

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

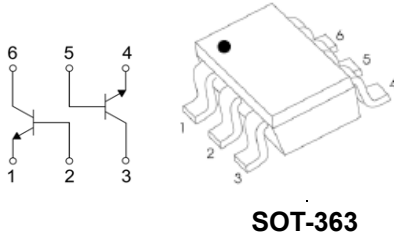


GDT



PLED

Product data sheet


DUAL TRANSISTOR (NPN+NPN)
FEATURES

- Two transistors in one package
- Reduces number of components and board space
- No mutual interference between the transistors

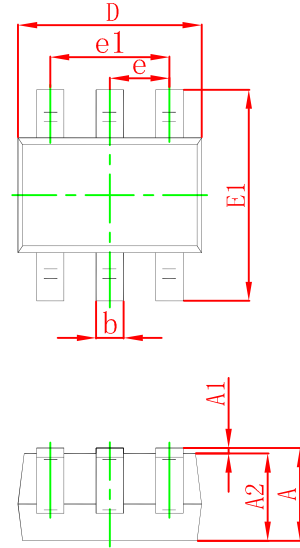
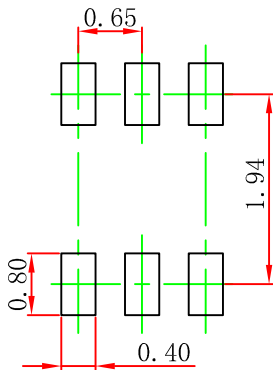
MARKING: 4Ft
MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Units |
|-----------|-------------------------------|---------|--------------------|
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | 65 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current –Continuous | 0.1 | A |
| P_C | Collector Dissipation | 200 | mW |
| T_J | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55-150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

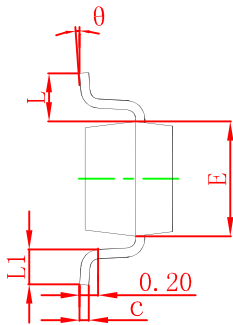
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|------------------|--|-----|------|-----|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10\mu\text{A}, I_E=0$ | 80 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=10\text{mA}, I_B=0$ | 65 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu\text{A}, I_C=0$ | 6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=30\text{V}, I_E=0$ | | | 15 | nA |
| Emitter cut-off current | I_{EBO} | $I_C=0, V_{EB}=5\text{V}$ | | | 5 | μA |
| DC current gain | h_{FE} | $V_{CE}=5\text{V}, I_C=2\text{mA}$ | 110 | | 600 | |
| Collector-emitter saturation voltage | $V_{CE(sat)(1)}$ | $I_C=10\text{mA}, I_B=0.5\text{mA}$ | | | 0.1 | V |
| | $V_{CE(sat)(2)}$ | $I_C=100\text{mA}, I_B=5\text{mA}$ | | | 0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=10\text{mA}, I_B=0.5\text{mA}$ | | 0.77 | | V |
| Transition frequency | f_T | $V_{CB}=5\text{V}, I_E=10\text{mA}, f=100\text{MHz}$ | 100 | | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | | 1.5 | pF |

SOT-363



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.100 | 0.150 | 0.004 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.400 | 0.085 | 0.094 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

REEL SPECIFICATION

| P/N | PKG | QTY |
|--------|---------|------|
| BC846S | SOT-363 | 3000 |

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