UTC PZTA42/43 NPN EPITAXIAL SILICON TRANSISTOR

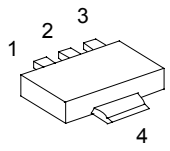
HIGH VOLTAGE TRANSISTOR

DESCRIPTION

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

FEATURES

*Collector-Emitter voltage:
V_{CEO}=300V(UTC PZTA42)
V_{CEO}=200V(UTC PZTA43)
*High current gain
*Complement to UTC PZTA92/93
*Collector Power Dissipation:
Pc(max)=1000mW



SOT-223

1:EMITTER 2,4:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage UTC PZTA42 UTC PZTA43	V_{CBO}	 300 200	V
Collector-Emitter Voltage UTC PZTA42 UTC PZTA43	V_{CEO}	 300 200	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Power Dissipation	Pc	1000	mW
Collector Current	Ic	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 UTC PZTA42 UTC PZTA43	BV_{CBO}	I_C=100μA,I_E=0	 300 200			V
Collector-Emitter Breakdown Voltage UTC PZTA42 UTC PZTA43	BV_{CEO}	I_C=1mA,I_B=0	 300 200			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=100μA,I_C=0	6			V

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}					
UTC PZTA42		V_{CB}=200V,I_E=0			100	nA
UTC PZTA43		V_{CB}=160V,I_E=0			100	
Emitter Cut-Off Current	I_{EBO}					
UTC PZTA42		V_{BE}=6V,Ic=0			100	nA
UTC PZTA43		V_{BE}=4V,Ic=0			100	
DC Current Gain(note)	h_{FE}	V_{CE}=10V,Ic=1mA	80			
		V_{CE}=10V,Ic=10mA	80		300	
		V_{CE}=10V,Ic=30mA	80			
Collector-Emitter Saturation Voltage	V_{CE}(sat)	Ic=20mA,I_B=2mA			0.2	V
Base-Emitter Saturation Voltage	V_{BE}(sat)	Ic=20mA,I_B=2mA			0.90	V
Current Gain Bandwidth Product	f_T	V_{CE}=20V,Ic=10mA, f=100MHz	50			MHz
Collector Base Capacitance	Ccb	V_{CB}=20V,IE=0				
UTCPZTA42		f=1MHz			3	pF
UTCPZTA43					4	

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 DC Current Gain

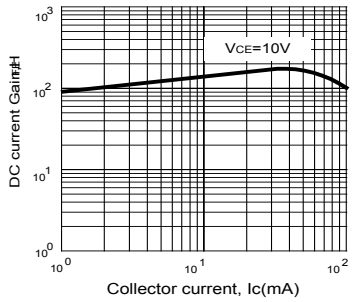


Fig.2 Saturation Voltage

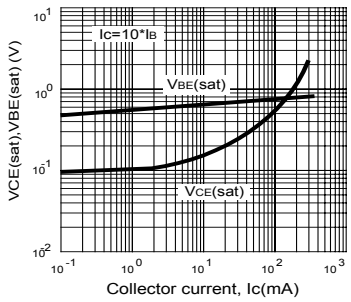


Fig.3 Capacitance

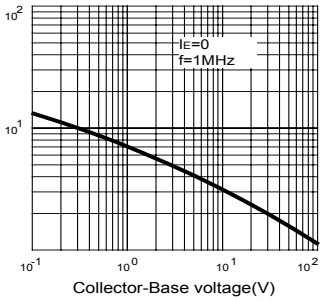


Fig.4 Current Gain Bandwidth product