

UTCTIP112

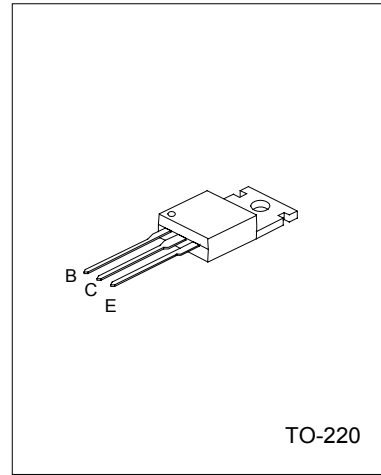
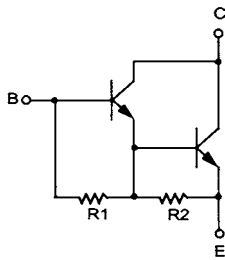
NPNEPITAXIAL PLANAR TRANSISTOR

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

UTC UNISONIC TECHNOLOGIES CO., LTD.

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QW-R203-022,A

TYPICAL CHARACTERISTICS

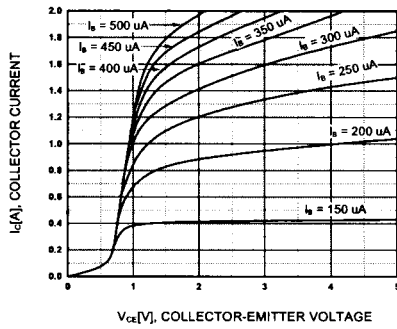


Figure 1. Static Characteristic

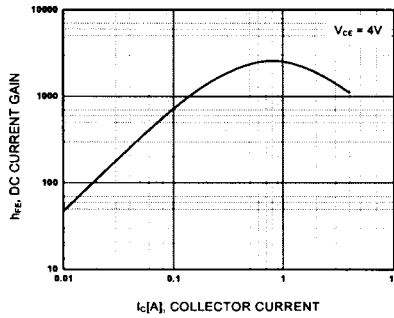


Figure 2. DC current Gain

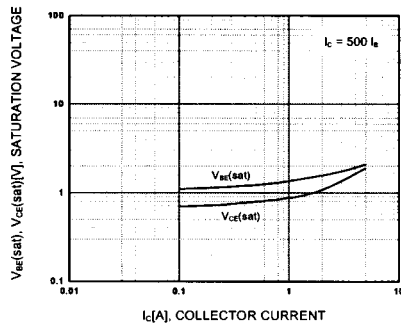


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

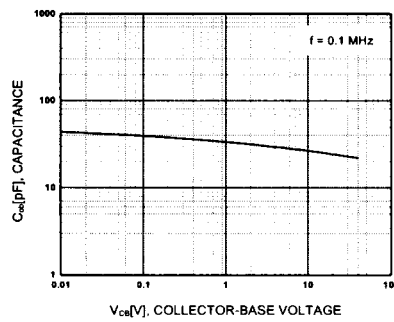


Figure 4. Collector Output Capacitance

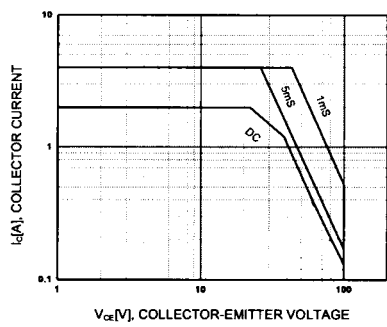


Figure 5. Safe Operating Area

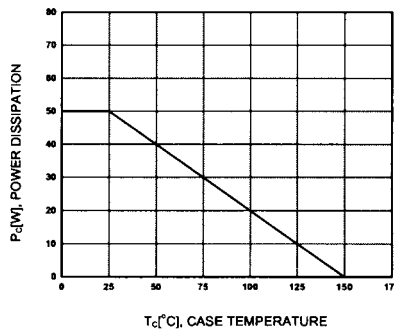


Figure 6. Power Derating

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