



## MN2510

Preliminary

**NPN EPITAXIAL SILICON TRANSISTOR**

### NPN TRANSISTOR

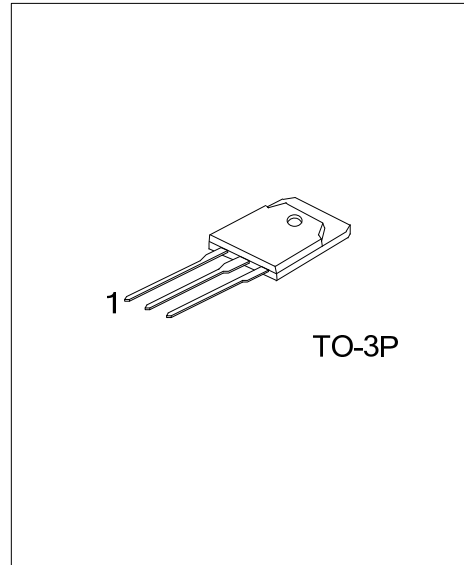
#### DESCRIPTION

The UTC **MN2510** is an NPN transistor, it uses UTC's advanced technology to provide the customers with high DC current gain and high collector-emitter breakdown voltage, etc.

The UTC **MN2510** is suitable for automobile power amplifiers, etc.

#### FEATURES

- \* High DC current gain (MIN = 40 @  $V_{CE} = 4V, I_C = 12A$ )
- \* High collector-emitter breakdown voltage (MIN = 100V)



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MN2510L-x-T3P-T	MN2510G-x-T3P-T	TO-3P	B	C	E	Tube

Pin Assignment: B: Base C: Collector E: Emitter

<p>MN2510L-x-T3P-T</p>	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Halogen Free</p>	<p>(1) T: Tube</p> <p>(2) T3P: TO-3P</p> <p>(3) refer to CLASSIFICATION OF <math>h_{FE}</math></p> <p>(4) L: Lead Free, G: Halogen Free</p>
------------------------	---	---

■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	25	A
Base Current	$I_B$	5	A
Collector Power Dissipation ( $T_C=25^\circ\text{C}$ )	$P_C$	125	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ 150	$^\circ\text{C}$

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 ( $T_A=25^\circ\text{C}$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=100\text{V}$			10	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=6\text{V}$			10	$\mu\text{A}$
Collector-Emitter Voltage	$V_{(BR)CEO}$	$I_C=50\text{mA}$	100			V
DC Current Gain (Note 1)	$h_{FE}$	$V_{CE}=4\text{V}, I_C=12\text{A}$	40		120	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=12\text{A}, I_B=1.2\text{A}$			1.5	V
Base- Emitter Saturation Voltage	$V_{BE(ON)}$	$V_{CE}=4\text{V}, I_C=12\text{A}$			1.8	V
Cut-Off Frequency	$f_T$	$V_{CE}=12\text{V}, I_E=-1\text{A}$		20		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$		200		pF

■ CLASSIFICATION OF  $h_{FE}$

RANK	R	O
$h_{FE1}$	40~80	60~120

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.