

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07516 07-33-07

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2270

STROBO FLASH APPLICATIONS.

MEDIUM POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High DC Current Gain
: $h_{FE}=140\sim 450$ ($V_{CE}=2V$, $I_C=0.5A$)
 $h_{FE}=70$ (Min.) ($V_{CE}=2V$, $I_C=4A$)
- Low Saturation Voltage
: $V_{CE(sat)}=1.0V$ (Max.) ($I_C=4A$, $I_B=0.1A$)
- High Collector Power Dissipation
: $P_C=1.0W$ ($T_c=25^\circ C$), $P_C=1.0W$ ($T_a=25^\circ C$)

MAXIMUM RATINGS ($T_a=25^\circ C$)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-----------------------------|------------------|-----------|---------|------------|
| Collector-Base Voltage | | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | | V_{CES} | 40 | V |
| | | V_{CEO} | 20 | |
| Emitter-Base Voltage | | V_{EBO} | 8 | V |
| Collector Current | DC | I_C | 5 | A |
| | Pulsed (Note 1) | I_{CP} | 8 | A |
| Emitter Current | DC | I_E | -5 | A |
| | Pulsed (Note 1) | I_{EP} | -8 | |
| Collector Power Dissipation | $T_a=25^\circ C$ | P_C | 1.0 | W |
| | $T_c=25^\circ C$ | | 10 | |
| Junction Temperature | | T_j | 150 | $^\circ C$ |
| Storage Temperature Range | | T_{stg} | -55~150 | $^\circ C$ |

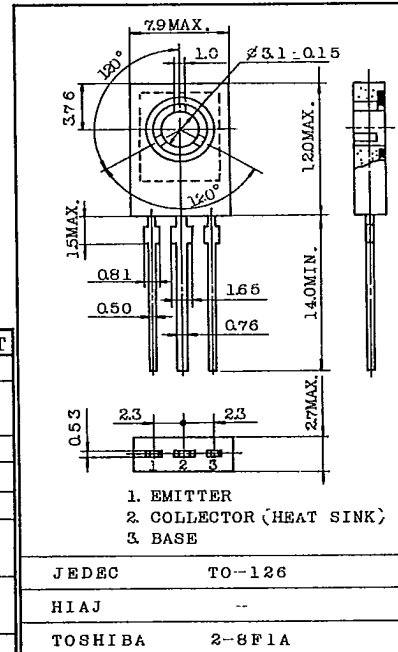
Note 1 : Pulse Test :
Pulse Width = 10ms (Max.)
Duty Cycle = 30 % (Max.)

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-------------------------|-----------------------------------|------|------|------|------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=40V$, $I_E=0$ | - | - | 100 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=8V$, $I_C=0$ | - | - | 100 | nA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=10mA$, $I_B=0$ | 20 | - | - | V |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=1mA$, $I_C=0$ | 8 | - | - | V |
| DC Current Gain | $h_{FE(1)}$ (Note 2) | $V_{CE}=2V$, $I_C=0.5A$ | 140 | - | 450 | |
| | $h_{FE(2)}$ | $V_{CE}=2V$, $I_C=4A$ | 70 | - | - | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=4A$, $I_B=0.1A$ | - | - | 1.0 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=2V$, $I_C=4A$ | - | - | 1.5 | V |
| Transition Frequency | f_T | $V_{CE}=2V$, $I_C=0.5A$ | - | 100 | - | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V$, $I_E=0$, $f=1MHz$ | - | 40 | - | pF |

