

UTCTIP112

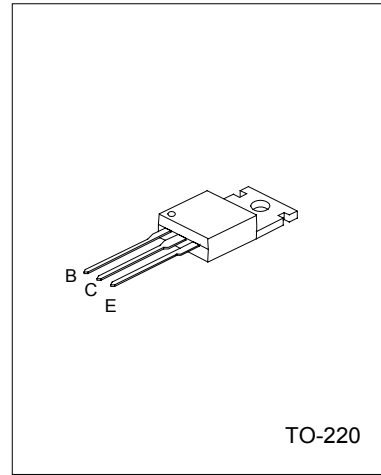
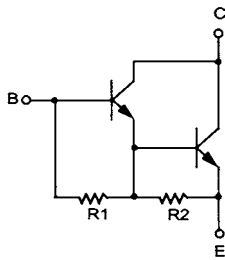
NPNEPITAXIAL PLANAR TRANSISTOR

NPN EPITAXIAL SILICON DARLINGTON TRANSISTOR

FEATURES

- * High DC Current Gain : $h_{FE} = 1000$ @ $V_{CE}=4V, I_C=1A$ (Min)
- * Low Collector-Emitter Saturation Voltage
- * Industrial Use

EQUIVALENT TEST (R1≒10kΩ, R2≒0.6Ω)



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	2	A
Collector Current (Pulse)	I_{cp}	4	A
Base Current (DC)	I_B	50	mA
Collector Dissipation (Ta=25°C)	P_C	2	W
Collector Dissipation (Tc=25°C)	P_C	50	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage	$V_{CEO(SUS)}$	$I_C=30mA, I_B=0$	100			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=100V, I_E=0$			1	mA
Collector-Cut-Off Current	I_{CEO}	$V_{CE}=50V, I_B=0$			2	mA
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=5V, I_C=0$			2	mA
DC Current Gain	h_{FE}	$I_C=1A, V_{CE}=4V$ $I_C=2A, V_{CE}=4V$	1000 500			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A, I_B=8mA$			2.5	V
Base-Emitter Saturation Voltage	$V_{BE(on)}$	$V_{CE}=4V, I_C=2A$			2.8	V
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=0.1MHz$			100	pF

TYPICAL CHARACTERISTICS

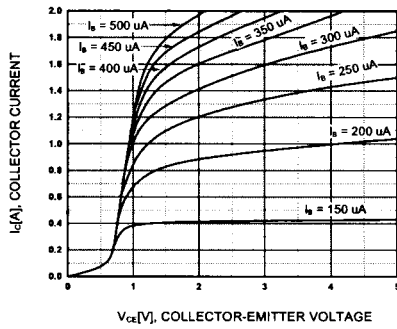


Figure 1. Static Characteristic

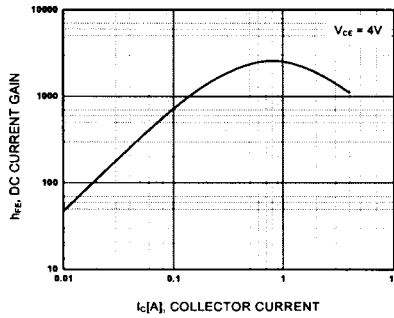


Figure 2. DC current Gain

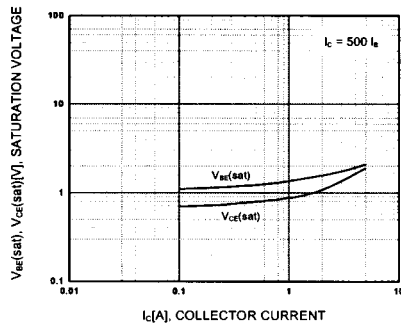


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

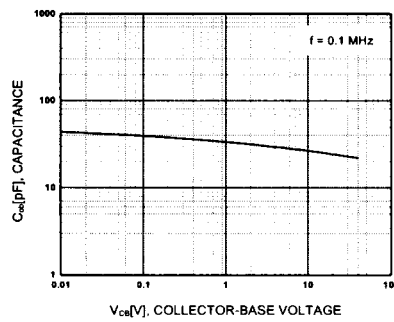


Figure 4. Collector Output Capacitance

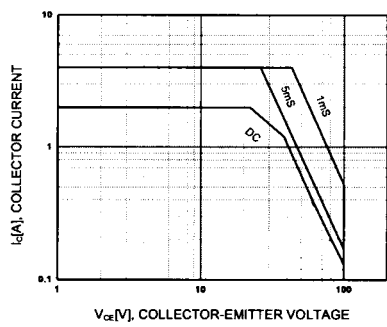


Figure 5. Safe Operating Area

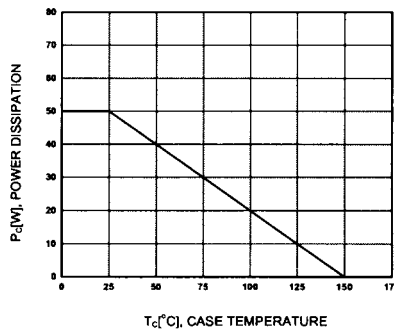


Figure 6. Power Derating

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.