

2SC4515

Silicon NPN Epitaxial Planar Type

For 2GH band low-noise amplification

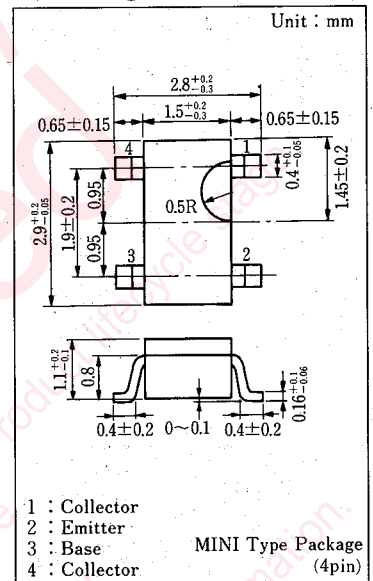
■ Features

- High transition frequency f_T
- Low noise figure NF
- A MINI type package that allows downsizing of equipment and automatic insertion by taping and magazine packaging

■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

| Item | Symbol | Value | Unit |
|-----------------------------|-----------|-----------------|------------------|
| Collector-Base Voltage | V_{CBO} | 15 | V |
| Collector-Emitter Voltage | V_{CEO} | 10 | V |
| Emitter-Base Voltage | V_{EBO} | 2 | V |
| Collector Current | I_C | 50 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | $-55 \sim +150$ | $^\circ\text{C}$ |

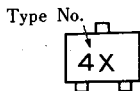
■ Package Dimensions

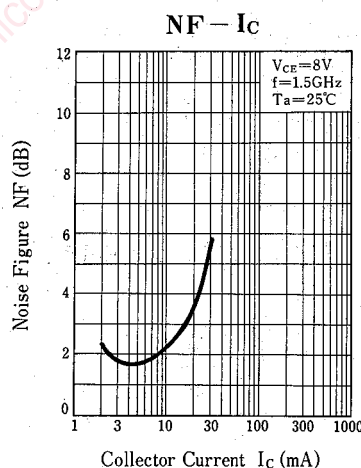
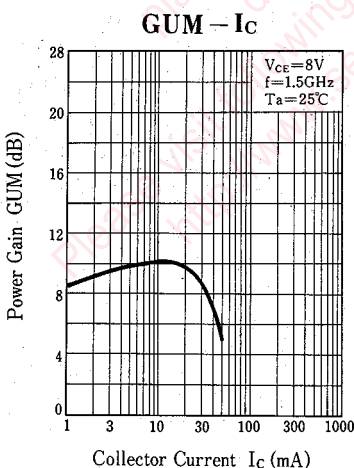
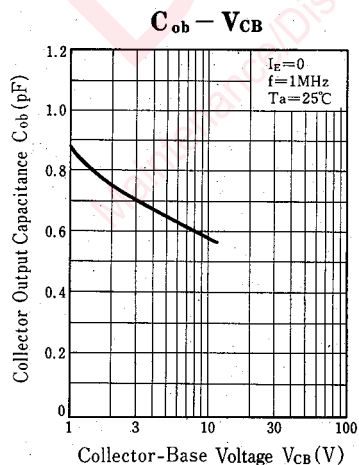
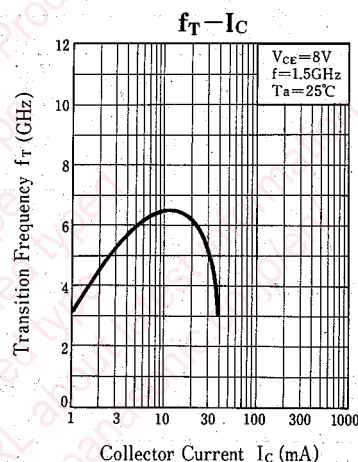
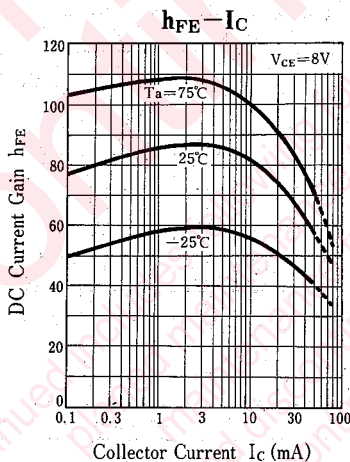
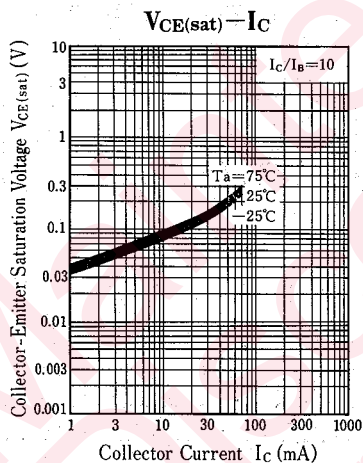
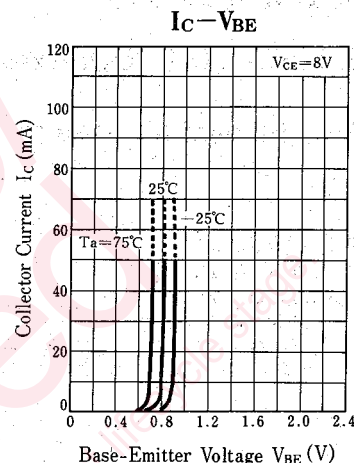
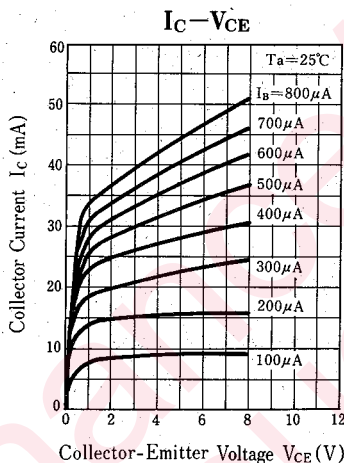
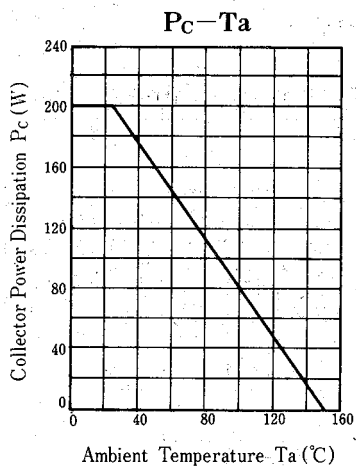


■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------|---------------|--|------|------|------|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=10\text{V}, I_E=0$ | | | 1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=1\text{V}, I_C=0$ | | | 1 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=8\text{V}, I_C=10\text{mA}$ | 50 | | 300 | |
| Transition Frequency | f_T | $V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$ | | 7 | | GHz |
| Collector Capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | 0.6 | 1.0 | pF |
| Forward Transfer Gain | $ S_{21e} ^2$ | $V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$ | | 9.5 | | dB |
| Power Gain | GUM | $V_{CE}=8\text{V}, I_C=10\text{mA}, f=1.5\text{GHz}$ | | 10.5 | | dB |
| Noise Figure | NF | $V_{CE}=8\text{V}, I_C=4\text{mA}, f=1.5\text{GHz}$ | | 1.7 | 2.5 | dB |

■ Type Name Marking





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