

UTC HE8050 NPN EPITAXIAL SILICON TRANSISTOR

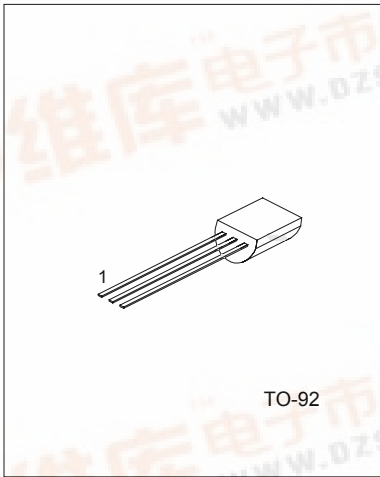
LOW VOLTAGE HIGH CURRENT
SMALL SIGNAL NPN TRANSISTOR

DESCRIPTION

The UTC HE8050 is a low voltage high current small signal NPN transistor, designed for Class B push-pull 2W audio amplifier for portable radio and general purpose applications.

FEATURES

- *Collector current up to 1.5A
- *Collector-Emitter voltage up to 25 V
- *complimentary to UTC HE8550



1:EMITTER 2:COLLECTOR 3: BASE

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

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	VCBO	40	V
Collector-Emitter Voltage	VCEO	25	V
Emitter-Base Voltage	VEBO	6	V
Collector Dissipation(Ta=25°C)	Pc	1	W
Collector Current	Ic	1.5	A
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	40			V
Collector-Emitter Breakdown Voltage	BVCEO	Ic=2mA,Ib=0	25			V
Emitter-Base Breakdown Voltage	BVEBO	Ie=100μA,Ic=0	6			V
Collector Cut-Off Current	ICBO	VCB=35V,Ie=0			100	nA
Emitter Cut-Off Current	IEBO	VEB=6V,Ic=0			100	nA
DC Current Gain	hFE1	VCE=1V,Ic=5mA	45	135		
	hFE2	VCE=1V,Ic=100mA	85	160	500	
	hFE3	VCE=1V,Ic=800mA	40	110		
Collector-Emitter Saturation Voltage	VCE(sat)	Ic=800mA,Ib=80mA			0.5	V
Base-Emitter Saturation Voltage	VBE(sat)	Ic=800mA,Ib=80mA			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	VCB=10V,Ie=0 f=1MHz		9.0		pF



UTC HE8050 NPN EPITAXIAL SILICON TRANSISTOR

CLASSIFICATION OF hFE

RANK	C	D	E
RANGE	120-200	160-300	250-500

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

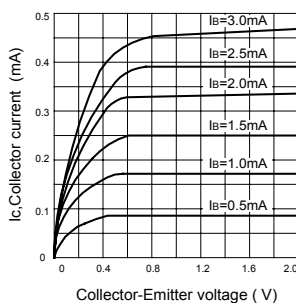


Fig.2 DC current Gain

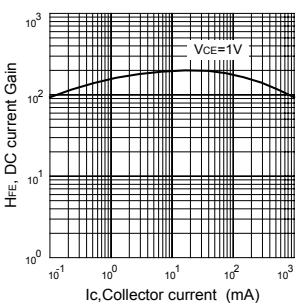


Fig.3 Base-Emitter on Voltage

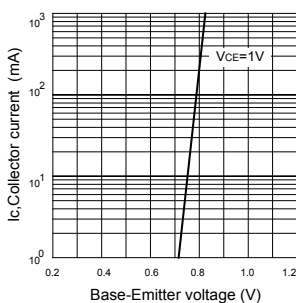


Fig.4 Saturation voltage

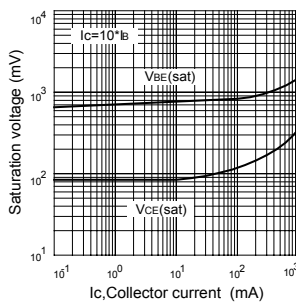


Fig.5 Current gain-bandwidth product

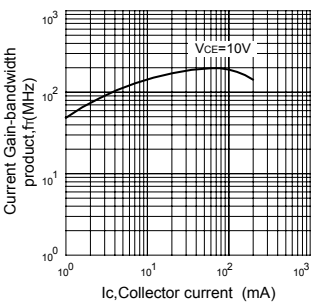
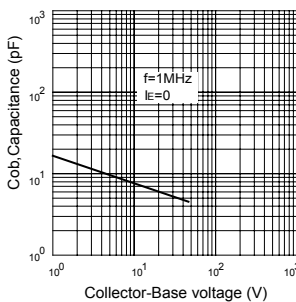


Fig.6 Collector output Capacitance



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.