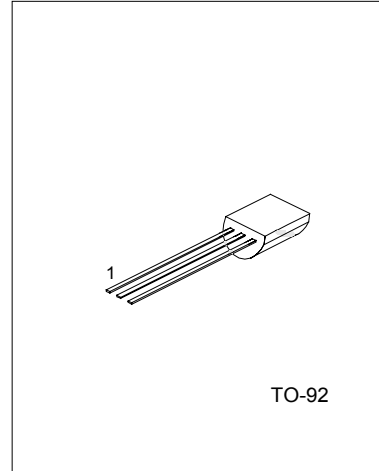


# UTC BC556/557/558 PNP EPITAXIAL SILICON TRANSISTOR

## SWITCHING AND AMPLIFIER APPLICATIONS

### FEATURES

\* High Voltage: BC556,  $V_{CE0}=-65V$



1: COLLECTOR 2: BASE 3: EMITTER

### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}C$ , unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	$V_{CB0}$		
: BC556		-80	V
: BC557		-50	V
: BC558		-30	V
Collector-emitter voltage	$V_{CE0}$		
: BC556		-65	V
: BC557		-45	V
: BC558		-30	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current (DC)	$I_c$	-100	mA
Collector dissipation	$P_c$	500	mW
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-65 ~ +150	$^{\circ}C$

### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-30V, I_E=0$			-15	nA
DC current gain	$h_{FE}$	$V_{CE}=-5V, I_c=2mA$	110		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c=-10mA, I_B=-0.5mA$ $I_c=-100mA, I_B=-5mA$		-90 -250	-300 -650	mV mV
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c=-10mA, I_B=-0.5mA$ $I_c=-100mA, I_B=-5mA$		-700 -900		mV
Base-emitter on voltage	$V_{BE(on)}$	$V_{CE}=-5V, I_c=-2mA$ $V_{CE}=-5V, I_c=-10mA$	-600	-660	-750 -800	mV mV
Current gain bandwidth product	$f_T$	$V_{CE}=-5V, I_c=-10mA, f=10MHz$		150		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$			6	pF

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## UTC BC556/557/558 PNP EPITAXIAL SILICON TRANSISTOR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Noise Figure	NF	$V_{CE}=-5V, I_C=-200\mu A,$ $f=1KHZ, R_G=2K\Omega$		2	10	dB

### CLASSIFICATION OF $h_{FE}$

RANK	A	B	C
$h_{FE}$	110 - 220	200 - 450	420 - 800

TYPICAL CHARACTERISTICS

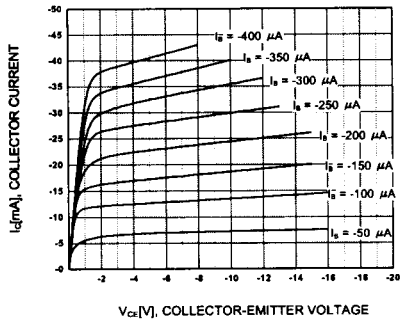


Figure 1. Static Characteristic

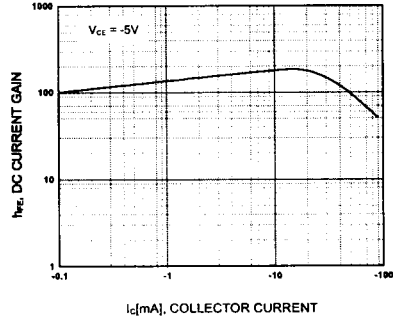


Figure 2. DC current Gain

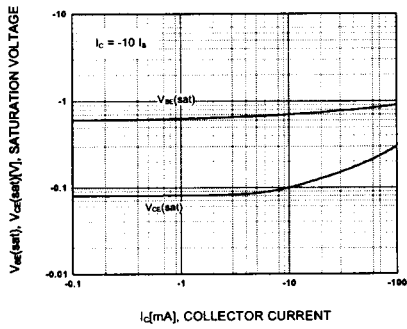


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

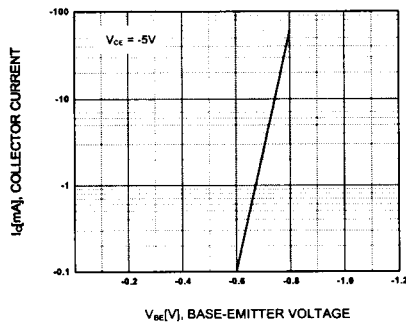


Figure 4. Base-Emitter On Voltage

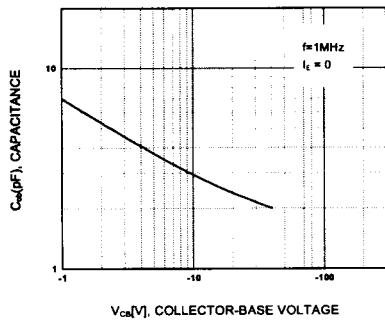


Figure 5. Collector Output Capacitance

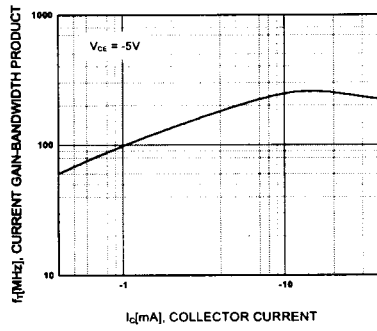


Figure 6. Current Gain Bandwidth Product

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