

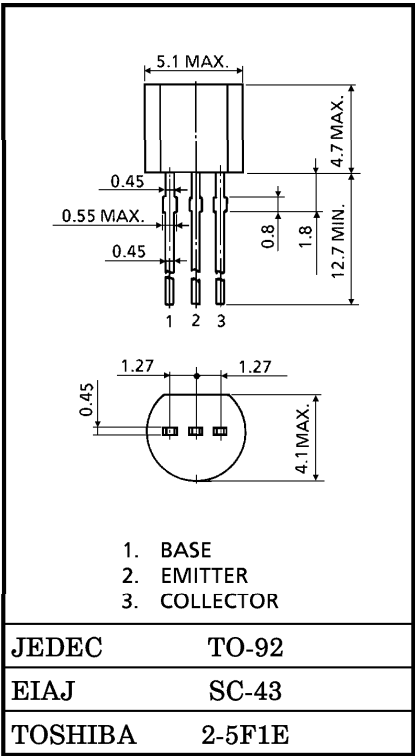
2SC2498

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATION

Unit in mm

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|------------------|---------|------|
| Collector-Base Voltage | V _{CBO} | 30 | V |
| Collector-Emitter Voltage | V _{CEO} | 20 | V |
| Emitter-Base Voltage | V _{EB0} | 3 | V |
| Collector Current | I _C | 50 | mA |
| Base Current | I _B | 25 | mA |
| Collector Power Dissipation | P _C | 300 | mW |
| Junction Temperature | T _j | 125 | °C |
| Storage Temperature Range | T _{stg} | -55~125 | °C |



