

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (MONOLITHIC DUAL TYPE)

2SA1349

LOW NOISE AUDIO AMPLIFIER APPLICATIONS

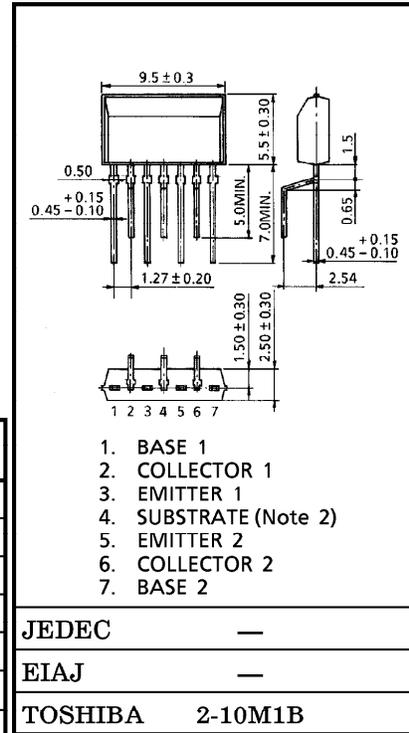
RECOMMENDED FOR CASCADE, CURRENT MIRROR CIRCUIT APPLICATIONS OF THE FIRST STAGES OF PRE, MAIN AMPLIFIERS

- 1 Chip Dual Type.
- Good Pair Characteristics.
- Low Noise : $NF=3dB$ (Max.), $R_g=10k\Omega$, $V_{CE}=-6V$, $I_C=-0.1mA$, $f=1kHz$
- High Breakdown Voltage : $V_{CEO}=-80V$ (Min.)
- Complementary to 2SC3381.

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------|
| Collector-Base Voltage | V_{CBO} | -80 | V |
| Collector-Emitter Voltage | V_{CEO} | -80 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current | I_C | -100 | mA |
| Base Current | I_B | -20 | mA |
| Collector Power Dissipation | P_C | 200×2 | mW |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature Range | T_{stg} | -55~125 | °C |

