

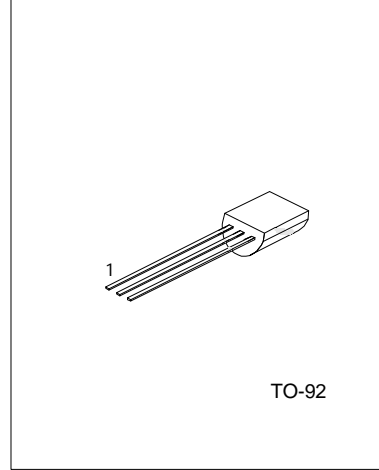
LOW FREQUENCY AMPLIFIER  
PNP EPITAXIAL SILICON  
TRANSISTOR

## DESCRIPTION

The UTC 2SA733 is an low frequency amplifier.

## FEATURES

- \*Collector-Emitter voltage:  
BV<sub>CE0</sub>=-50V
- \*Collector current up to -150mA
- \*High h<sub>FE</sub> linearity
- \*Complimentary to 2SC945



1:EMITTER 2:COLLECTOR 3: BASE

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

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	-60	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-50	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	V
Collector Dissipation(Ta=25°C)	P <sub>c</sub>	250	mW
Collector Current	I <sub>c</sub>	-150	mA
Junction Temperature	T <sub>j</sub>	125	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>c</sub> =-100μA, I <sub>E</sub> =0	-60			V
Collector-Emitter Breakdown Voltage	BV <sub>CE0</sub>	I <sub>c</sub> =-10mA, I <sub>B</sub> =0	-50			V
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =-40V, I <sub>E</sub> =0			-100	nA
Emitter Cut-Off Current	I <sub>EB0</sub>	V <sub>EB</sub> =-3V, I <sub>c</sub> =0			-100	nA
DC Current Gain(note)	h <sub>FE1</sub>	V <sub>CE</sub> =-6V, I <sub>c</sub> =-1mA	90		600	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =-100mA, I <sub>B</sub> =-10mA		-0.1	-0.3	V
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>c</sub> =-50mA	100	190		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		2.0	3.0	pF
Noise Figure	NF	I <sub>c</sub> =-0.1mA, V <sub>CE</sub> =-6V R <sub>G</sub> =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

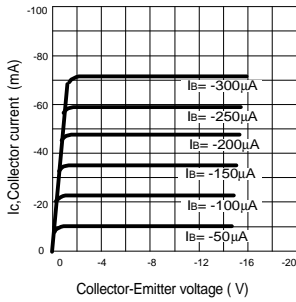


Fig.2 DC current Gain

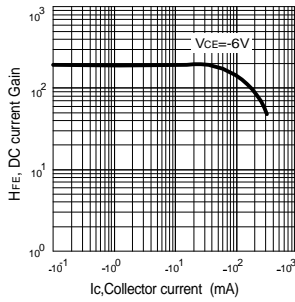


Fig.3 Base-Emitter on Voltage

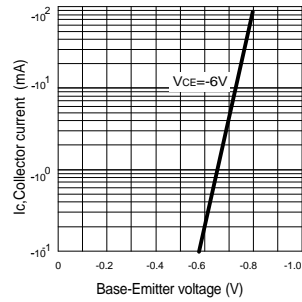


Fig.4 Saturation voltage

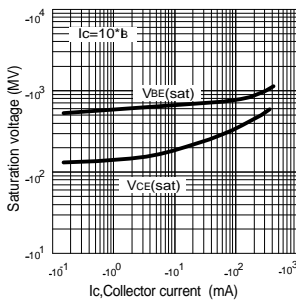


Fig.5 Current gain-bandwidth product

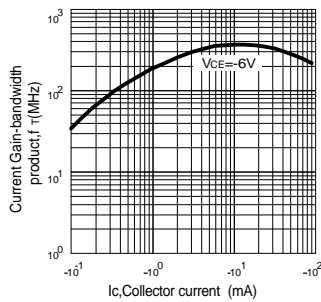


Fig.6 Collector output Capacitance

