

UTC2SC945

NPNEPITAXIAL SILICON TRANSISTOR

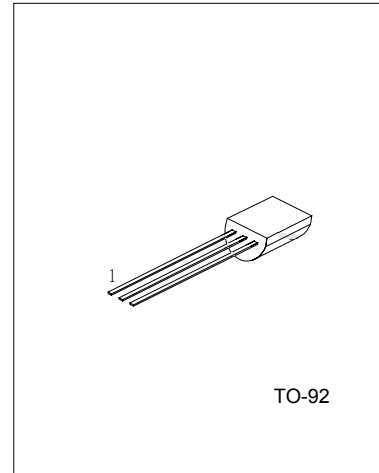
AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC NPN TRANSISTOR

DESCRIPTION

The UTC 2SC945 is an audio frequency amplifier high frequency OSC NPN transistor.

FEATURES

- *Collector-Emitter voltage:
BV_{CBO}=50V
- *Collector current up to 150mA
- *High hFE linearity
- *Complimentary to 2SA733



1:EMITTER 2:COLLECTOR 3: BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified)

| PARAMETER | SYMBOL | VALUE | UNIT |
|--------------------------------|------------------|------------|------|
| Collector-Base Voltage | V _{CBO} | 60 | V |
| Collector-Emitter Voltage | V _{CEO} | 50 | V |
| Emitter-Base Voltage | V _{EBO} | 5 | V |
| Collector Dissipation(Ta=25°C) | P _c | 250 | mW |
| Collector Current | I _c | 150 | mA |
| Base Current | I _B | 50 | mA |
| Junction Temperature | T _j | 125 | °C |
| Storage Temperature | T _{STG} | -55 ~ +150 | °C |

ELECTRICAL CHARACTERISTICS(Ta=25°C,unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector-Base Breakdown Voltage | BV _{CBO} | I _c =100μA, I _E =0 | 60 | | | V |
| Collector-Emitter Breakdown Voltage | BV _{CEO} | I _c =10mA, I _B =0 | 50 | | | V |
| Collector Cut-Off Current | I _{CBO} | V _{CB} =40V, I _E =0 | | | 100 | nA |
| Emitter Cut-Off Current | I _{EBO} | V _{EB} =3V, I _c =0 | | | 100 | nA |
| DC Current Gain(note) | h _{FE} | V _{CE} =6V, I _c =1mA | 70 | | 700 | |
| Collector-Emitter Saturation Voltage | V _{CE(sat)} | I _c =100mA, I _B =10mA | | 0.1 | 0.3 | V |
| Current Gain Bandwidth Product | f _T | V _{CE} =10V, I _c =50mA | 100 | 190 | | MHz |
| Output Capacitance | C _{ob} | V _{CB} =10V, I _E =0, f=1MHz | | 2.0 | 3.0 | pF |
| Noise Figure | NF | I _c =0.1mA, V _{CE} =6V R _G =10kΩ, f=100Hz | | 4.0 | 6.0 | dB |

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CLASSIFICATION OF hFE

| RANK | O | G | Y | L |
|-------|--------|---------|---------|---------|
| RANGE | 70-140 | 200-400 | 120-240 | 350-700 |

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

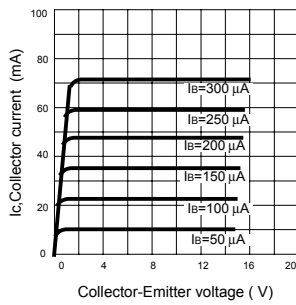


Fig.2 DC current Gain

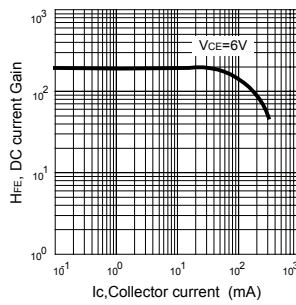


Fig.3 Base-Emitter on Voltage

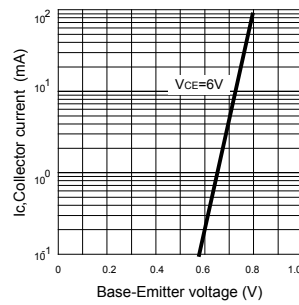


Fig.4 Saturation voltage

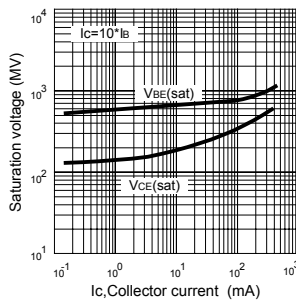


Fig.5 Current gain-bandwidth product

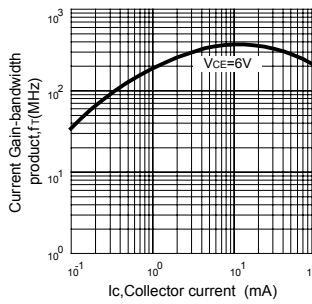


Fig.6 Collector output Capacitance

