

UTCMPSA92/93 PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE PNP TRANSISTOR

DESCRIPTION

The UTC MPSA92/93 are high voltage PNP transistors, designed for telephone signal switching and for high voltage amplifier.

FEATURES

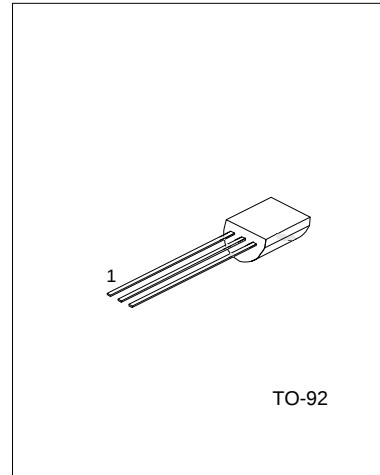
* High Collector-Emitter voltage:

$V_{CE0} = -300V$ (UTC MPSA92)

$V_{CE0} = -200V$ (UTC MPSA93)

* Collector Dissipation:

$P_c(\max) = 625mW$



1:EMITTER 2:BASE 3:COLLECTOR

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

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-300	V
UTC MPSA92		-200	
Collector-Emitter Voltage	V_{CEO}	-300	V
UTC MPSA92		-200	
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Dissipation($T_a = 25^\circ C$)	P_c	625	mW
Derate Above $25^\circ C$		5	mW/ $^\circ C$
Collector Current	I_c	-500	mA
Collector Dissipation($T_c = 25^\circ C$)	P_c	1.5	W
Derate Above $25^\circ C$		12	mW/ $^\circ C$
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ C$

UTCMPSA92/93 PNP EPITAXIAL SILICON TRANSISTOR

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage UTC MPSA92 UTC MPSA93	BVCBO	I _c =-100μA,I _E =0	-300 -200			V
Collector-Emitter Breakdown Voltage UTC MPSA92 UTC MPSA93	BVCEO	I _c =-1mA,I _B =0	-300 -200			V
Emitter-Base Breakdown Voltage	BVEBO	I _E =-100μA,I _c =0	-5			V
Collector Cut-Off Current UTC MPSA92 UTC MPSA93	ICBO	V _{CB} =-200V,I _E =0 V _{CB} =-160V,I _E =0			-0.25 -0.25	μA
Emitter Cut-Off Current	IEBO	V _{EB} =-3V,I _c =0			-0.10	μA
DC Current Gain(note)	hFE	V _{CE} =-10V,I _c =-1mA V _{CE} =-10V,I _c =-10mA V _{CE} =-10V,I _c =-30mA	60 80 80			
Collector-Emitter Saturation Voltage	V _{CE(sat)} 1	I _c =-20mA,I _B =-2mA			-0.5	V
Base-Emitter Saturation Voltage	V _{BE(sat)} 1	I _c =-20mA,I _B =-2mA			-0.90	V
Current Gain Bandwidth Product	f _T	V _{CE} =-20V,I _c =-10mA, f=100MHz	50			MHz
Collector Base Capacitance UTC MPSA92 UTC MPSA93	C _{cb}	V _{CB} =-20V,I _E =0 f=1MHz			6 8	pF

Note:Pulse test:PW<300μs,Duty Cycle<2%, V_{CE(SAT)}1<200mV(Class SIN)

UTCMPSA92/93 PNP EPITAXIAL SILICON TRANSISTOR

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 DC Current Gain

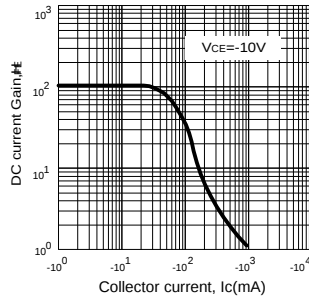


Fig.2 Saturation Voltage

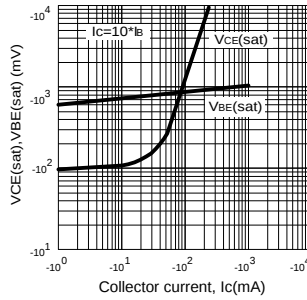


Fig.3 Capacitance

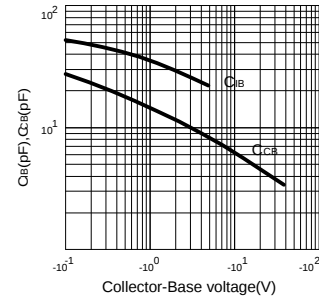


Fig.4 Active-region safe operating area

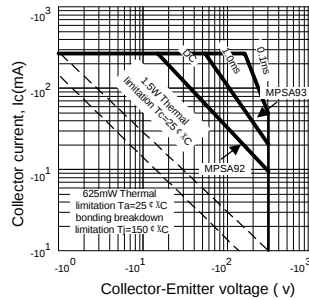


Fig.5 Current Gain Bandwidth product

