

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

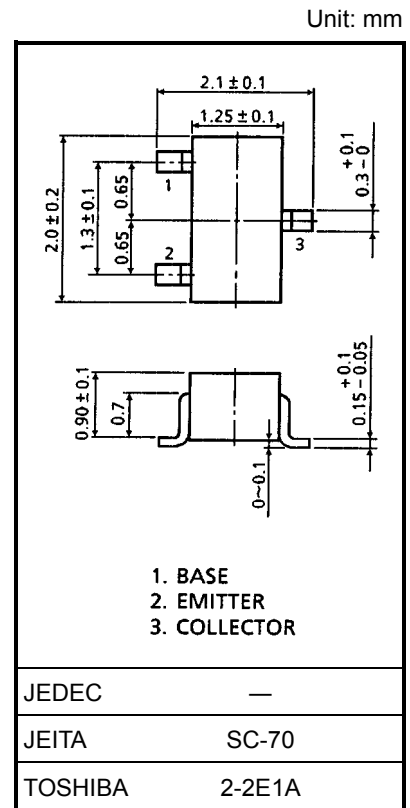
2SC4253

TV Final Picture IF Amplifier Applications

- Good linearity of f_T

Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|-----------------------------|-----------|---------|------|
| Collector-base voltage | V_{CBO} | 30 | V |
| Collector-emitter voltage | V_{CEO} | 25 | V |
| Emitter-base voltage | V_{EBO} | 4 | V |
| Collector current | I_C | 50 | mA |
| Base current | I_B | 25 | mA |
| Collector power dissipation | P_C | 100 | mW |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -55~125 | °C |

