

<Transistor>

2SC5395

For Low Frequency Amplify Application
Silicon NPN Epitaxial Type Micro(Frame type)

DESCRIPTION

2SC5395 is a silicon NPN epitaxial type transistor. It is designed for low frequency voltage amplify application.

FEATURE

- Small collector to emitter saturation voltage.
 $V_{CE(sat)}=0.3V$ max (@ $I_C=100mA, I_B=10mA$)
- Excellent linearity of DC forward current gain
- Small package for easy mounting

APPLICATION

For small machine low frequency voltage amplify application.

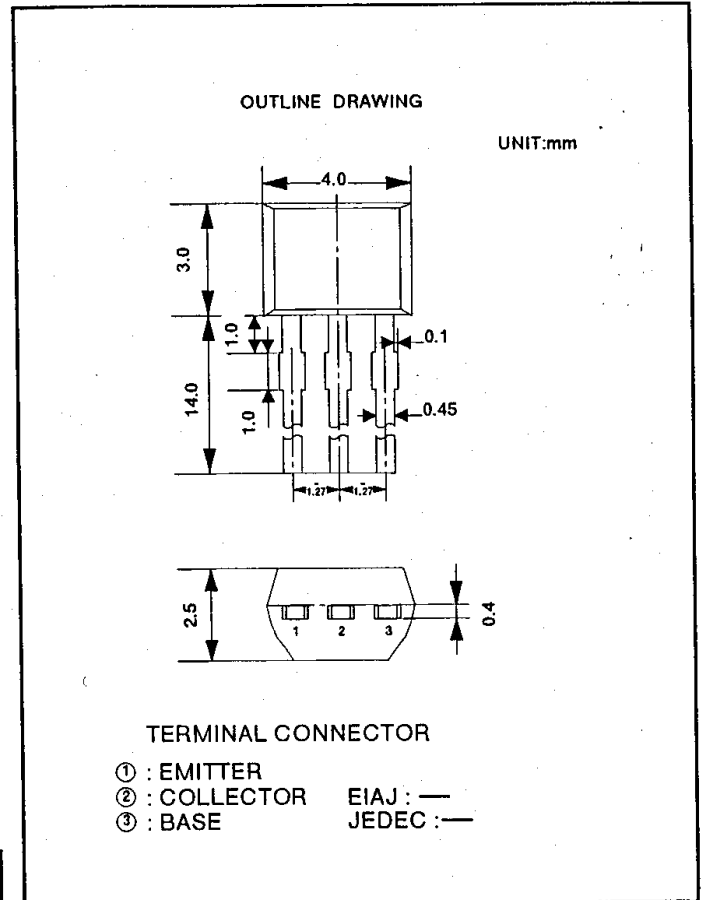
MAXIMUM RATINGS (Ta=25°C)

| SYMBOL | PARAMETER | RATINGS | UNIT |
|------------------|---------------------------------|-----------|------|
| V _{CB0} | Collector to Base voltage | 50 | V |
| V _{EB0} | Emitter to Base voltage | 6 | V |
| V _{CE0} | Collector to Emitter voltage | 50 | V |
| I _C | Collector current | 200 | mA |
| P _C | Collector dissipation (Ta=25°C) | 450 | mW |
| T _J | Junction temperature | +125 | °C |
| T _{stg} | Storage temperature | -55to+125 | °C |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| SYMBOL | PARAMETER | TEST CONDITIONS | LIMITS | | | UNIT |
|----------------------|------------------------------|--|--------|-----|-----|------|
| | | | MIN | TYP | MAX | |
| V _{(BR)CEO} | C to E break down voltage | I _C =100 μA, R _{BE} =∞ | 50 | | | V |
| I _{CB0} | Collector cut off current | V _{CB} =50V, I _E =0 | | | 0.1 | μA |
| I _{EB0} | Emitter cut off current | V _{EB} =6V, I _C =0 | | | 0.1 | μA |
| h _{FE} * | DC forward current gain | V _{CE} =6V, I _C =1mA | 150 | | 800 | — |
| h _{FE} | DC forward current gain | V _{CE} =6V, I _C =0.1mA | 50 | | | — |
| V _{CE(sat)} | C to E saturation voltage | I _C =100mA, I _B =10mA | | | 0.3 | V |
| f _T | Gain band width product | V _{CE} =6V, I _E =-10mA | | 200 | | MHz |
| C _{ob} | Collector output capacitance | V _{CB} =6V, I _E =0, f=1MHz | | 2.5 | | pF |
| NF | Noise figure | V _{CE} =6V, I _E =-0.1mA, f=1kHz, R _G =2kΩ | | | 15 | dB |