Unit in mm



Weight : 0.37g

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

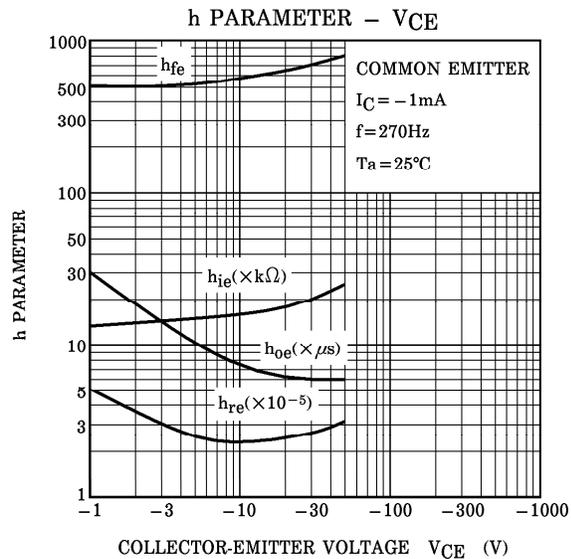
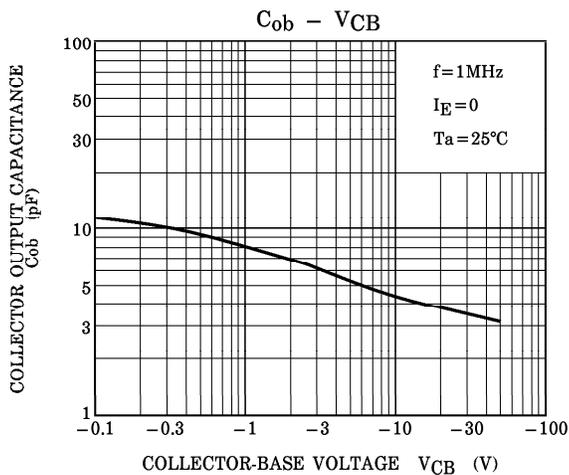
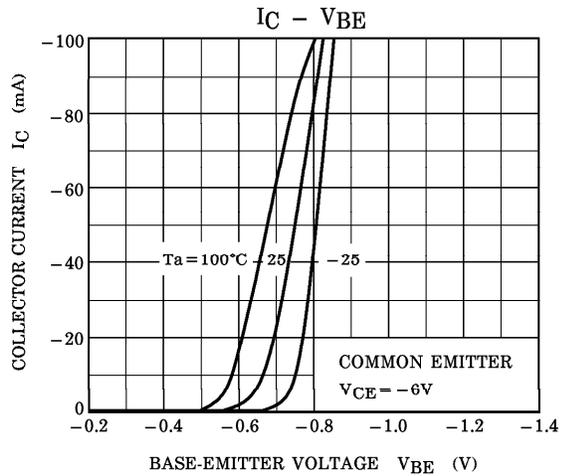
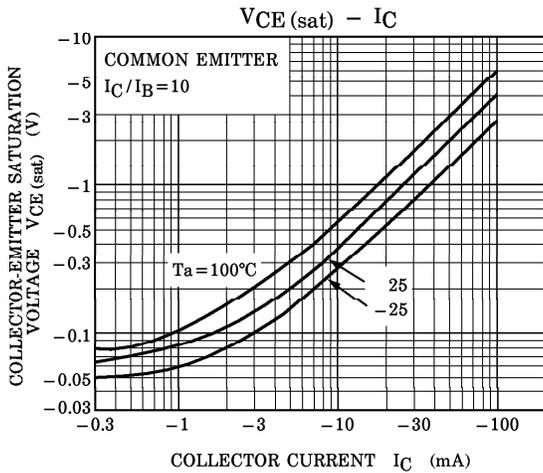
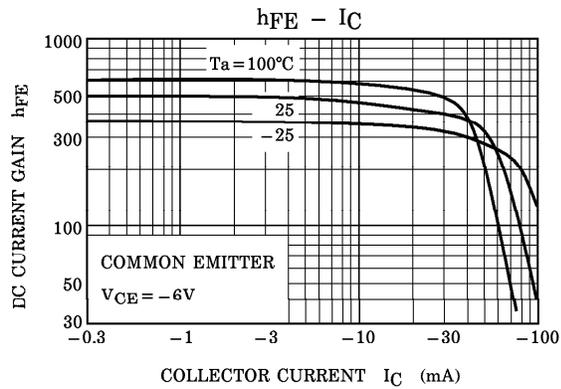
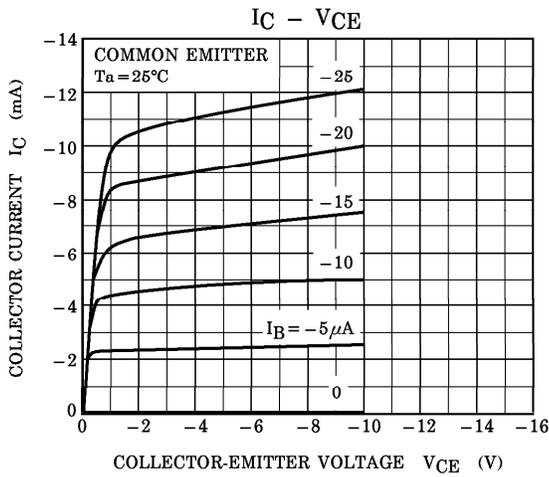
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-------------------------|---|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = -80V, I_E = 0$ | — | — | -0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | — | — | -0.1 | μA |
| DC Current Gain | h_{FE} (Note 1) | $V_{CE} = -6V, I_C = -2mA$ | 200 | — | 700 | |
| DC Current Gain Ratio | $h_{FE(S)} / h_{FE(L)}$ | $V_{CE} = -6V, I_C = -2mA$ | 0.9 | — | 1.0 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -5mA, I_B = -0.5mA$ | — | — | -0.3 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE} = -6V, I_C = -2mA$ | — | -0.6 | — | V |
| Differential Base-Emitter Voltage | $ V_{BE1} - V_{BE2} $ | $V_{CE} = -6V, I_C = -2mA$ | 0 | — | 10 | mV |
| Collector Output Capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | — | 4.2 | — | pF |
| Noise Figure | NF | $V_{CE} = -6V, I_C = -0.1mA$ $R_G = 10k\Omega, f = 1kHz$ | 0 | — | 3 | dB |

Note 1 : h_{FE} Classification GR : 200~400, BL : 350~700

2 : Use the substrate lead with open.

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