Weight : 0.21 g

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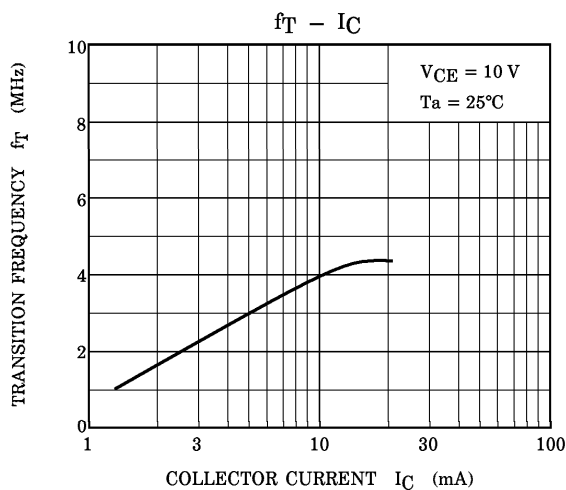
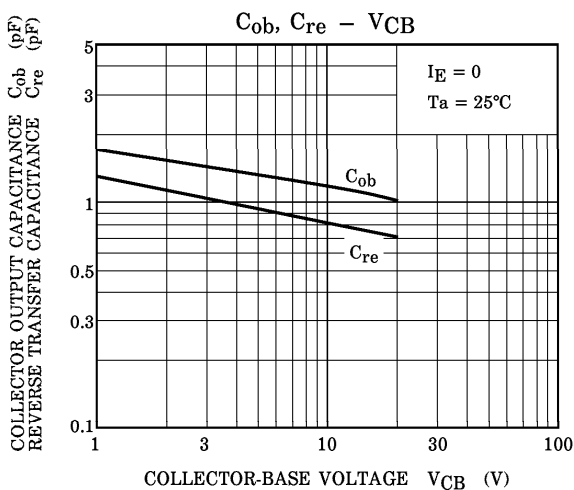
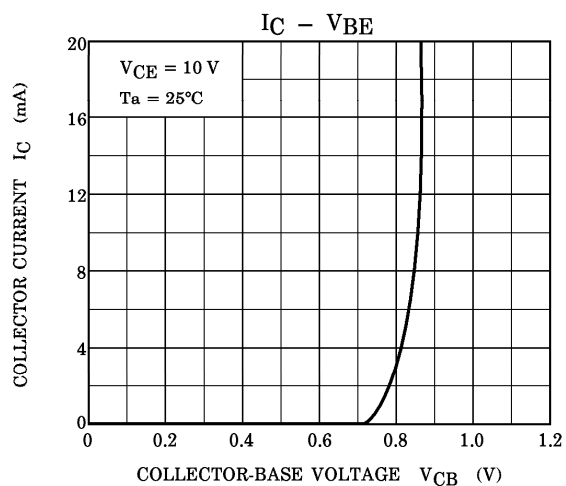
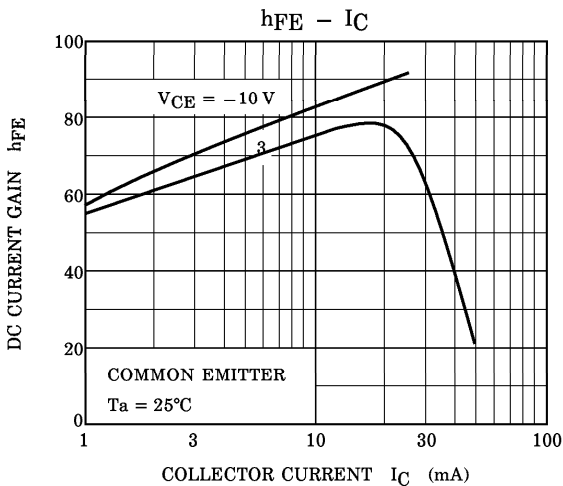
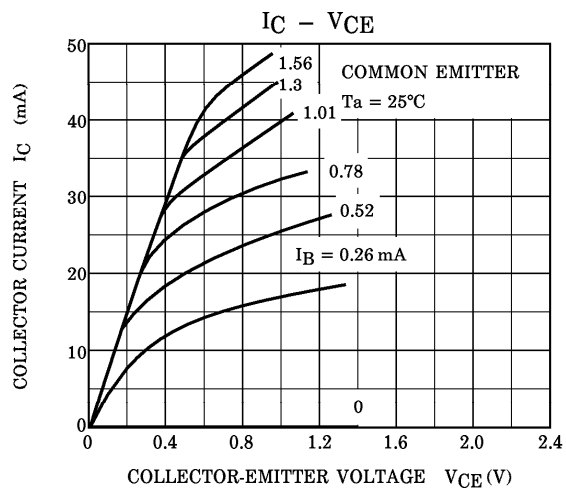
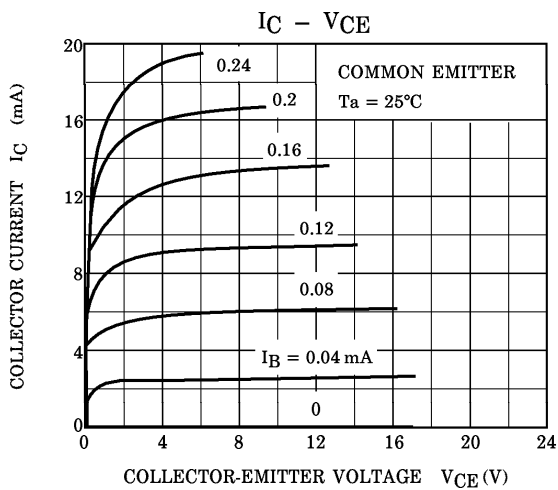
MICROWAVE CHARACTERISTICS (Ta = 25°C)