| ITEM | E | F | G |
|-----------------|---------|---------|---------|
| h _{FE} | 150~300 | 250~500 | 400~800 |

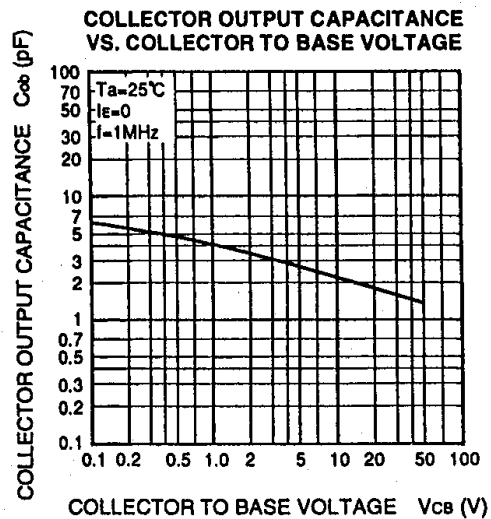
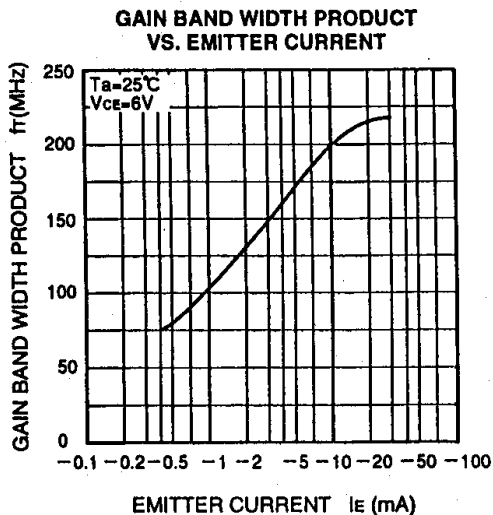
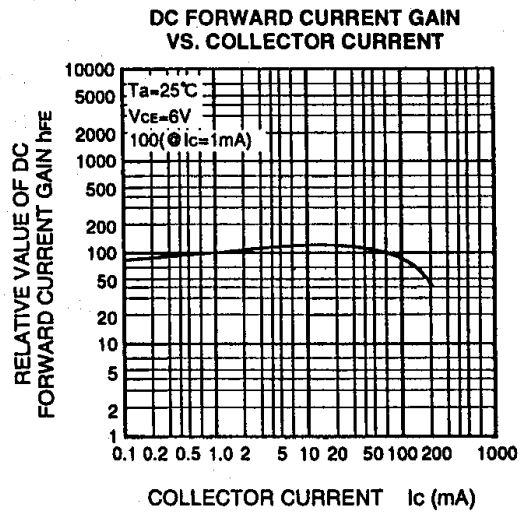
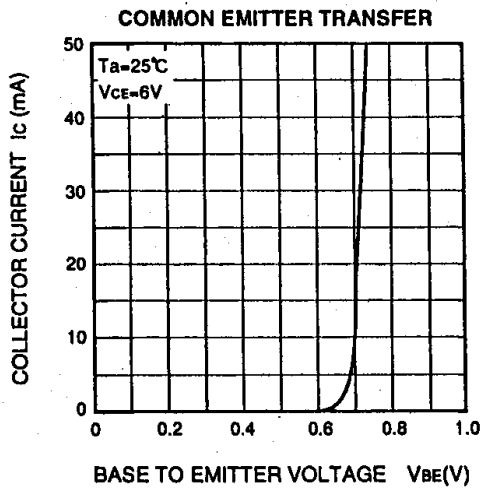
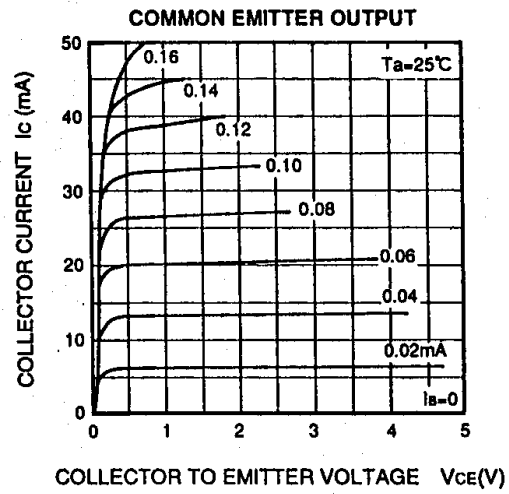
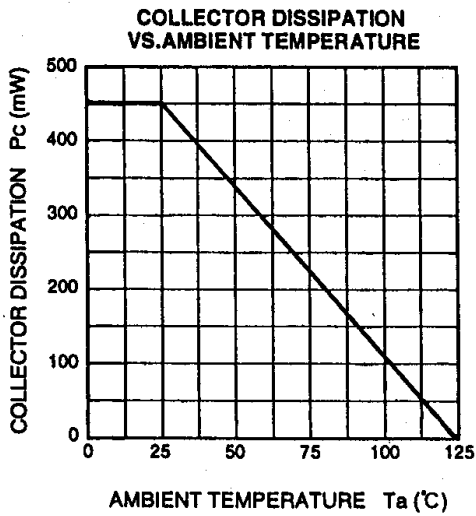


