

UTCMPSA92/93 PNP EPITAXIAL SILICON TRANSISTOR

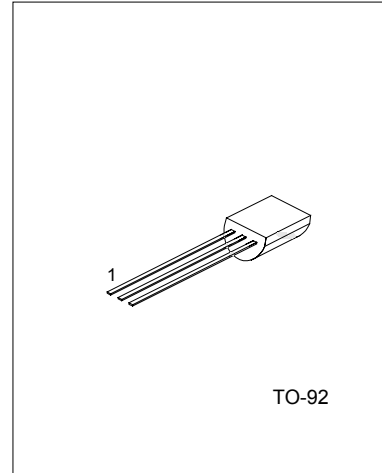
HIGH VOLTAGE PNP TRANSISTOR

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 _{CB0}	-300	V
UTC MPSA92		-200	
Collector-Base Voltage	V _{CE0}	-300	V
UTC MPSA93		-200	
Emitter-Base Voltage	V _{EB0}	-5	V
Collector Dissipation (T _a =25°C)	P _c	625	mW
Derate Above 25°C		5	mW/°C
Collector Current	I _c	-500	mA
Collector Dissipation (T _c =25°C)	P _c	1.5	W
Derate Above 25°C		12	mW/°C
Junction Temperature	T _j	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CB0}	I _c = -100μA, I _E = 0	-300			V
UTC MPSA92			-200			
Collector-Base Breakdown Voltage	BV _{CE0}	I _c = -1mA, I _B = 0	-300			V
UTC MPSA92			-200			
Collector-Base Breakdown Voltage	BV _{EB0}	I _E = -100μA, I _c = 0	-5			V
Collector Cut-Off Current	I _{CBO}	V _{CB} = -200V, I _E = 0			-0.25	μA
UTC MPSA92			V _{CB} = -160V, I _E = 0			

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Emitter Cut-Off Current	IEBO	VEB=-3V, Ic=0			-0.10	μA
DC Current Gain(note)	hFE	VCE=-10V, Ic=-1mA VCE=-10V, Ic=-10mA VCE=-10V, Ic=-30mA	60 80 80			
Collector-Emitter Saturation Voltage	VCE(sat)1	Ic=-20mA, IB=-2mA			-0.5	V
Base-Emitter Saturation Voltage	VBE(sat)1	Ic=-20mA, IB=-2mA			-0.90	V
Current Gain Bandwidth Product	fT	VCE=-20V, Ic=-10mA, f=100MHz	50			MHz
Collector Base Capacitance UTC MPSA92 UTC MPSA93	Ccb	VCB=-20V, IE=0 f=1MHz			6 8	pF

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

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 DC Current Gain

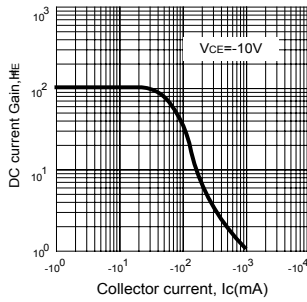


Fig.2 Saturation Voltage

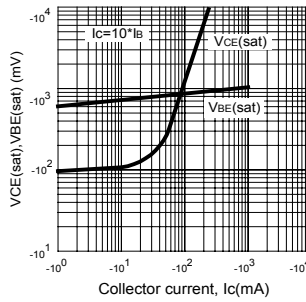


Fig.3 Capacitance

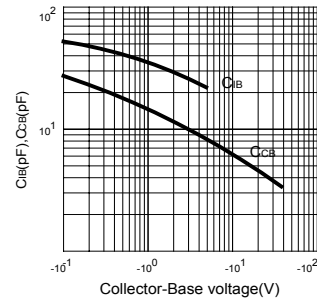


Fig.4 Active-region safe operating area

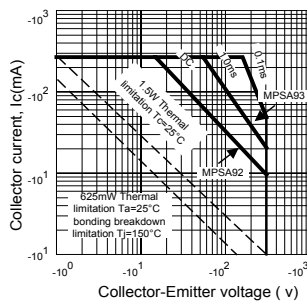
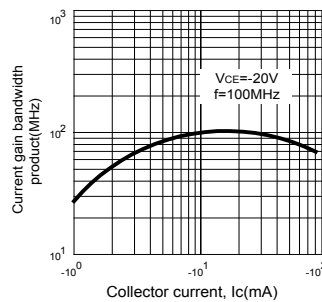


Fig.5 Current Gain Bandwidth product



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