

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

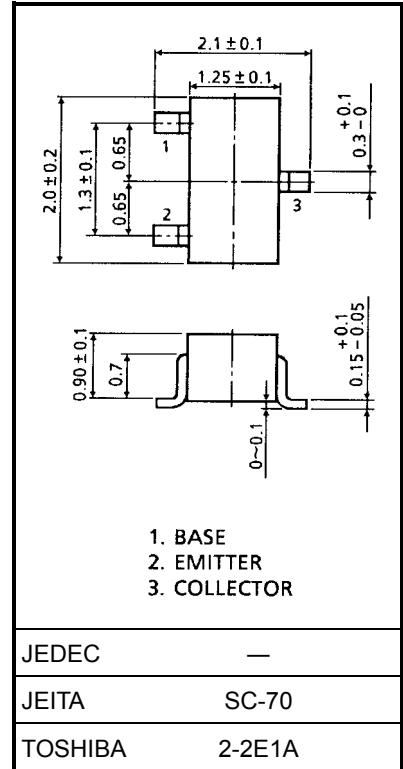
2SC4251

TV Tuner, VHF Oscillator Applications

Unit: mm

Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|-----------------------------|-----------|---------|------|
| Collector-base voltage | V_{CBO} | 30 | V |
| Collector-emitter voltage | V_{CEO} | 15 | V |
| Emitter-base voltage | V_{EBO} | 3 | 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 |