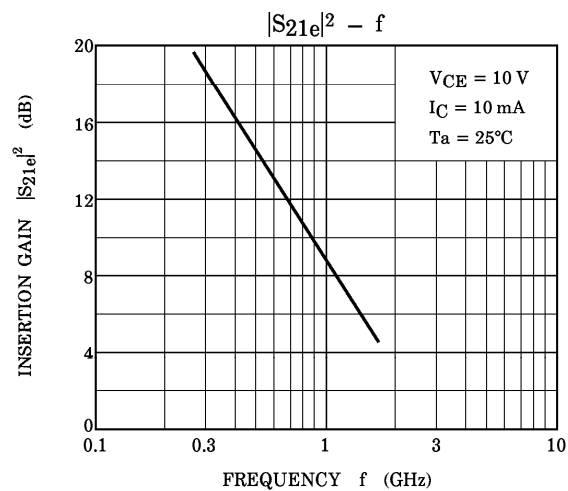
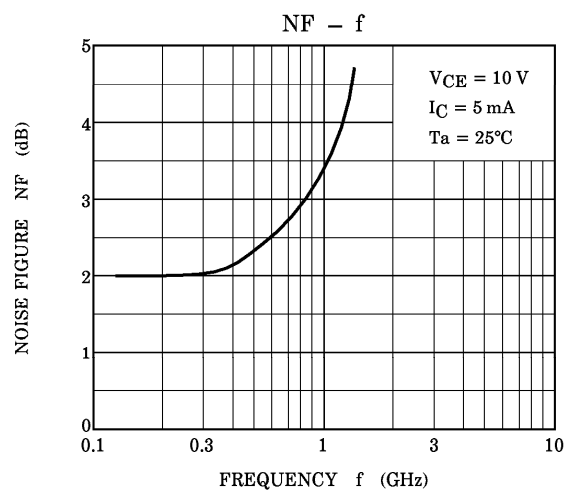
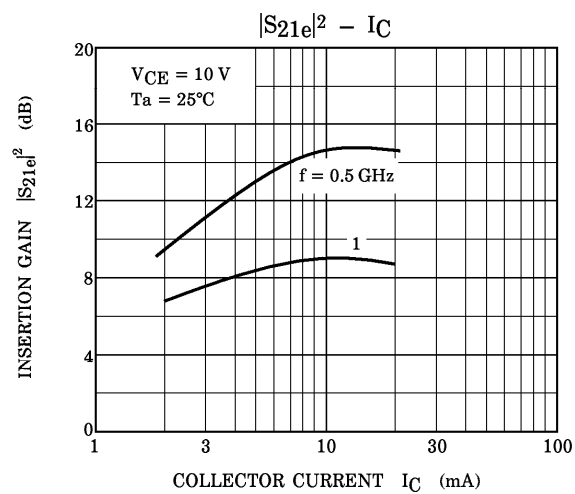
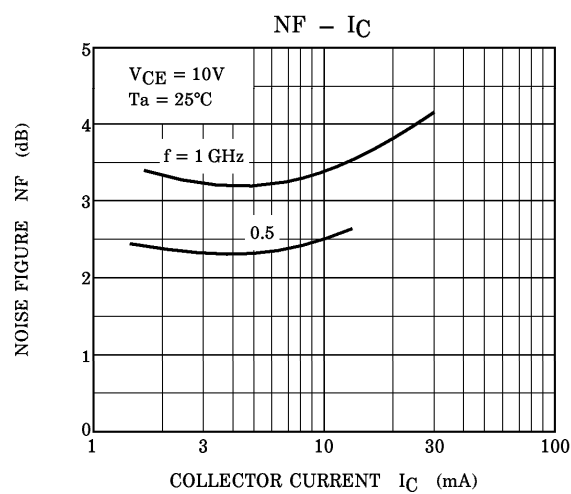
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|----------------------|-------------------|---|------|------|------|------|
| Transition Frequency | f_T | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$ | — | 3.5 | — | GHz |
| Insertion Gain | $ S_{21e} ^2 (1)$ | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA},$ $f = 500\text{ MHz}$ | — | 14.5 | — | dB |
| | $ S_{21e} ^2 (2)$ | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA},$ $f = 1\text{ GHz}$ | — | 9 | — | |
| Noise Figure | NF (1) | $V_{CE} = 10\text{ V}, I_C = 5\text{ mA},$ $f = 500\text{ MHz}$ | — | 2.5 | — | dB |
| | NF (2) | $V_{CE} = 10\text{ V}, I_C = 5\text{ mA},$ $f = 1\text{ GHz}$ | — | 4 | — | |

MICROWAVE CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|-----------|---|------|------|------|---------------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 10\text{ V}, I_E = 0$ | — | — | 1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = 1\text{ V}, I_C = 0$ | — | — | 1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 10\text{ V}, I_C = 10\text{ mA}$ | 30 | 80 | 300 | — |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ (Note) | — | 1.15 | — | pF |
| Reverse Transfer Capacitance | C_{re} | | — | 0.75 | — | |