Note 2 : $h_{FE(1)}$ Classification A : 140~240, B : 200~330, C : 300~450

Unit in mm



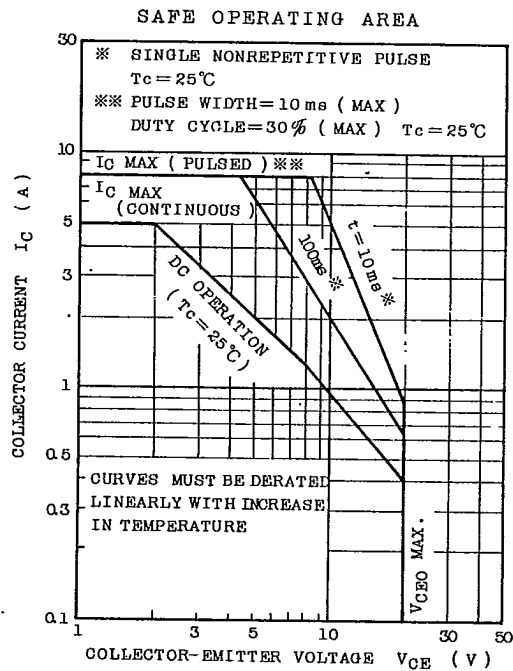
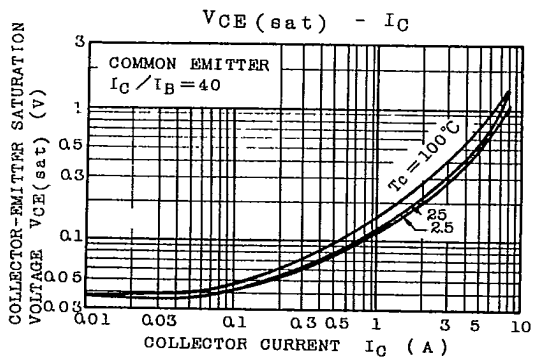
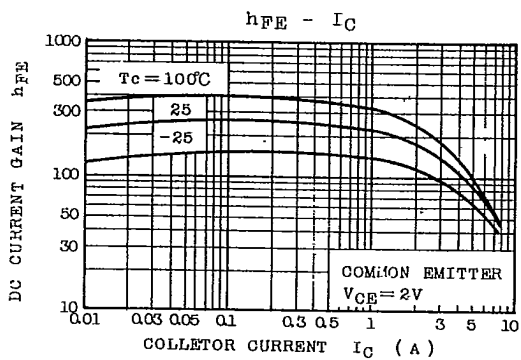
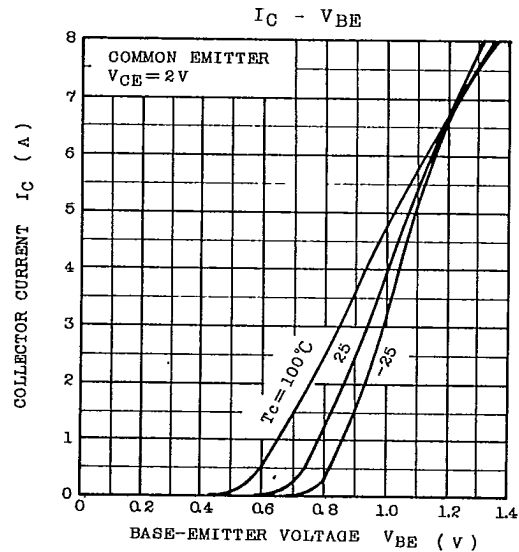
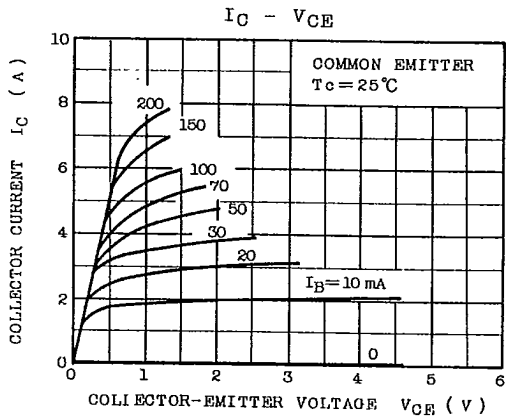
Mounting Kit No. AC46C
Weight : 0.72g

||||| TOSHIBA CORPORATION

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