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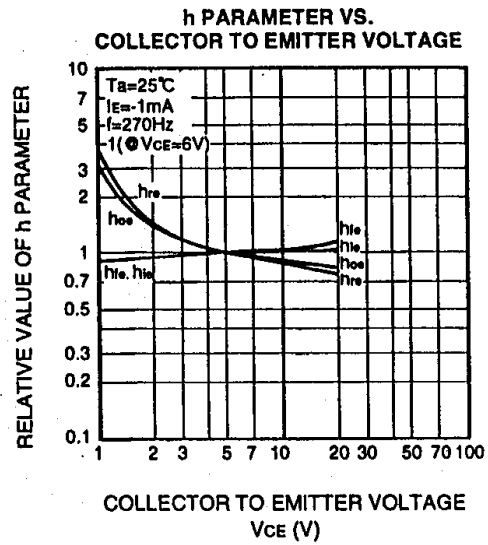
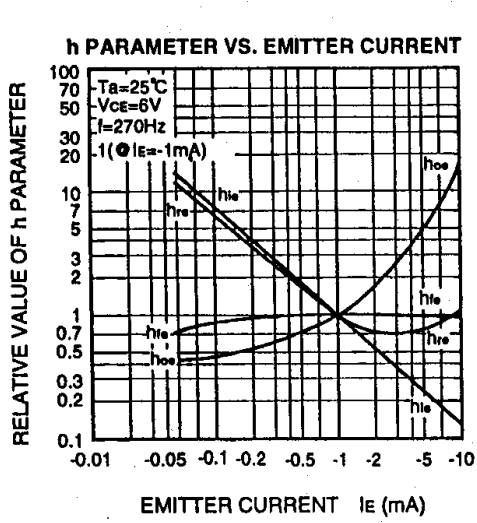
TYPICAL CHARACTERISTICS



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COMMON EMITTER h PARAMETER (TYPICAL VALUE)

| Symbol | Parameter | Test conditions | Limits | Unit |
|----------|---|--|--------|------------------|
| h_{ie} | Closed loop small signal input impedance | $T_a=25^\circ\text{C}$ $V_{CE}=6\text{V}$ $I_E=1\text{mA}$ $f=270\text{Hz}$ | 8.5 | k Ω |
| h_{re} | Open loop small signal reverse voltage amplification factor | | 0.1 | $\times 10^{-3}$ |
| h_{fe} | Closed loop small signal forward current amplification factor | | 300 | — |
| h_{oe} | Open loop small signal output admittance | | 5.5 | μS |

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