

## UTC 8050S NPN EPITAXIAL SILICON TRANSISTOR

LOW VOLTAGE HIGH CURRENT  
SMALL SIGNAL NPN  
TRANSISTOR

### DESCRIPTION

The UTC8050S is a low voltage high current small signal NPN transistor, designed for Class B push-pull audio amplifier and general purpose applications.

### FEATURES

- \*Collector current up to 700mA
- \*Collector-Emitter voltage up to 20 V
- \*Complementary to UTC 8550S



1: EMITTER 2: COLLECTOR 3: BASE

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

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	VCBO	30	V
Collector-Emitter Voltage	VCEO	20	V
Emitter-Base Voltage	VEBO	5	V
Collector Dissipation(Ta=25°C)	Pc	1	W
Collector Current	Ic	700	mA
Junction Temperature	Tj	150	°C
Storage Temperature	TSTG	-65 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BVCBO	Ic=100μA, IE=0	30			V
Collector-Emitter Breakdown Voltage	BVCEO	Ic=1mA, IB=0	20			V
Emitter-Base Breakdown Voltage	BVEBO	IE=100μA, Ic=0	5			V
Collector Cut-Off Current	ICBO	VCE=30V, IE=0			1	μA
Emitter Cut-Off Current	IEBO	VEB=5V, Ic=0			100	nA
DC Current Gain(note)	hFE1 hFE2 hFE3	VCE=1V, Ic=1mA VCE=1V, Ic=150 mA VCE=1V, Ic=500mA	100 120 40	110	400	
Collector-Emitter Saturation Voltage	VCE(sat)	Ic=500mA, IB=50mA			0.5	V
Base-Emitter Saturation Voltage	VBE(sat)	Ic=500mA, IB=50mA			1.2	V
Base-Emitter Saturation Voltage	VBE	VCE=1V, Ic=10mA			1.0	V
Current Gain Bandwidth Product	fT	VCE=10V, Ic=50mA	100			MHz
Output Capacitance	Cob	VCE=10V, IE=0 f=1MHz		9.0		pF

UTC UNISONIC TECHNOLOGIES CO., LTD. 1

QW-R201-011,A



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## CLASSIFICATION OF hFE2

RANK	C	D	E
RANGE	120-200	160-300	280-400

## TYPICAL PERFORMANCE CHARACTERISTICS

