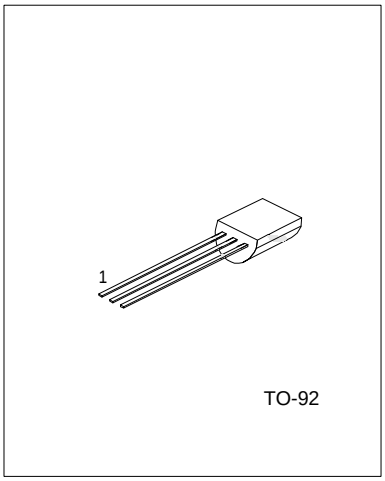
# UTC 2SB772S PNP EPITAXIAL SILICON TRANSISTOR

## MEDIUM POWER LOW VOLTAGE TRANSISTOR




TO-92

1:EMITTER 2:COLLECTOR 3:BASE

### DESCRIPTION

The UTC 2SB772S is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

### FEATURES

*High current output up to 3A
*Low saturation voltage
*Complement to 2SD882S

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

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -40 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -30 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -5 | V |
| Collector Dissipation( Tc=25°C) | Pc | 10 | W |
| Collector Dissipation( Ta=25°C) | Pc | 1 | W |
| Collector Current(DC) | Ic | -3 | A |
| Collector Current(PULSE) | Ic | -7 | A |
| Base Current | $I_B$ | -0.6 | A |
| Junction Temperature | $T_j$ | 150 | °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 | $I_{CBO}$ | $V_{CB}$=-30V,$I_E$=0 | | | -1000 | nA |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=-3V,Ic=0 | | | -1000 | nA |
| DC Current Gain(note 1) | $h_{FE1}$ | $V_{CE}$=-2V,Ic=-20mA | 30 | 200 | | |
| | $h_{FE2}$ | $V_{CE}$=-2V,Ic=-1A | 100 | 150 | 400 | |
| Collector-Emitter Saturation Voltage | $V_{CE}$(sat) | Ic=-2A,$I_B$=-0.2A | | -0.3 | -0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE}$(sat) | Ic=-2A,$I_B$=-0.2A | | -1.0 | -2.0 | V |
| Current Gain Bandwidth Product | $f_T$ | $V_{CE}$=-5V,Ic=-0.1A | | 80 | | MHz |
| Output Capacitance | Cob | $V_{CB}$=-10V,$I_E$=0,f=1MHz | | 45 | | pF |

Note 1:Pulse test:PW<300μs,Duty Cycle<2%

### CLASSIFICATION OF hFE

| RANK | Q | P | E |
|---|---|---|---|
| RANGE | 100-200 | 160-320 | 200-400 |

## TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

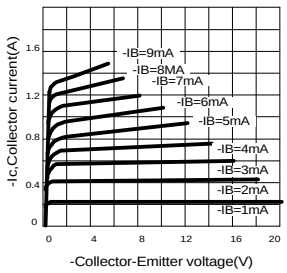



Fig.2 Derating curve of safe operating areas

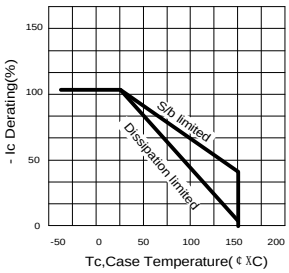



Fig.3 Power Derating

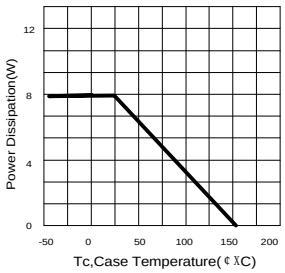



Fig.4 Collector Output capacitance

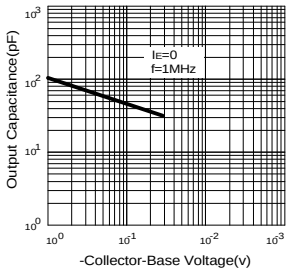



Fig.5 Current gain-bandwidth product

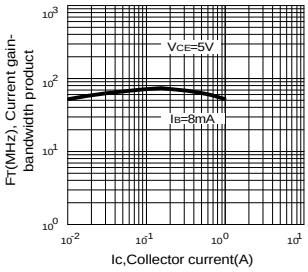



Fig.6 Safe operating area

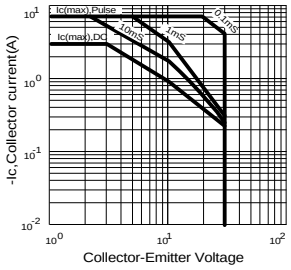



Fig.7 DC current gain

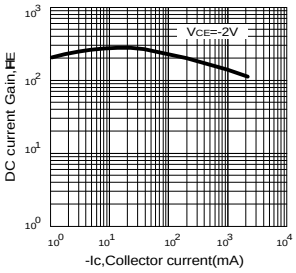
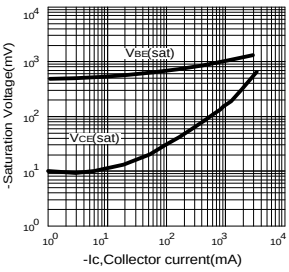



Fig.8 Saturation Voltage



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