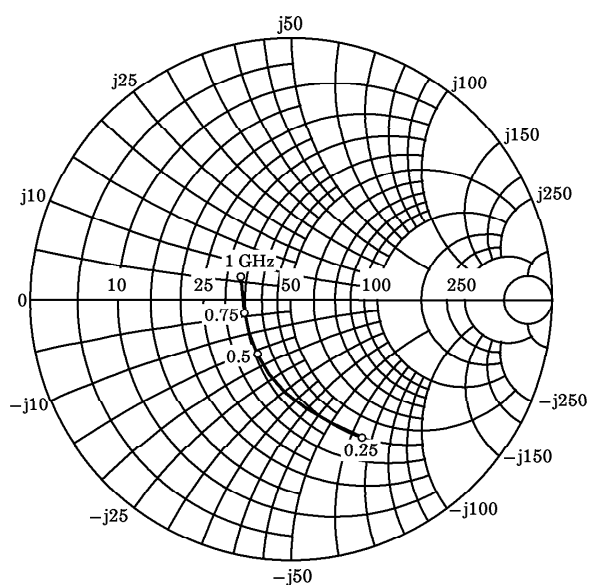
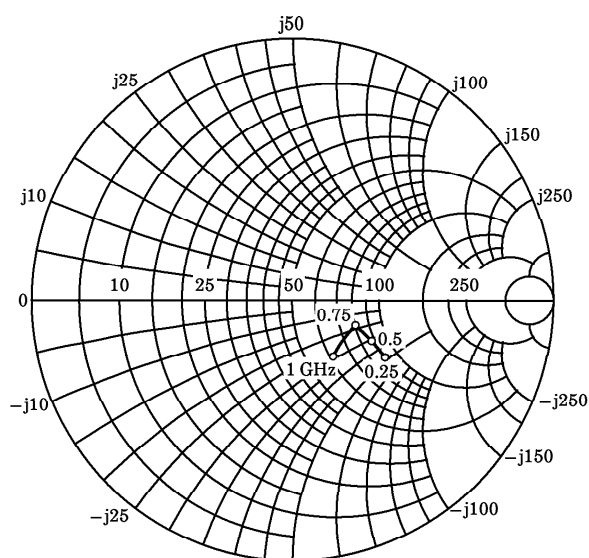
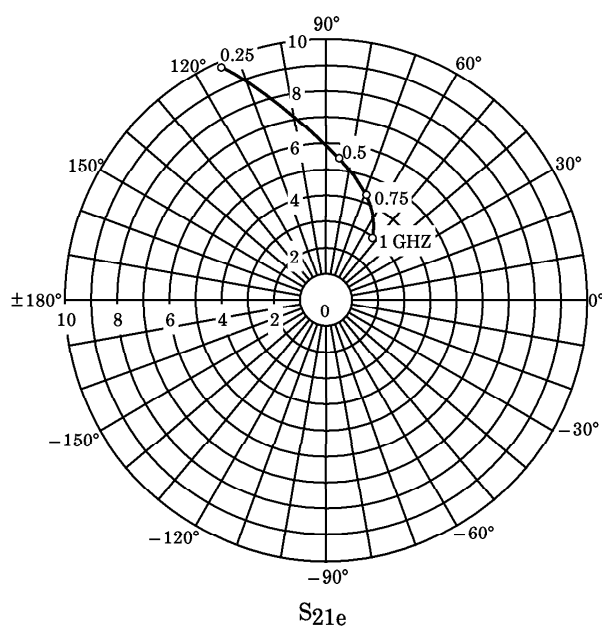
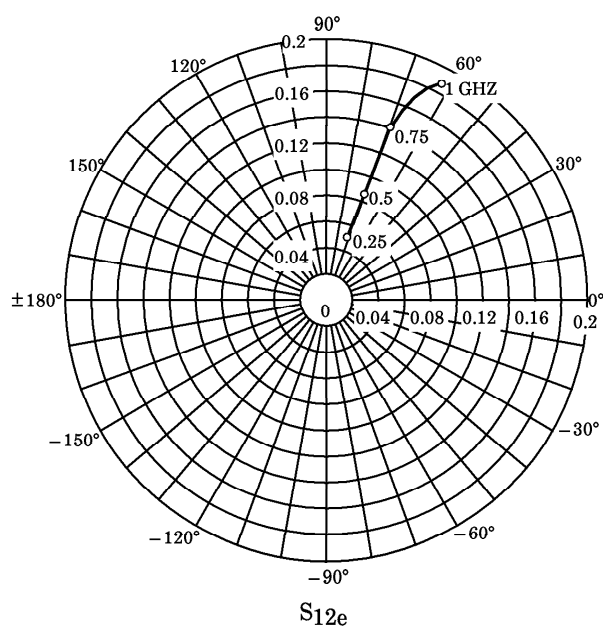
(Note) : C_{re} is measured by 3 terminal method with Capacitance Bridge.





COMMON EMITTER SMALL SIGNAL S-PARAMETERS OF 2SC2498.

$$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$$

 S_{11e} (UNIT : Ω) S_{22e} (UNIT : Ω) S_{21e}  S_{12e}