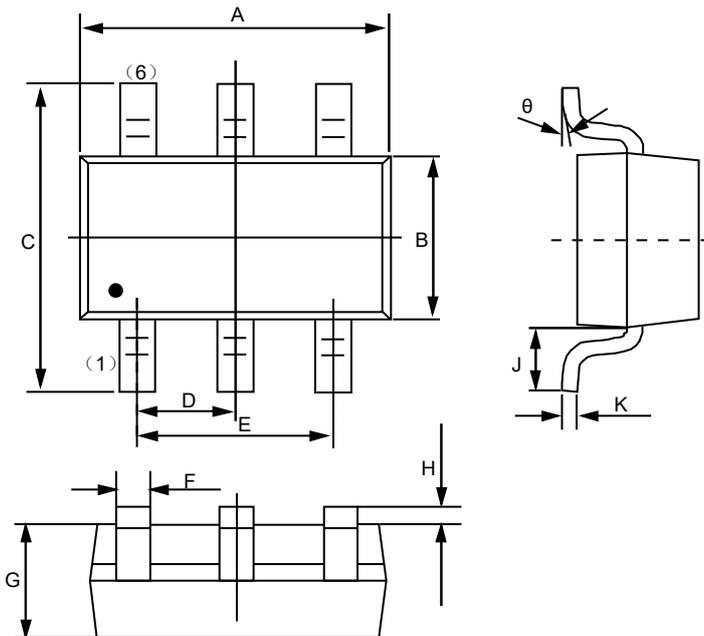
Fig 6. Switching Times Resistive Load

Solder Reflow Recommendation

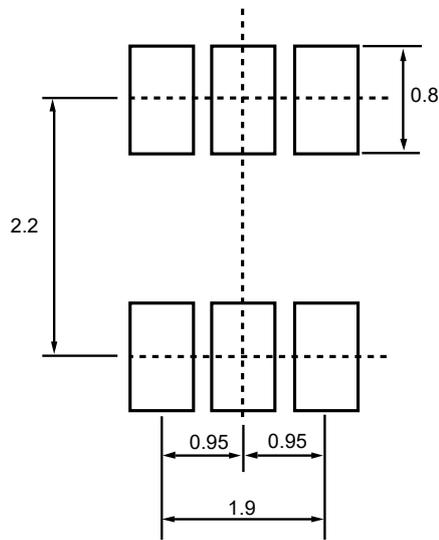


Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SOT-23-6L)



| Dim | Millimeters | | Inches | |
|-------|-------------|-------|-------------|--------|
| | MIN | MAX | MIN | MAX |
| A | 2.820 | 3.020 | 0.111 | 0.119 |
| B | 1.500 | 1.700 | 0.059 | 0.067 |
| C | 2.650 | 2.950 | 0.104 | 0.116 |
| D | 0.950 (BSC) | | 0.037 (BSC) | |
| E | 1.800 | 2.000 | 0.071 | 0.079 |
| F | 0.300 | 0.500 | 0.012 | 0.020 |
| G | 1.050 | 1.150 | 0.041 | 0.045 |
| H | 0.000 | 0.100 | 0.000 | 0.004 |
| J | 0.45 | 0.60 | 0.0180 | 0.0236 |
| K | 0.100 | 0.200 | 0.004 | 0.008 |
| theta | 0° | 8° | 0° | 8° |

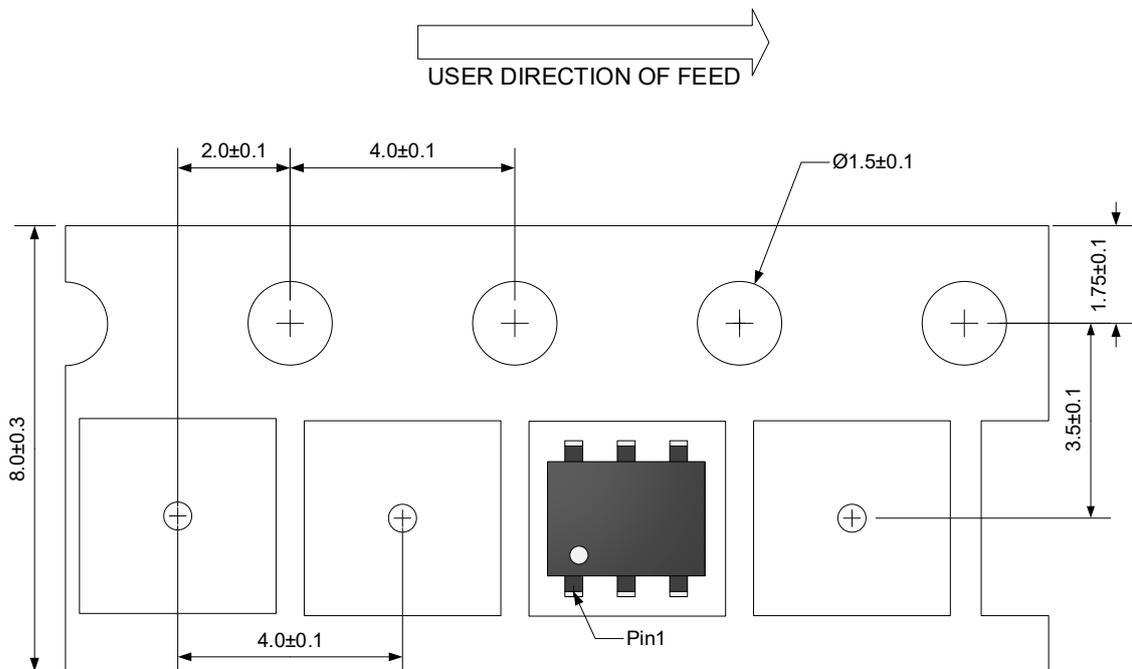


Unit:mm

Ordering information

| Device | Package | Shipping |
|-------------|-----------|--------------------|
| PT236T30E2H | SOT-23-6L | 3000 / Tape & Reel |

Load with information



Unit:mm

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