

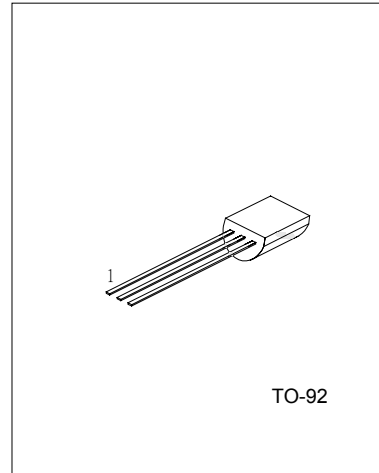
AUDIO FREQUENCY AMPLIFIER
HIGH FREQUENCY OSC NPN
TRANSISTOR

DESCRIPTION

The UTC KSC945 is an audio frequency amplifier high frequency OSC NPN transistor.

FEATURES

- *Collector-Base voltage:
BV_{CBO}=60V
- *Collector current up to 150mA
- *High hFE linearity
- *Complimentary to KSA733



1:EMITTER 2: BASE 3: COLLECTOR

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)	P _c	250	mW
Collector Current	I _c	150	mA
Base Current	I _B	50	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 _{CBO}	I _c =100μA, I _E =0	60			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _c =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, I _c =0			100	nA
DC Current Gain(note)	hFE	V _{CE} =6V, I _c =1mA	40		700	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _c =100mA, I _B =10mA		0.1	0.3	V
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _c =50mA	100	190		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		2.0	3.0	pF
Noise Figure	NF	I _c =0.1mA, V _{CE} =6V R _G =10kΩ, f=100Hz		4.0	6.0	dB

CLASSIFICATION OF hFE

RANK	R	O	Y	G	L
RANGE	40-80	70-140	120-240	200-400	350-700

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

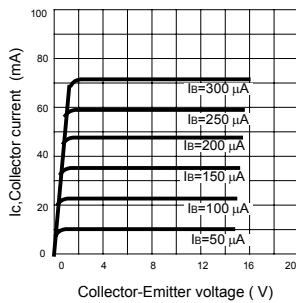


Fig.2 DC current Gain

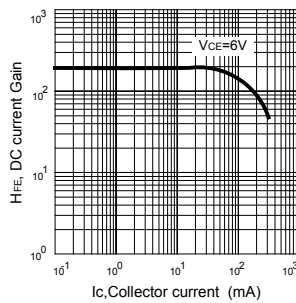


Fig.3 Base-Emitter on Voltage

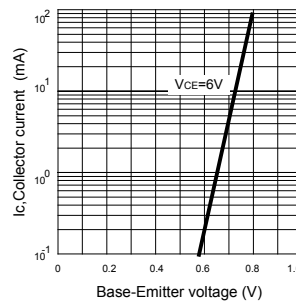


Fig.4 Saturation voltage

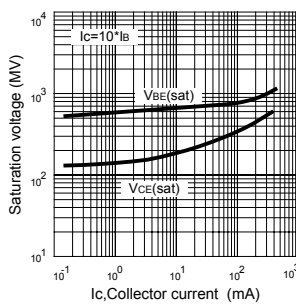


Fig.5 Current gain-bandwidth product

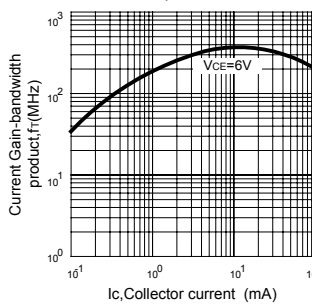
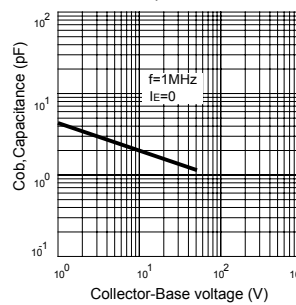


Fig.6 Collector output Capacitance



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