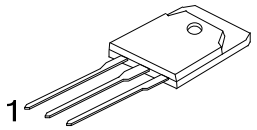
UN2488 **Preliminary** ***NPN EPITAXIAL SILICON TRANSISTOR***

# NPN SLICON POWER TRANSISTOR




TO-3P

## ■ DESCRIPTION

The UTC **UN2488** is an NPN epitaxial transistor, it uses UTC's advanced technology to provide the customers with high collector-emitter breakdown voltage and ultra-high DC current gain, etc.

## ■ FEATURES

* High collector-emitter breakdown voltage
* Ultra-high DC current gain

## ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| UN2488L-x-T3P-T | UN2488G-x-T3P-T | TO-3P | B | C | E | Tube |

Note: Pin Assignment: A: Anode, K: Cathode

UN2488L-x-T3P-T
(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Free

(1) T: Tube
(2) T3P: TO-3P
(3) x: refer to Classification of $h_{FE}$
(4) L: Lead Free, G: Halogen Free

## ■ MARKING INFORMATION

| PACKAGE MARKING | |
|---|---|
| TO-3P | UTC<br>UN2488□<br>□□□□□□<br>Lot Code<br>Data Code<br>L: Lead Free<br>G: Halogen Free<br>1 |

## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°C, unless otherwise specified)

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 160 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 150 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 5 | V |
| Collector Current | $I_C$ | 10 | A |
| Base Current | $I_B$ | 1 | A |
| Collector Power Dissipation ($T_C$=25°C) | $P_C$ | 150 | W |
| Junction Temperature | $T_J$ | 150 | °C |
| Storage Temperature | $T_{STG}$ | -55 ~+150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL CHARACTERISTICS ($T_A$ =25°C, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-Off Current | $I_{CBO}$ V | $_{CB}$=160V, $I_E$=0A | | | 100 | μA |
| Emitter Cut-Off Current | $I_{EBO}$ V | $_{EB}$=5V, $I_C$=0A | | | 100 | μA |
| Collector-Emitter Voltage | $V_{CEO}$ I | $_C$=30mA 150 | | | | V |
| DC Current Gain | $h_{FE}$ | $V_{CE}$=4V, $I_C$=7A 500 | 0 | | 30000 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ I | $_C$=7A, $I_B$=7mA | | | 2.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ I | $_C$=7A, $I_B$=7mA | | | 3.0 | V |
| Current Gain Bandwidth Product | $f_T$ V | $_{CE}$=12V, $I_E$=2A | 5 | 5 | | MHz |
| Output Capacitance | $C_{ob}$ V | $_{CB}$=10V, f=1MHz, $I_E$=0A | 95 | | | pF |

## ■ CLASSIFICATION OF $h_{FE}$

| RANK | O | P | Y |
|---|---|---|---|
| RANGE | 5000 ~ 12000 | 6500 ~ 20000 | 15000 ~ 30000 |