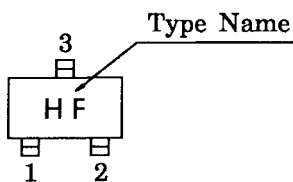


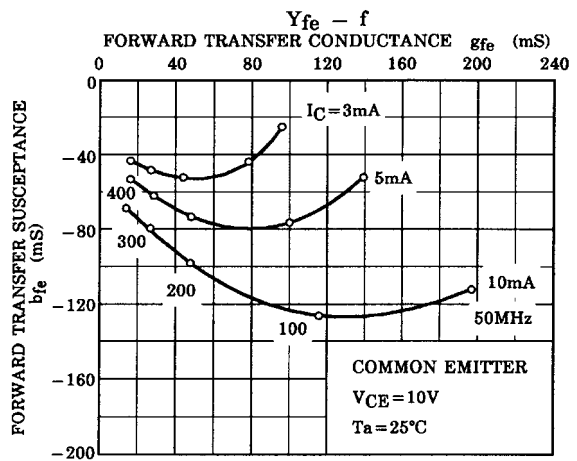
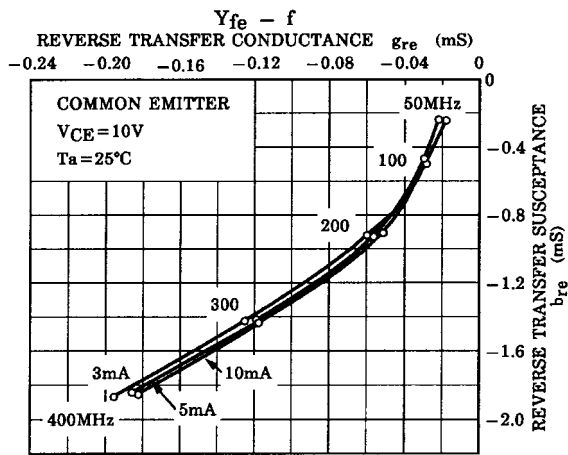
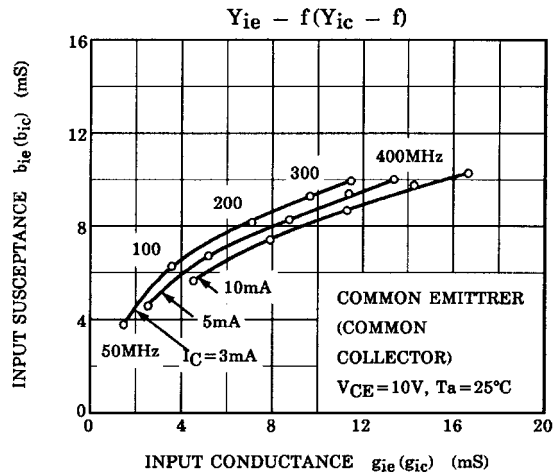
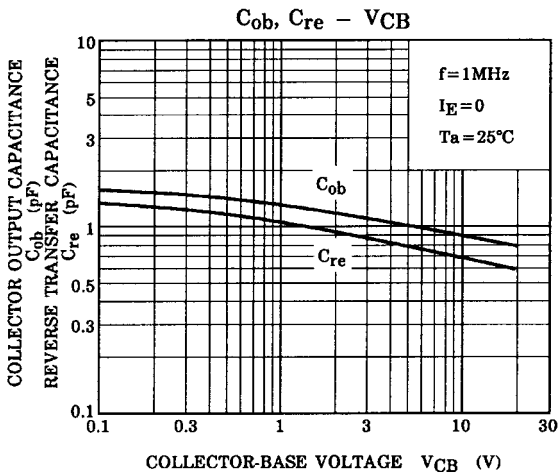
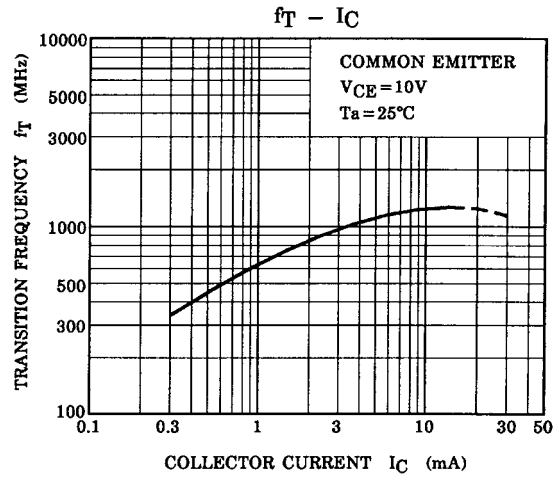
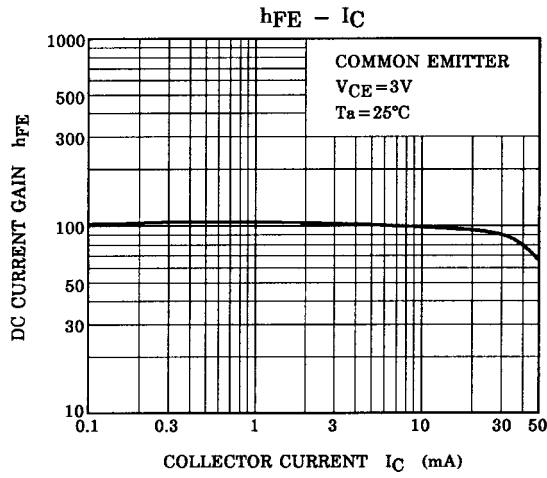
Weight: 0.006 g (typ.)