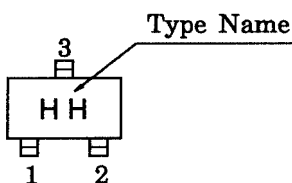


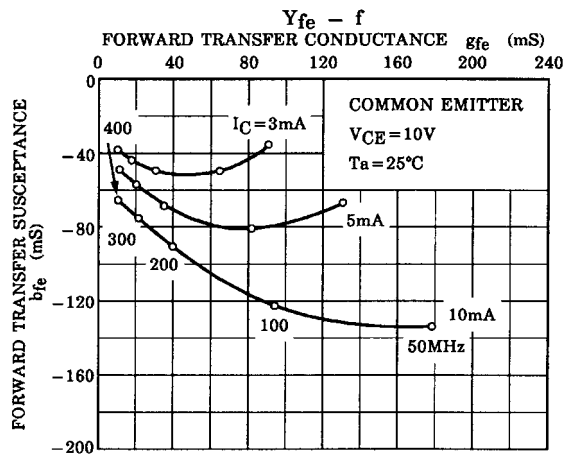
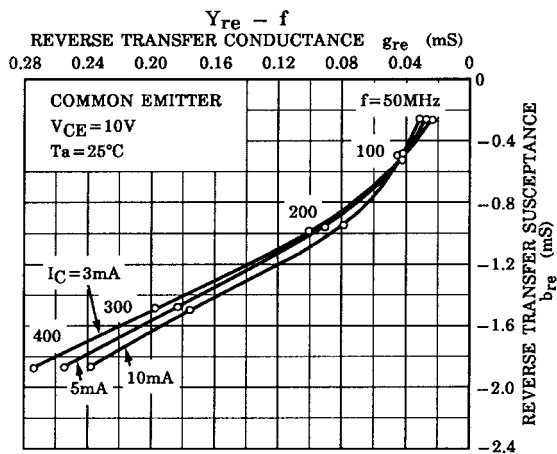
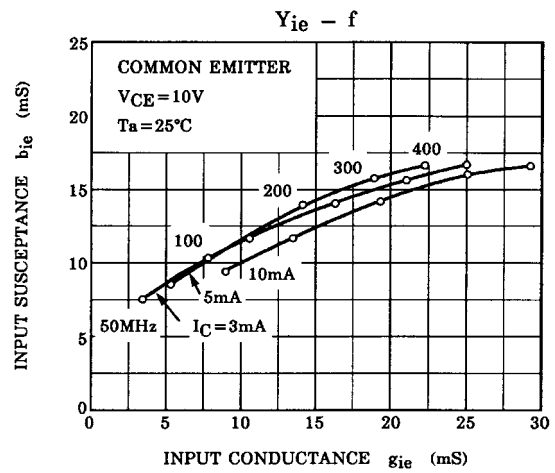
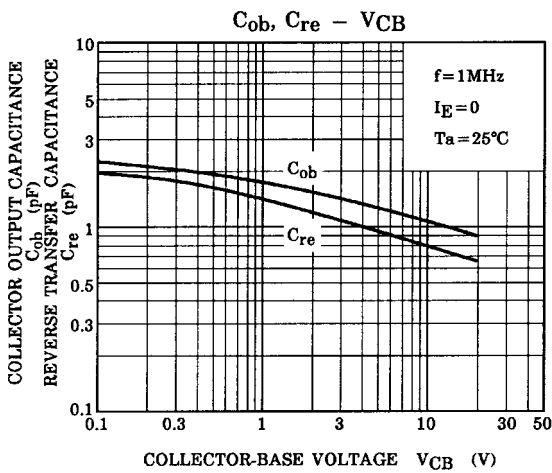
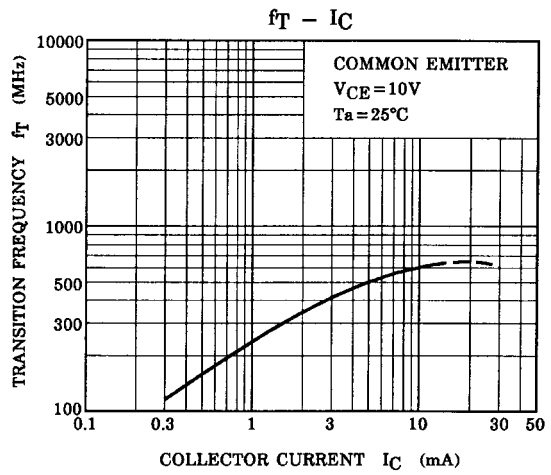
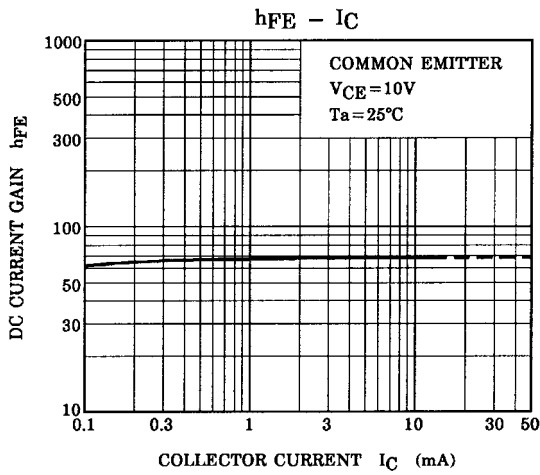
Weight: 0.006 g (typ.)

