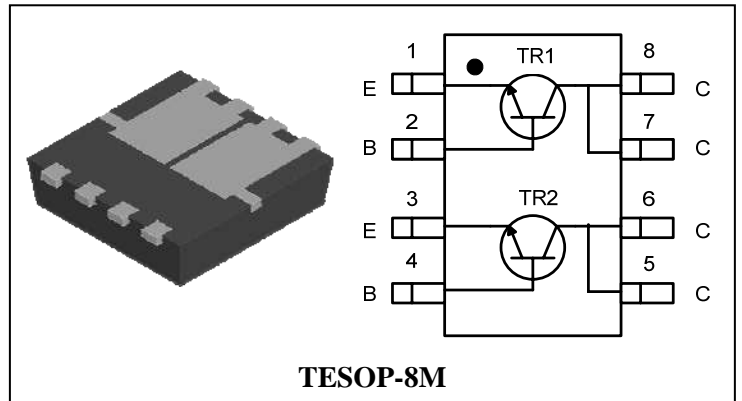


Descriptions

- General purpose amplifier
- Recommended for LED Drive Application

Features

- Thermally Enhanced Power PKG
- Low saturation: $V_{CE(sat)} = 0.5V$ Max
- 2 NPN chips in TESOP-8M Package



Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SUT041C | T041□ | TESOP-8M |

□ : Year & Week Code

Absolute maximum ratings(TR1, TR2)

($T_a = 25^\circ C$)

| Characteristic | Symbol | Ratings | Unit |
|-----------------------------|------------------------------|---------|------------|
| Collector-Base voltage | V_{CBO} | 45 | V |
| Collector-Emitter voltage | V_{CEO} | 40 | V |
| Emitter-Base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 1 | A(DC) |
| | I_{CP}^* | 2 | A(Pulse) |
| Collector power dissipation | $P_C(T_a = 25^\circ C)^{**}$ | 0.5 | W/TOTAL |
| | | 0.4 | W/ELEMENT |
| | $P_C(T_c = 25^\circ C)$ | 4 | W/TOTAL |
| Junction temperature | T_J | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55~150 | $^\circ C$ |

* : Single pulse, $t_p = 300 \mu s$

** : Each terminal mounted on a recommended solder land

Electrical Characteristics(TR1, TR2)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|-----------------------------------|------|------|------|---------|
| Collector-Base breakdown voltage | BV_{CBO} | $I_C = 100 \mu A, I_E = 0$ | 45 | - | - | V |
| Collector-Emitter breakdown voltage | BV_{CEO} | $I_C = 1mA, I_B = 0$ | 40 | - | - | V |
| Emitter-Base breakdown voltage | BV_{EBO} | $I_E = 10 \mu A, I_C = 0$ | 5 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 45V, I_E = 0$ | - | - | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | - | - | 0.1 | μA |
| DC current gain | $h_{FE}^{1)}$ | $V_{CE} = 1V, I_C = 100mA$ | 160 | - | 320 | - |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | - | - | 0.5 | V |
| Transition frequency | f_T | $V_{CE} = 5V, I_C = 10mA$ | - | 150 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0, f = 1MHz$ | - | 8 | - | pF |

Note 1) hFE Rank : 160~320 only

Electrical Characteristic Curves(TR1, TR2)

