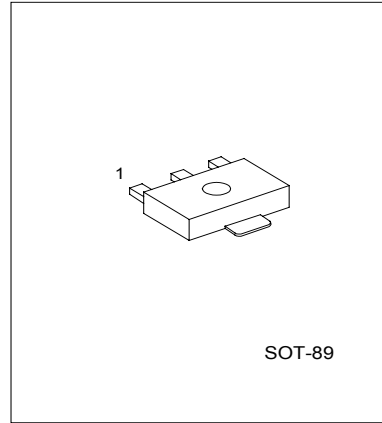


# UTC2SC4548 NPN EPITAXIAL PLANAR SILICON TRANSISTOR

## HIGH VOLTAGE DRIVER APPLICATION

### FEATURES

- \*High breakdown voltage.
- \*Excellent hFE linearity.



SOT-89

1:EMITTER 2:COLLECTOR 3:BASE

### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER                   | SYMBOL | RATING     | UNIT |
|-----------------------------|--------|------------|------|
| Collector-Base Voltage      | VCBO   | 400        | V    |
| Collector-Emitter Voltage   | VCEO   | 400        | V    |
| Emitter-Base Voltage        | VEBO   | 5          | V    |
| Collector Current           | Ic     | 200        | mA   |
| Collector Current (PULSE)   | Icp    | 400        | mA   |
| Collector Power Dissipation | Pc     | 1.3        | W    |
| Junction Temperature        | Tj     | 150        | °C   |
| Storage Temperature         | Tstg   | -55 ~ +150 | °C   |

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

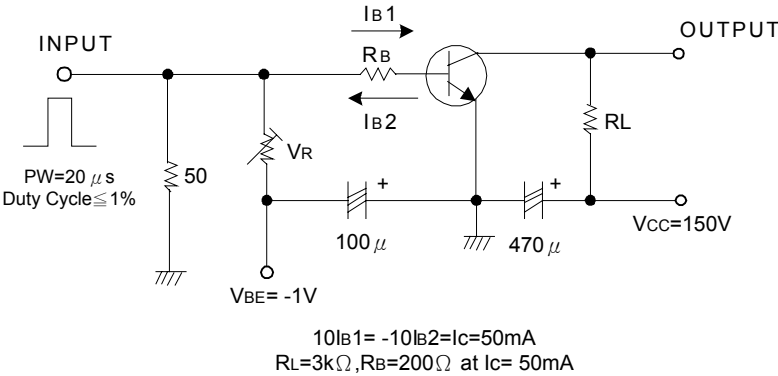
| PARAMETER                          | SYMBOL   | TEST CONDITIONS      | MIN | TYP  | MAX | UNIT |
|------------------------------------|----------|----------------------|-----|------|-----|------|
| Collect-Base Breakdown Voltage     | BVCBO    | IC= 10μA, IE=0       | 400 |      |     | V    |
| Collect-Emitter Breakdown Voltage  | BVCEO    | IC= 1mA, IB=0, RBE=∞ | 400 |      |     | V    |
| Emitter-Base Breakdown Voltage     | BVEBO    | IE= 10μA, IC=0       | 5   |      |     | V    |
| Collector Cutoff Current           | ICBO     | VCB= 300V, IE=0      |     |      | 0.1 | μA   |
| Emitter Cutoff Current             | IEBO     | VEB=4V, IC=0         |     |      | 0.1 | μA   |
| DC Current Transfer Ratio          | hFE      | VCE=10V, IC=50mA     | 60  |      | 200 |      |
| Collect-Emitter Saturation Voltage | VCE(sat) | IC=50mA, IB=5mA      |     | 0.6  |     | V    |
| Base-Emitter Saturation Voltage    | VBE(sat) | IC=50mA, IB=5mA      |     |      | 1.0 | V    |
| Output Capacitance                 | Cob      | VCB=30V, f=1MHz      |     | 4    |     | pF   |
| Reverse Transfer Capacitance       | Cre      | VCB=30V, f=1MHz      |     | 3    |     | pF   |
| Gain-Bandwidth Product             | fT       | VCE=30V, IC=10mA     |     | 70   |     | MHz  |
| Turn-on Time                       | ton      | See test circuit     |     | 0.25 |     | μs   |
| Turn-off Time                      | toff     | See test circuit     |     | 5.0  |     | μs   |

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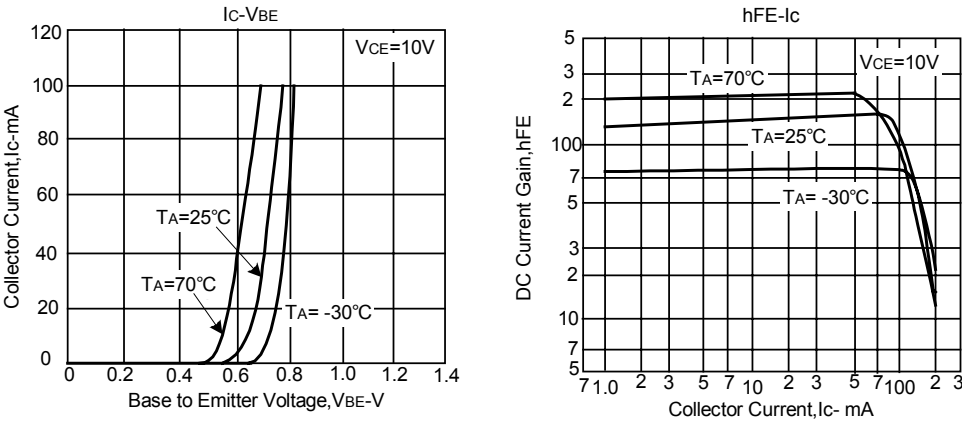
## CLASSIFICATION OF hFE

| RANK  | D      | E       |
|-------|--------|---------|
| RANGE | 60-120 | 100-200 |

## TEST CIRCUIT (Unit : resistance : $\Omega$ , capacitance : F)



## ELECTRICAL CHARACTERISTICS CURVES



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