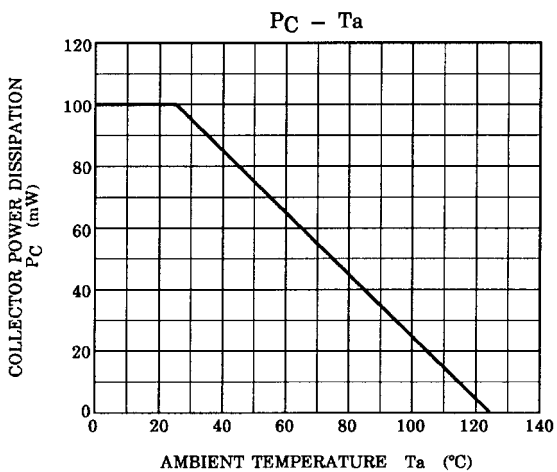
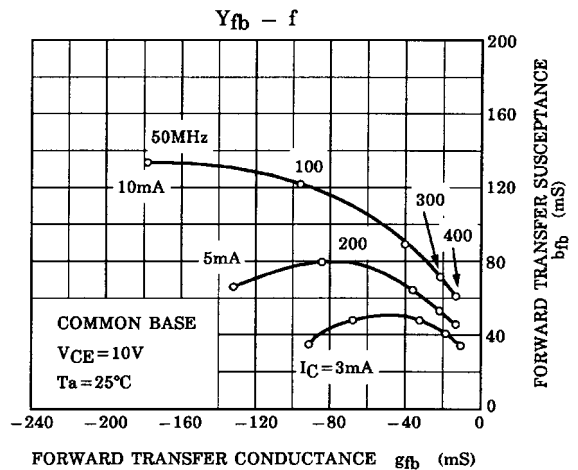
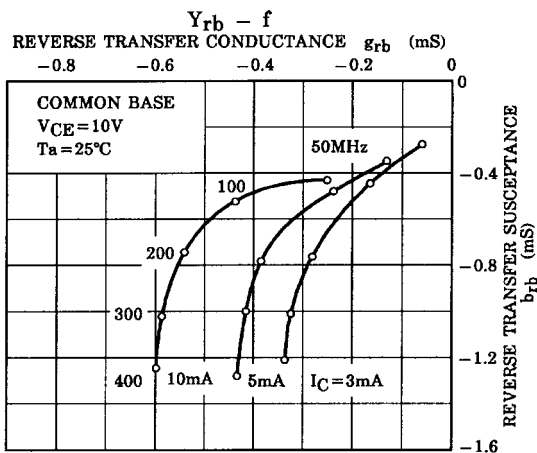
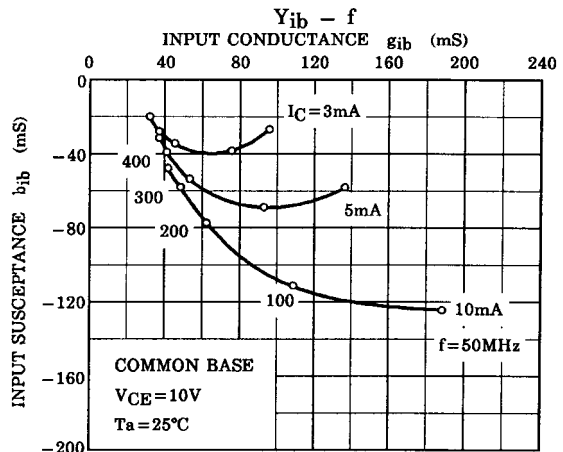
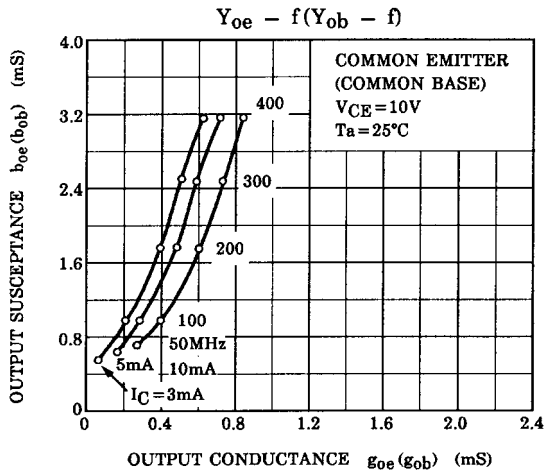
Electrical Characteristics (Ta = 25°C)

| Characteristics | | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------------------------|-------------------|---------------|--|-----|------|-----|---------------|
| Collector cut-off current | | I_{CBO} | $V_{CB} = 30\text{ V}, I_E = 0$ | — | — | 0.1 | μA |
| Emitter cut-off current | | I_{EBO} | $V_{EB} = 3\text{ V}, I_C = 0$ | — | — | 0.1 | μA |
| Collector-emitter breakdown voltage | | $V_{(BR)CEO}$ | $I_C = 1\text{ mA}, I_B = 0$ | 25 | — | — | V |
| DC current gain | | h_{FE} | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$ | 20 | 70 | 200 | |
| Saturation voltage | Collector-emitter | $V_{CE(sat)}$ | $I_C = 15\text{ mA}, I_B = 1.5\text{ mA}$ | — | — | 0.2 | V |
| | Base-emitter | $V_{BE(sat)}$ | | — | — | 1.5 | |
| Collector output capacitance | | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | — | 1.1 | 1.6 | pF |
| Collector-base time constant | | $C_c.rbb'$ | $V_{CB} = 10\text{ V}, I_C = 1\text{ mA}, f = 30\text{ MHz}$ | — | — | 25 | ps |
| Transition frequency | | f_T | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$ | 250 | 600 | — | MHz |

Marking







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