

# UTC MPSA94 PNP EPITAXIAL SILICON TRANSISTOR

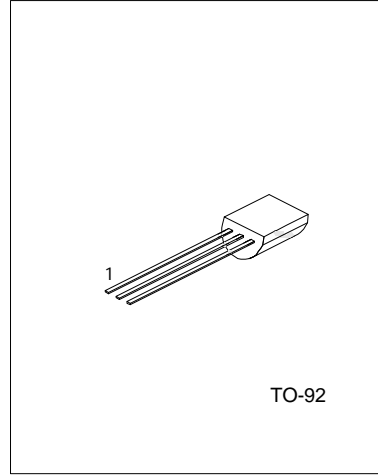
## HIGH VOLTAGE TRANSISTOR

### FEATURES

- \*Collector-Emitter voltage:  
V<sub>CEO</sub>=400V
- \*Collector Dissipation:  
P<sub>c(max)</sub>=625mW
- \*Low collector-Emitter saturation voltage

### APPLICATIONS

- \*Telephone switching
- \*High voltage switch



1:EMITTER 2:BASE 3:COLLECTOR

### ABSOLUTE MAXIMUM RATINGS ( Operating temperature range applies unless otherwise specified )

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CB0</sub>	-400	V
Collector-emitter voltage	V <sub>CEO</sub>	-400	V
Emitter-base voltage	V <sub>EB0</sub>	-6	V
Collector dissipation(T <sub>a</sub> =25°C)	P <sub>c</sub>	625	mW
Collector current	I <sub>c</sub>	-300	mA
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

### ELECTRICAL CHARACTERISTICS(T<sub>J</sub>=25°C,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV <sub>CB0</sub>	I <sub>c</sub> =-100μA,I <sub>E</sub> =0	-400			V
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>c</sub> =-1mA,I <sub>B</sub> =0	-400			V
Collector-emitter breakdown voltage	BV <sub>CES</sub>	I <sub>c</sub> =-100μA,V <sub>BE</sub> =0	-400			V
Emitter-base breakdown voltage	BV <sub>EB0</sub>	I <sub>E</sub> =-100μA,I <sub>c</sub> =0	-5			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =-300V,I <sub>E</sub> =0			-100	nA
Collector cut-off current	I <sub>CES</sub>	V <sub>CB</sub> =-400V,V <sub>BE</sub> =0			-1	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> =-4V,I <sub>c</sub> =0			100	nA
DC current gain(note)	h <sub>FE</sub>	V <sub>CE</sub> =-10V,I <sub>c</sub> =-1mA V <sub>CE</sub> =-10V,I <sub>c</sub> =-10mA V <sub>CE</sub> =-10V,I <sub>c</sub> =-50mA V <sub>CE</sub> =-10V,I <sub>c</sub> =-100mA	60 70 70 40		300	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =-10mA,I <sub>B</sub> =-1mA I <sub>c</sub> =-50mA,I <sub>B</sub> =-5mA			-0.20 -0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =-10mA,I <sub>B</sub> =-1mA			-0.75	V
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-20V,I <sub>E</sub> =0, f=1MHz			7	pF

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

**UTC** UNISONIC TECHNOLOGIES CO. LTD

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## TYPICAL PARAMETERS PERFORMANCE

Fig.1 Dc current gain

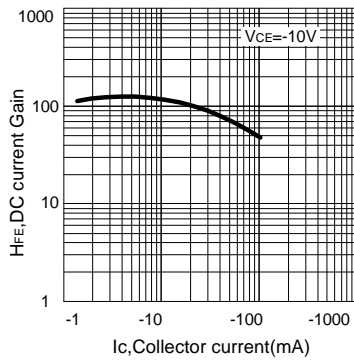


Fig.2 Base-emitter saturation voltage

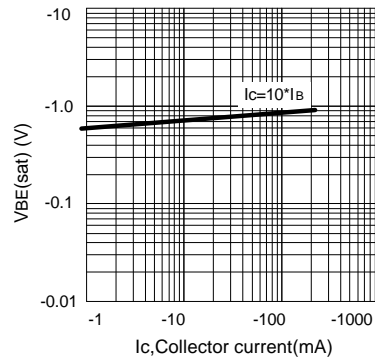


Fig.3 Collector-emitter saturation voltage

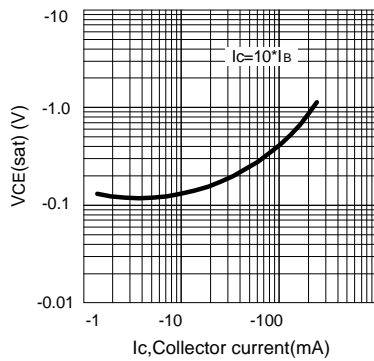


Fig.4 Collector Output capacitance

