

UTCPZTA92/93 PNP EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE PNP TRANSISTOR

DESCRIPTION

The UTC PZTA92/93 are high voltage PNP transistors, designed for telephone signal switching and for high voltage amplifier.

FEATURES

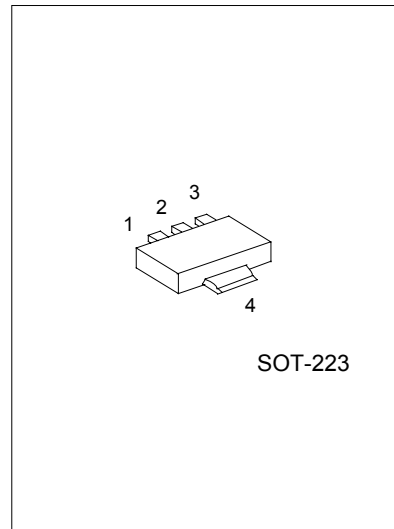
* High Collector-Emitter voltage:

$V_{CE0} = -300V$ (UTC PZTA92)

$V_{CE0} = -200V$ (UTC PZTA93)

* Collector Power Dissipation:

$P_c(\max) = 1000mW$



1:EMITTER 2,4:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage			V
UTC PZTA92	V_{CB0}	-300	
UTC PZTA93		-200	
Collector-Emitter Voltage			V
UTC PZTA92	V_{CE0}	-300	
UTC PZTA93		-200	
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Power Dissipation	P_c	1000	mW
Collector Current	I_c	-500	mA
Junction Temperature	T_j	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage UTC PZTA92 UTC PZTA93	BVCBO	Ic=-100μA, IE=0	-300 -200			V
Collector-Emitter Breakdown Voltage UTC PZTA92 UTC PZTA93	BVCEO	Ic=-1mA, IB=0	-300 -200			V
Emitter-Base Breakdown Voltage	BVEBO	IE=-100μA, Ic=0	-5			V
Collector Cut-Off Current UTC PZTA92 UTC PZTA93	ICBO	VCB=-200V, IE=0 VCB=-160V, IE=0			-0.25 -0.25	μA
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 PZTA92 UTC PZTA93	Ccb	VCB=-20V, IE=0 f=1MHz			6 8	pF

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

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TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 DC Current Gain

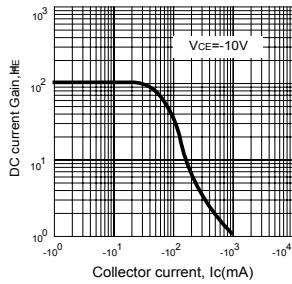


Fig.2 Saturation Voltage

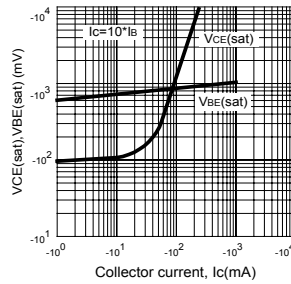


Fig.3 Capacitance

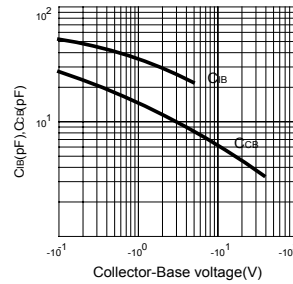


Fig.4 Active-region safe operating area

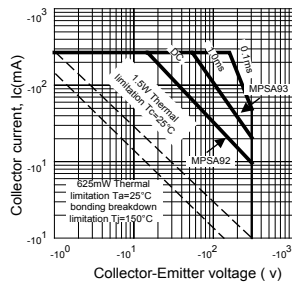
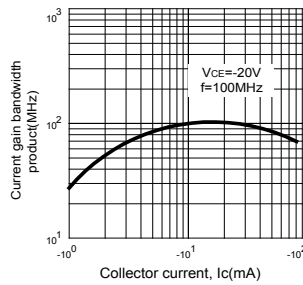


Fig.5 Current Gain Bandwidth product



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