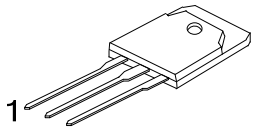
MN2510 Preliminary ***NPN EPITAXIAL SILICON TRANSISTOR***

NPN TRANSISTOR



TO-3P

■ 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

MN2510L-x-T3P-T

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

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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°C)	Pc	125	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)

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

■ CLASSIFICATION OF h_{FE}

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