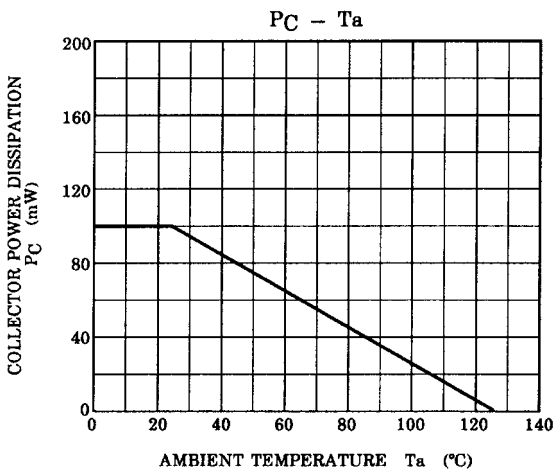
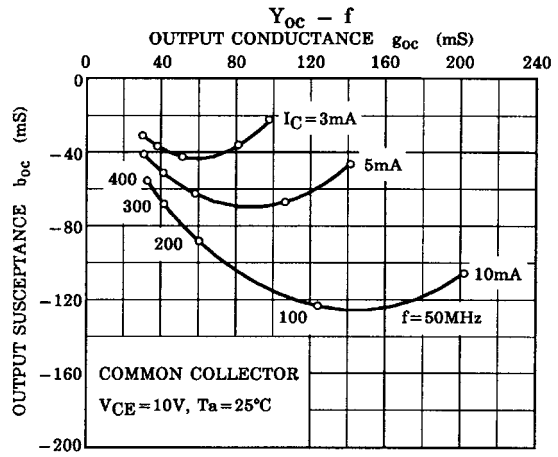
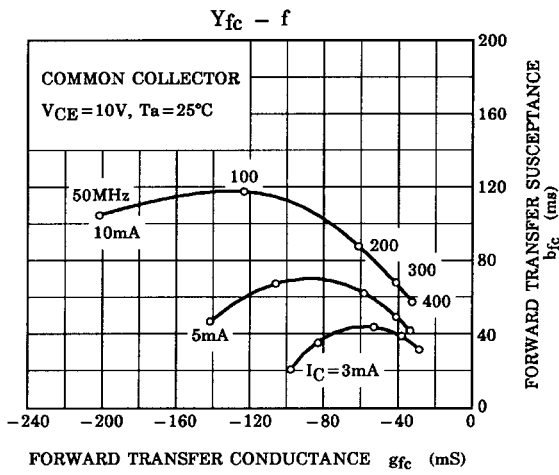
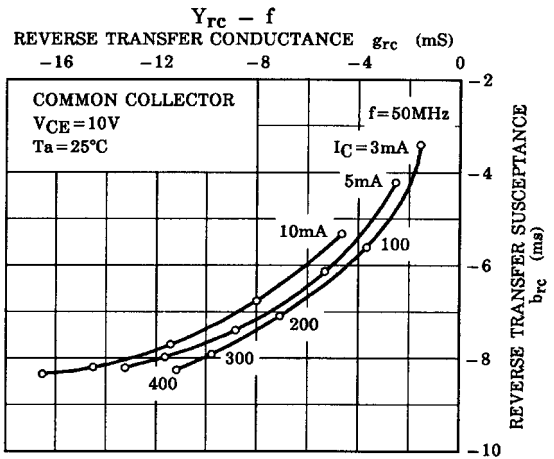
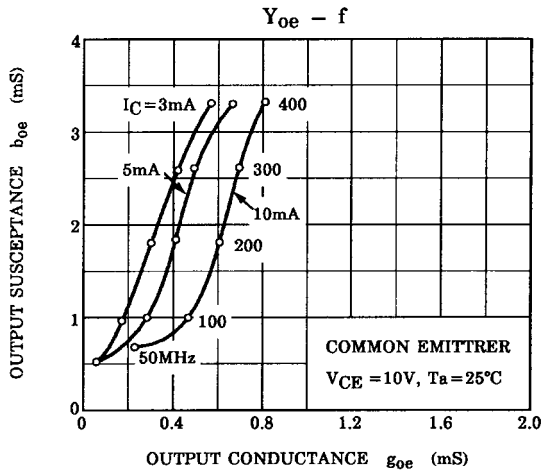
Electrical Characteristics (Ta = 25°C)

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------------------------|---------------|--|-----|------|-----|---------------|
| Collector cut-off current | I_{CBO} | $V_{CB} = 15\text{ V}, I_E = 0$ | — | — | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 3\text{ V}, I_C = 0$ | — | — | 1.0 | μA |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 1\text{ mA}, I_B = 0$ | 15 | — | — | V |
| DC current gain | h_{FE} | $V_{CE} = 3\text{ V}, I_C = 8\text{ mA}$ | 40 | 100 | 200 | |
| Transition frequency | f_T | $V_{CE} = 10\text{ V}, I_C = 8\text{ mA}$ | 650 | 1100 | — | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | — | 0.9 | 1.3 | pF |
| Collector-base time constant | $C_c.rbb'$ | $V_{CB} = 10\text{ V}, I_C = 8\text{ mA}, f = 30\text{ MHz}$ | — | 7 | 12 | ps |

Marking







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