

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07943 DT-33-09

2SD1407

SILICON NPN TRIPLE DIFFUSED TYPE

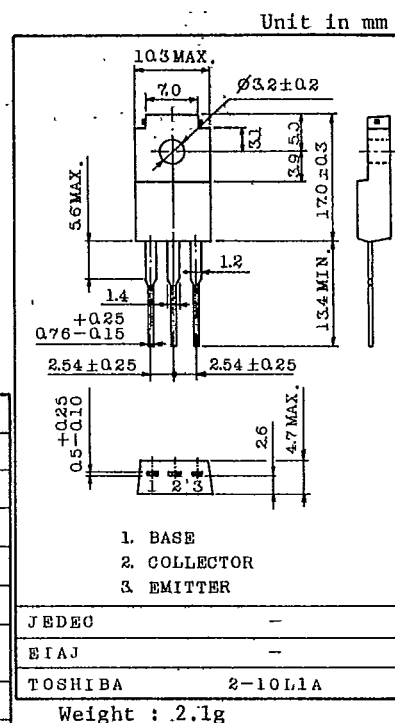
POWER AMPLIFIER APPLICATIONS.

FEATURES:

- High Breakdown Voltage : $V_{CE0}=100V$
- Low Collector Saturation Voltage : $V_{CE(sat)}=2.0V(Max.)$
- Complementary to 2SB1016
- Recommended for 30W High Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|-----------|-----------|--------------------|
| Collector-Base Voltage | V_{CBO} | 100 | V |
| Collector-Emitter Voltage | V_{CEO} | 100 | V |
| Emitter-Base Voltage | V_{EB0} | 5 | V |
| Collector Current | I_C | 15 | A |
| Base Current | I_B | 0.5 | A |
| Collector Power Dissipation ($T_c=25^{\circ}\text{C}$) | P_C | 30 | W |
| Junction Temperature | T_j | 150 | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ 150 | $^{\circ}\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_d=25^{\circ}\text{C}$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------------|-----------------------------|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB}=100V, I_E=0$ | - | - | 100 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 1 | mA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=50mA, I_B=0$ | 100 | - | - | V |
| DC Current Gain | $h_{FE}(1)$ (Note) | $V_{CE}=5V, I_C=1A$ | 40 | - | 240 | |
| | $h_{FE}(2)$ | $V_{CE}=5V, I_C=4A$ | 20 | - | - | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=4A, I_B=0.4A$ | - | - | 2.0 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=5V, I_C=1A$ | - | - | 1.5 | V |
| Transition Frequency | f_T | $V_{CE}=5V, I_C=1A$ | - | 12 | - | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | - | 100 | - | pF |

Note : hpf(1) Classification R : 40~80, O : 70~140, Y : 120~240

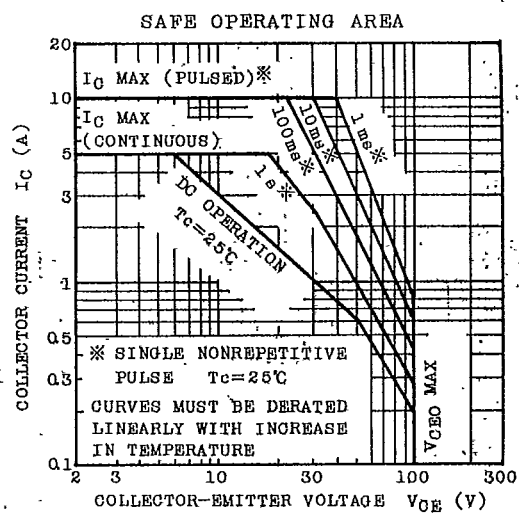
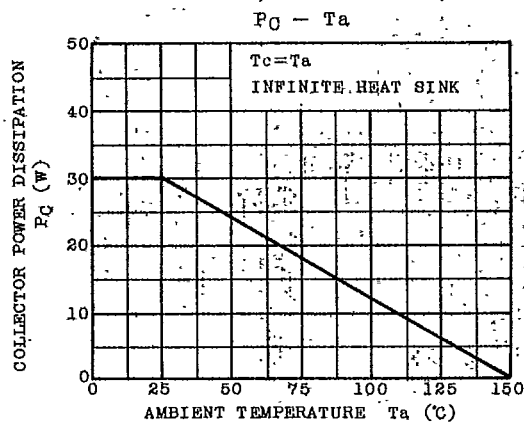
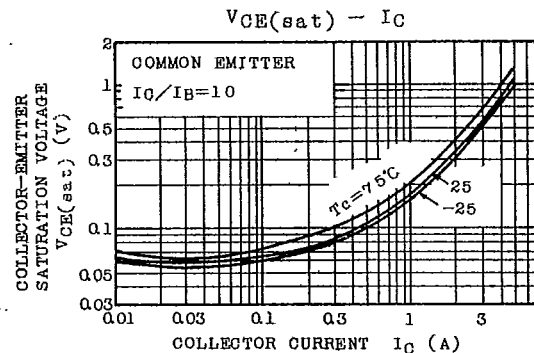
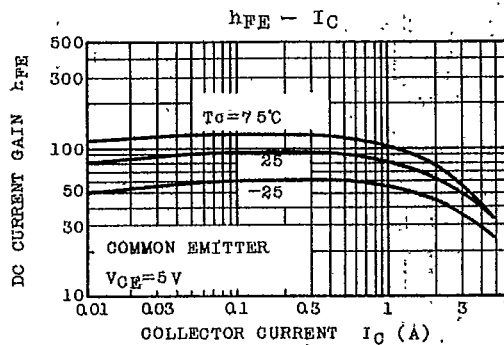
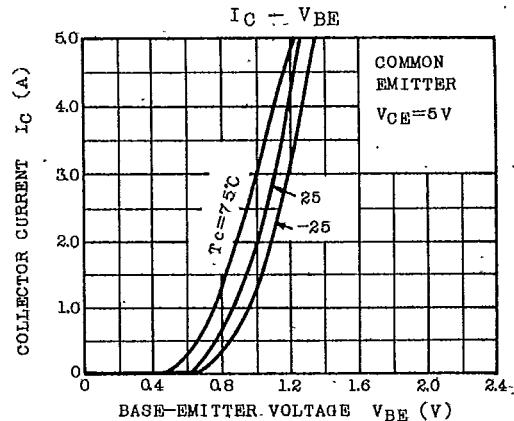
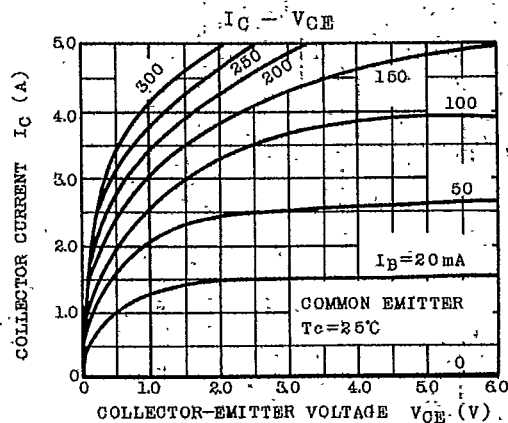
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