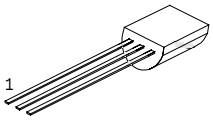
UTC 2SC945 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC NPN TRANSISTOR



TO-92

1:EMITTER 2:COLLECTOR 3: BASE

DESCRIPTION

The UTC 2SC945 is an audio frequency amplifier high frequency OSC NPN transistor.

FEATURES

*Collector-Emitter voltage:
BV_{CBO}=50V
*Collector current up to 150mA
*High hFE linearity
*Complimentary to 2SA733

ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Dissipation(Ta=25°C)	Pc	250	mW
Collector Current	Ic	150	mA
Base Current	I_B	50	mA
Junction Temperature	T_j	125	°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_{CBO}	Ic=100μA, I_E=0	60			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	Ic=10mA,I_B=0	50			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=40V,I_E=0			100	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=3V,Ic=0			100	nA
DC Current Gain(note)	h_{FE}	V_{CE}=6V,Ic=1mA	90		600	
Collector-Emitter Saturation Voltage	V_{CE}(sat)	Ic=100mA,I_B=10mA		0.1	0.3	V
Current Gain Bandwidth Product	f_T	V_{CE}=10V,Ic=50mA	100	190		MHz
Output Capacitance	Cob	V_{CB}=10V,I_E=0,f=1MHz		2.0	3.0	pF
Noise Figure	NF	Ic=-0.1mA,V_{CE}=6V R_G=10kΩ,f=100Hz		4.0	6.0	dB

CLASSIFICATION OF hFE

RANK	R	Q	P	K
RANGE	90-180	135-270	200-400	300-600

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

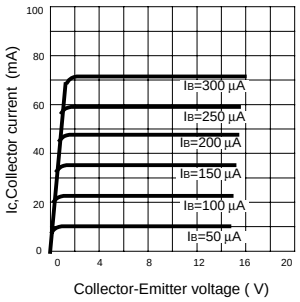


Fig.2 DC current Gain

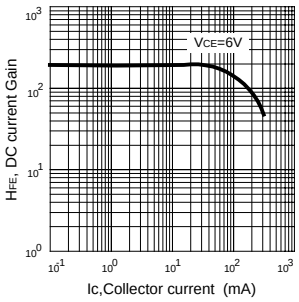


Fig.3 Base-Emitter on Voltage

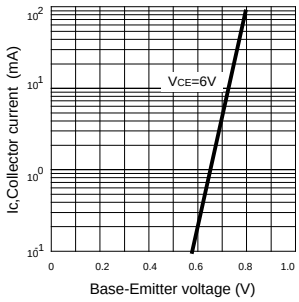


Fig.4 Saturation voltage

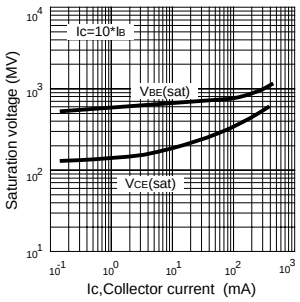


Fig.5 Current gain-bandwidth product

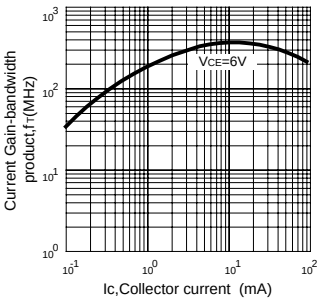


Fig.6 Collector output Capacitance