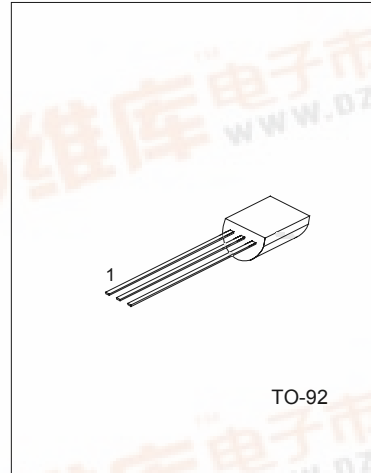


## UTC2SC1815 NPN EPITAXIAL SILICON TRANSISTOR

AUDIO FREQUENCY AMPLIFIER  
HIGH FREQUENCY OSC NPN  
TRANSISTOR

### FEATURES

- \*Collector-Emitter voltage:  
BV<sub>CEO</sub>=50V
- \*Collector current up to 150mA
- \* High h<sub>FE</sub> linearity
- \*complimentary to 2SA1015



1:EMITTER 2:COLLECTOR 3. BASE

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

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CB0</sub>	60	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector dissipation(Ta=25°C)	P <sub>c</sub>	400	mW
Collector current	I <sub>c</sub>	150	mA
Base current	I <sub>B</sub>	50	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 cut-off current	I <sub>cBO</sub>	V <sub>CB</sub> =60V,I <sub>E</sub> =0			100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V,I <sub>C</sub> =0			100	nA
DC current gain(note)	h <sub>FE1</sub> h <sub>FE2</sub>	V <sub>CE</sub> =6V,I <sub>C</sub> =2mA	70		700	
		V <sub>CE</sub> =6V,I <sub>C</sub> =150mA	25			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA,I <sub>B</sub> =10mA		0.1	0.25	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA,I <sub>B</sub> =10mA			1.0	V
Current gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> =10V,I <sub>C</sub> =50mA	80			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		1.0	1.0	dB

UTC UNISONIC TECHNOLOGIES CO. LTD

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QW-R201-006,A



# UTC2SC1815 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

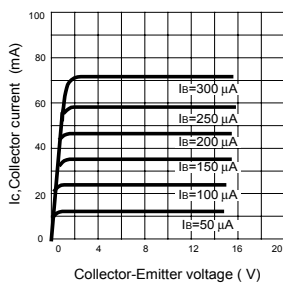


Fig.2 DC current Gain

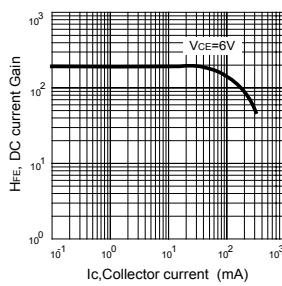


Fig.3 Base-Emitter on Voltage

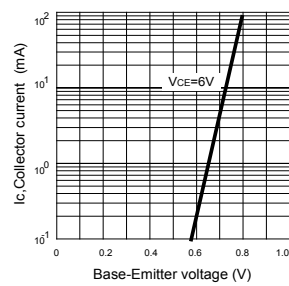


Fig.4 Saturation voltage

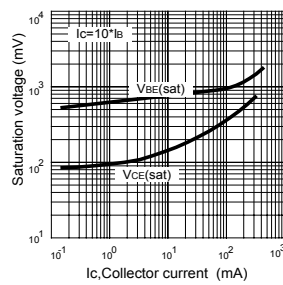


Fig.5 Current gain-bandwidth product

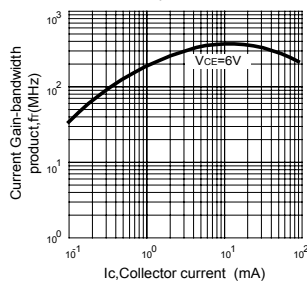


Fig.6 Collector output Capacitance