Fig. 1 $P_C - T_a$

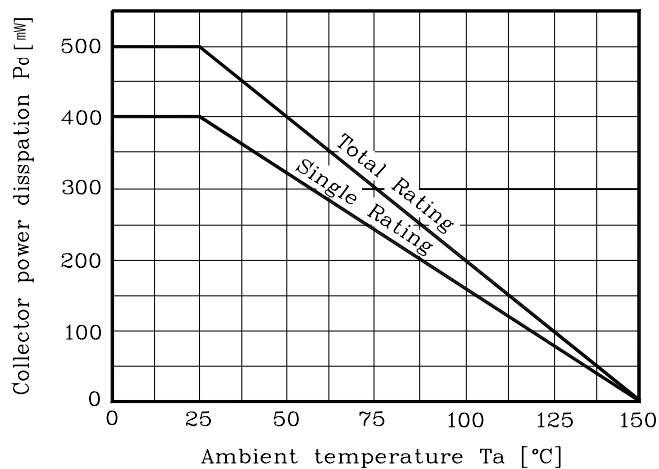


Fig. 2 $I_C - V_{BE}$

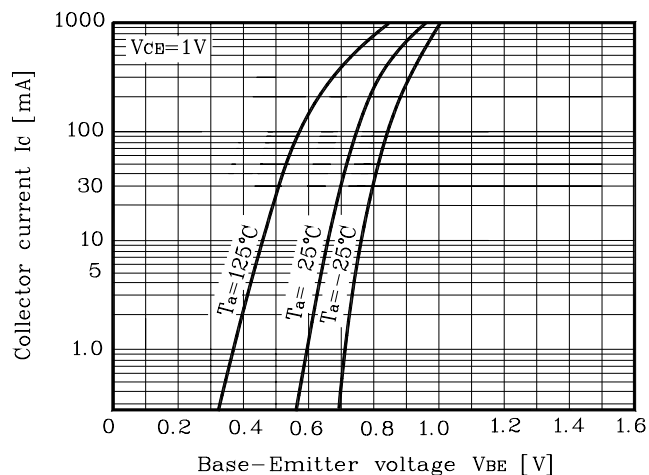


Fig. 3 $V_{CE(sat)} - I_C$

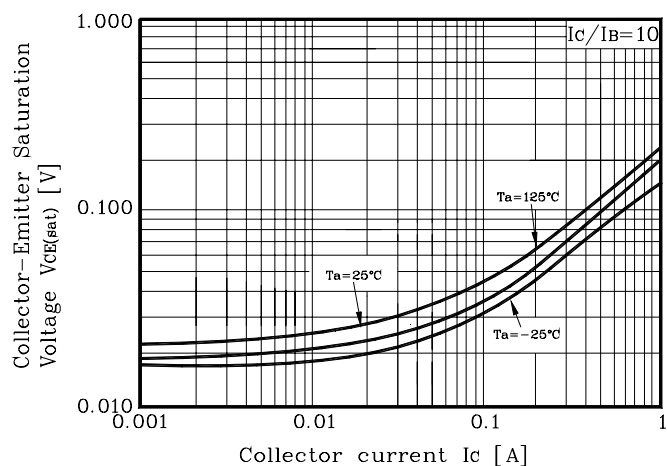


Fig. 4 $I_C - V_{CE}$

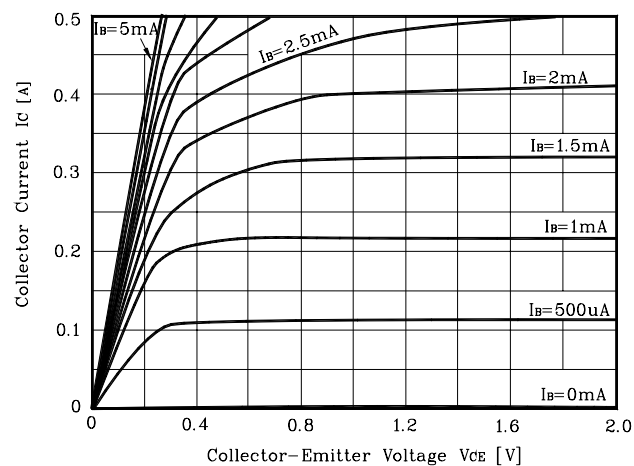


Fig. 5 $I_C - V_{CE}$

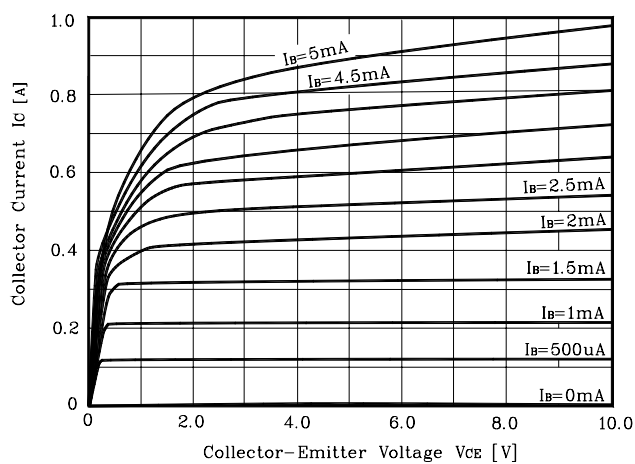


Fig. 6 $h_{FE} - I_C$

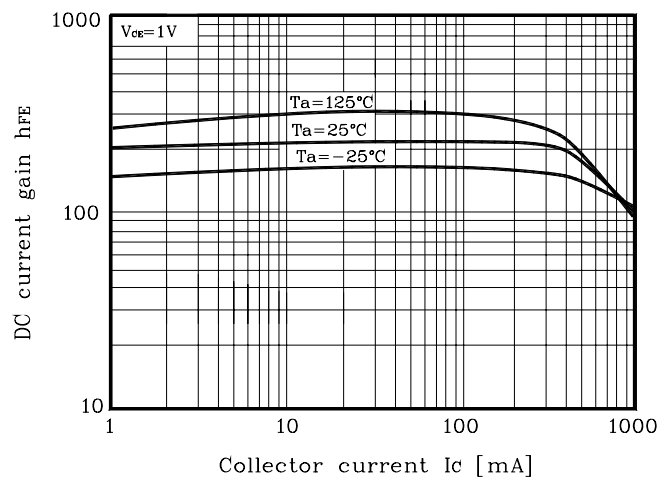


Fig. 7 $h_{FE} - I_C$

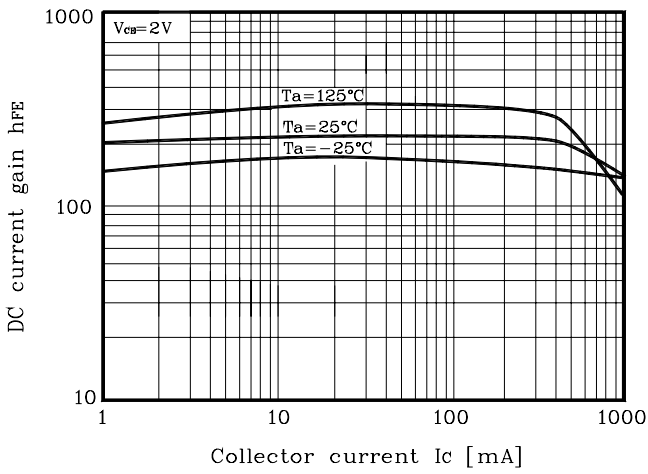


Fig. 8 $h_{FE} - I_C$

