

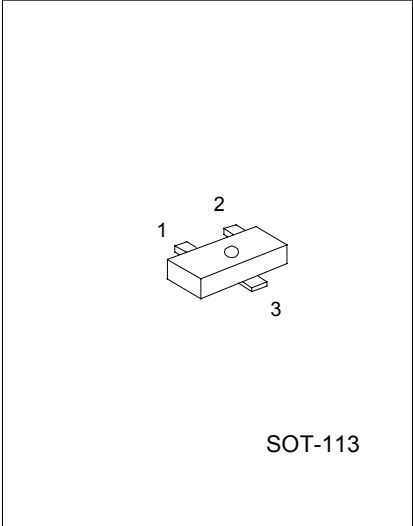
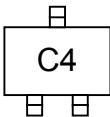
UTCMMBT1815 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER
HIGH FREQUENCY OSC NPN
TRANSISTOR

FEATURES

- *Collector-Emitter voltage:
BVCEO=50V
- *Collector current up to 150mA
- * High hFE linearity
- *complimentary to MMBT1015

MARKING



SOT-113

1: EMITTER 2: BASE 3: COLLECTOR

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

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V _{CB0}	60	V
Collector-emitter voltage	V _{CEO}	50	V
Emitter-base voltage	V _{EB0}	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	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 cut-off current	I _{CBO}	V _{CB} =60V,I _E =0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =5V,I _C =0			100	nA
DC current gain(note)	h _{FE1}	V _{CE} =6V,I _C =2mA	70		700	
	h _{FE2}	V _{CE} =6V,I _C =150mA	25			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA,I _B =10mA		0.1	0.25	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA,I _B =10mA			1.0	V
Current gain bandwidth product	f _T	V _{CE} =10V,I _C =50mA	80			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		1.0	1.0	dB

UTCMMBT1815 NPN EPITAXIAL SILICON TRANSISTOR

CLASSIFICATION OF hFE1

RANK	Y	G	L
RANGE	120-240	200-400	350-700

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

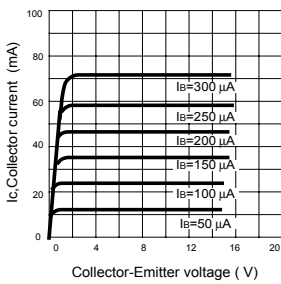


Fig.2 DC current Gain

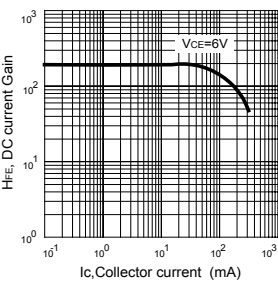


Fig.3 Base-Emitter on Voltage

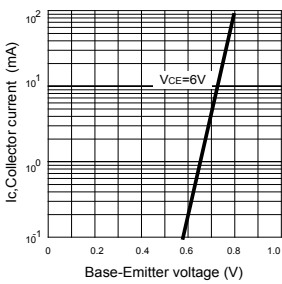


Fig.4 Saturation voltage

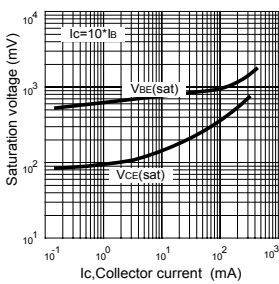


Fig.5 Current gain-bandwidth product

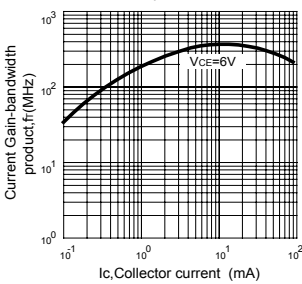


Fig.6 Collector output Capacitance

