

UTC PZTA42/43 NPNEPITAXIAL SILICON TRANSISTOR

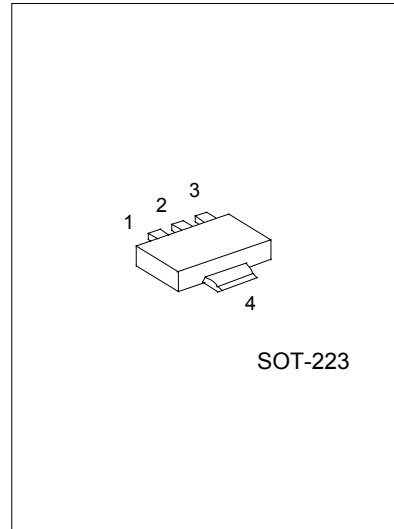
HIGH VOLTAGE TRANSISTOR

DESCRIPTION

The UTC PZTA42/43 are high voltage transistors, designed for telephone switch and high voltage switch.

FEATURES

- *Collector-Emitter voltage:
 $V_{CE0}=300V$ (UTC PZTA42)
 $V_{CE0}=200V$ (UTC PZTA43)
- *High current gain
- *Complement to UTC PZTA92/93
- *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 PZTA42	V_{CB0}	300	
UTC PZTA43		200	
Collector-Emitter Voltage			V
UTC PZTA42	V_{CE0}	300	
UTC PZTA43		200	
Emitter-Base Voltage	V_{EB0}	6	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

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CB0}	$I_c=100\mu A, I_E=0$				V
UTC PZTA42			300			
UTC PZTA43			200			
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_c=1mA, I_B=0$				V
UTC PZTA42			300			
UTC PZTA43			200			
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=100\mu A, I_c=0$	6			V

UTC UNISONIC TECHNOLOGIES CO., LTD. 1

QW-R207-005,B

UTCPZTA42/43 NPNEPITAXIAL SILICON TRANSISTOR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current UTC PZTA42 UTC PZTA43	I_{CBO}	$V_{CB}=200V, I_E=0$ $V_{CB}=160V, I_E=0$			100 100	nA
Emitter Cut-Off Current UTC PZTA42 UTC PZTA43	I_{EBO}	$V_{BE}=6V, I_C=0$ $V_{BE}=4V, I_C=0$			100 100	nA
DC Current Gain(note)	h_{FE}	$V_{CE}=10V, I_C=1mA$ $V_{CE}=10V, I_C=10mA$ $V_{CE}=10V, I_C=30mA$	80 80 80		300	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA$			0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=20mA, I_B=2mA$			0.90	V
Current Gain Bandwidth Product	f_T	$V_{CE}=20V, I_C=10mA,$ $f=100MHz$	50			MHz
Collector Base Capacitance UTC PZTA42 UTC PZTA43	C_{cb}	$V_{CB}=20V, I_E=0$ $f=1MHz$			3 4	pF

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 DC Current Gain

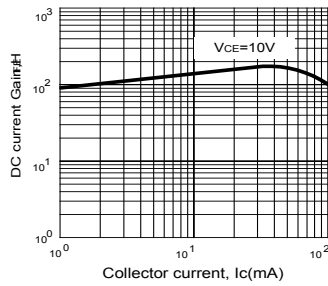


Fig.2 Saturation Voltage

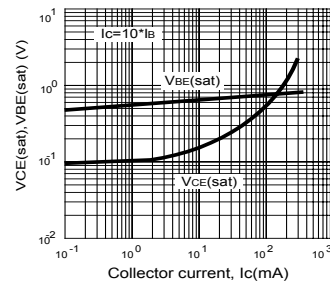


Fig.3 Capacitance

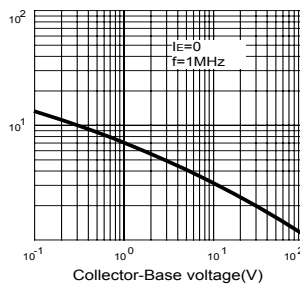
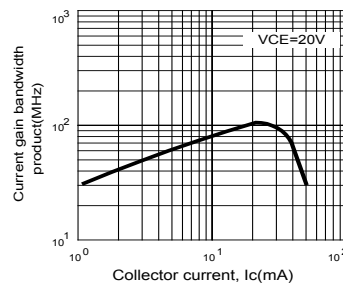


Fig.4 Current Gain Bandwidth product



UTCPZTA42/43 NPNEPITAXIAL SILICON TRANSISTOR

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.

UTC UNISONIC TECHNOLOGIES CO., LTD. 3

QW-R207-005,B