

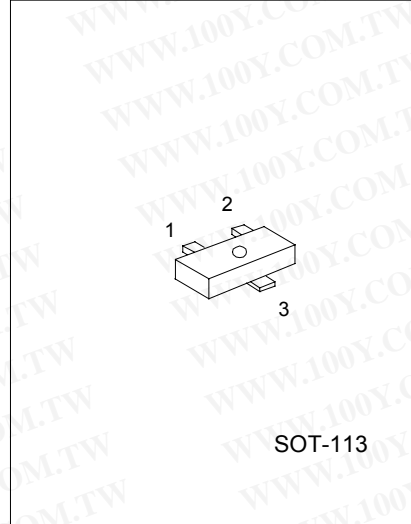
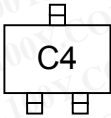
UTCMMBT1815 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER
 HIGH FREQUENCY OSC NPN
 TRANSISTOR

FEATURES

- *Collector-Emitter voltage:
 $V_{CE0}=50V$
- *Collector current up to 150mA
- * High h_{FE} linearity
- *complimentary to MMBT1015

MARKING



1: EMITTER 2: BASE 3: COLLECTOR

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}C$,unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	5	V
Collector dissipation($T_a=25^{\circ}C$)	P_c	250	mW
Collector current	I_c	150	mA
Base current	I_B	50	mA
Junction Temperature	T_J	125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}C$,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	$I_c=0.1mA, V_{CE}=6V$ $R_G=10k\Omega, f=100Hz$		1.0	1.0	dB

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CLASSIFICATION OF hFE1

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

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

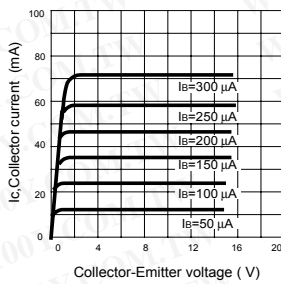


Fig.2 DC current Gain

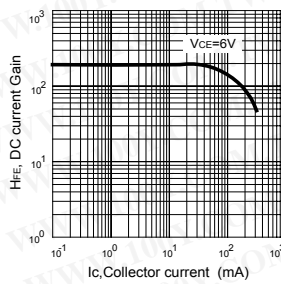


Fig.3 Base-Emitter on Voltage

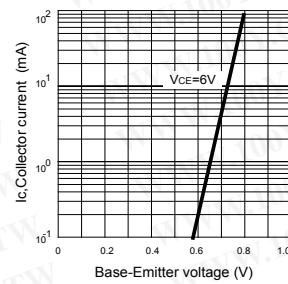


Fig.4 Saturation voltage

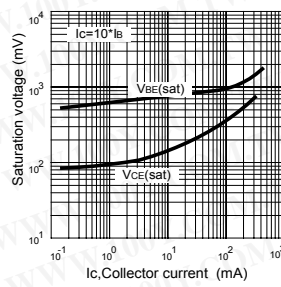


Fig.5 Current gain-bandwidth product

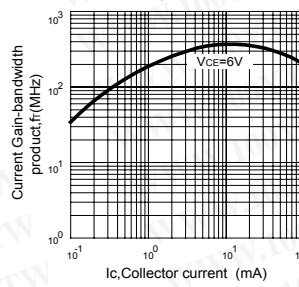


Fig.6 Collector output Capacitance

