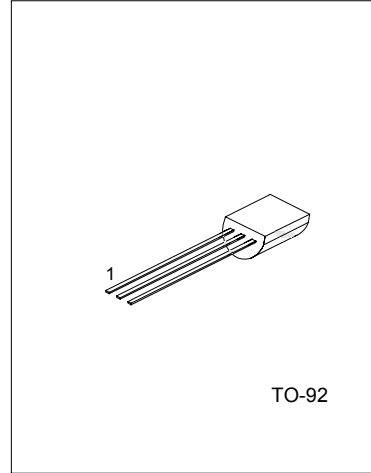


UTC2SC1815 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER
HIGH FREQUENCY OSC NPN
TRANSISTOR

FEATURES

- *Collector-Emitter voltage:
BV_{CEO}=50V
- *Collector current up to 150mA
- * High h_{FE} linearity
- *complimentary to 2SA1015



TO-92

1:EMITTER 2:COLLECTOR 3. BASE

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

| PARAMETER | SYMBOL | RATING | UNIT |
|--------------------------------|------------------|------------|------|
| Collector-base voltage | V _{CB0} | 60 | V |
| Collector-emitter voltage | V _{CEO} | 50 | V |
| Emitter-base voltage | V _{EB0} | 5 | V |
| Collector dissipation(Ta=25°C) | P _c | 400 | 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 cut-off current | I _{CBO} | V _{CB} =60V,I _E =0 | | | 100 | nA |
| Emitter cut-off current | I _{EBO} | V _{EB} =5V,I _C =0 | | | 100 | nA |
| DC current gain(note) | h _{FE1} h _{FE2} | V _{CE} =6V,I _C =2mA V _{CE} =6V,I _C =150mA | 70 25 | | 700 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =100mA,I _B =10mA | | 0.1 | 0.25 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C =100mA,I _B =10mA | | | 1.0 | V |
| Current gain bandwidth product | f _T | V _{CE} =10V,I _C =50mA | 80 | | | 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 | | 1.0 | 1.0 | dB |

UTC2SC1815 NPN EPITAXIAL SILICON TRANSISTOR

CLASSIFICATION OF hFE1

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

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

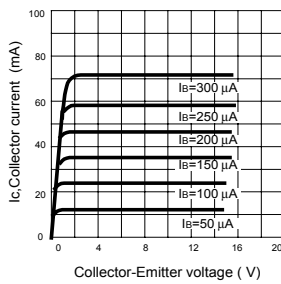


Fig.2 DC current Gain

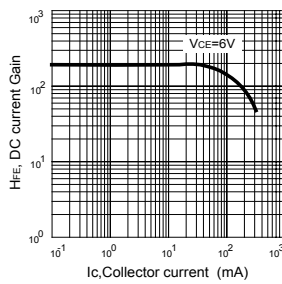


Fig.3 Base-Emitter on Voltage

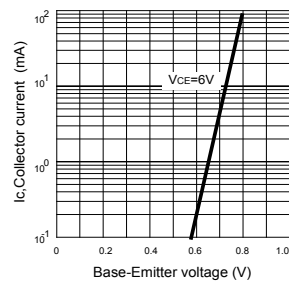


Fig.4 Saturation voltage

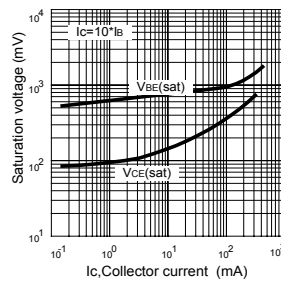


Fig.5 Current gain-bandwidth product

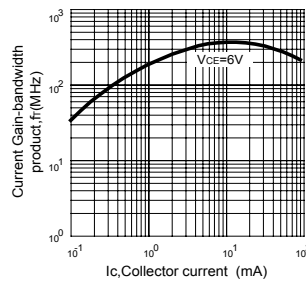


Fig.6 Collector output Capacitance