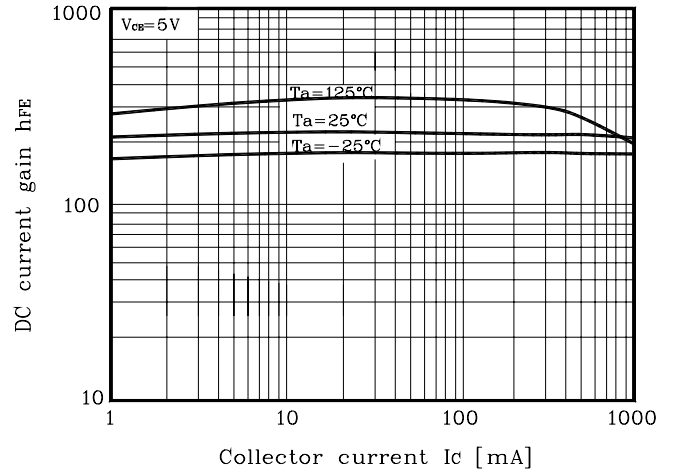


Fig. 9 $C_{ob} - V_{CB}$

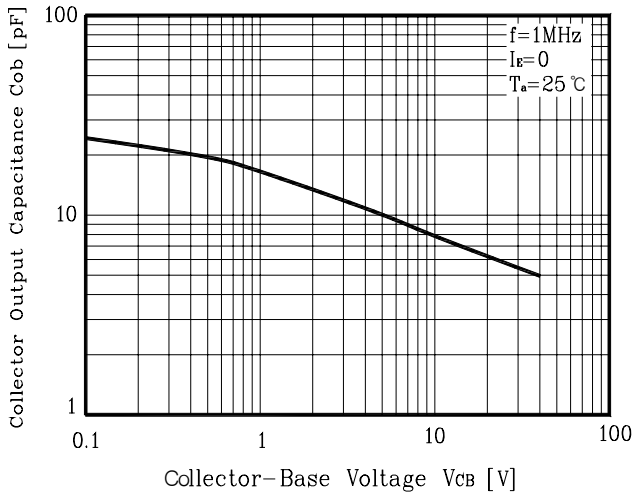


Fig. 10 $f_T - I_C$

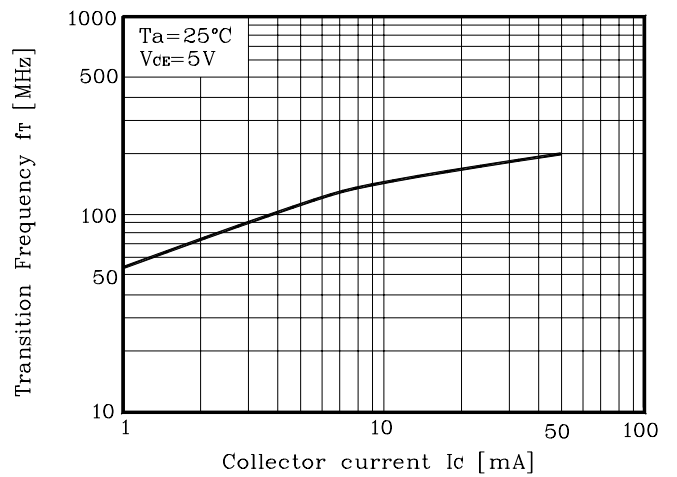
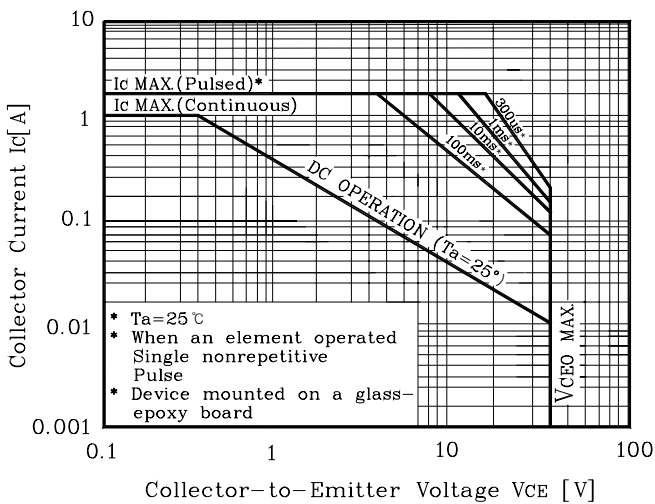
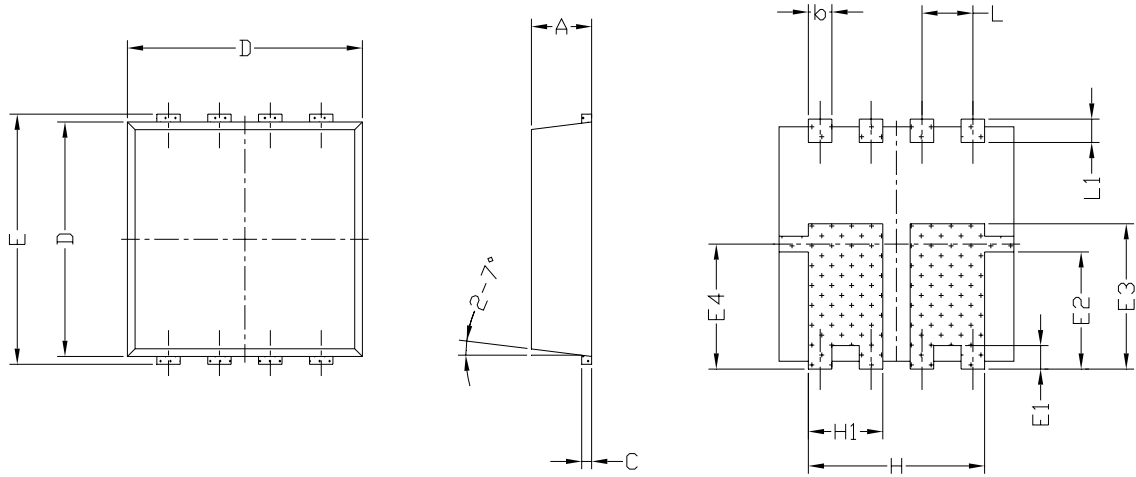


Fig. 11 Safe operating Area

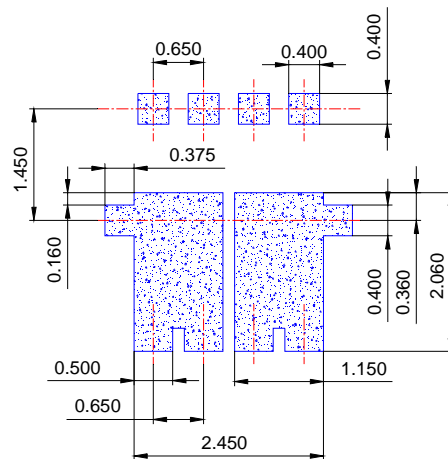


Outline Dimension



| SYMBOL | SYMBOL | | | NOTE |
|--------|-----------|---------|---------|------|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A | 0.740 | 0.770 | 0.800 | |
| b | 0.250 | 0.300 | 0.400 | |
| C | 0.077 | 0.127 | 0.177 | |
| D | 2.900 | 3.000 | 3.100 | |
| E | 3.050 | 3.200 | 3.350 | |
| E1 | 0.100 | 0.300 | 0.500 | |
| E2 | 1.300 | 1.500 | 1.700 | |
| E3 | 1.660 | 1.860 | 2.060 | |
| E4 | 1.600 TYP | | | |
| H | 2.050 | 2.250 | 2.450 | |
| H1 | 0.750 | 0.950 | 1.150 | |
| L | 0.650 | | | |
| L1 | 0.200 | 0.300 | 0.400 | |

※Recommend PCB solder land [Unit: mm]



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