



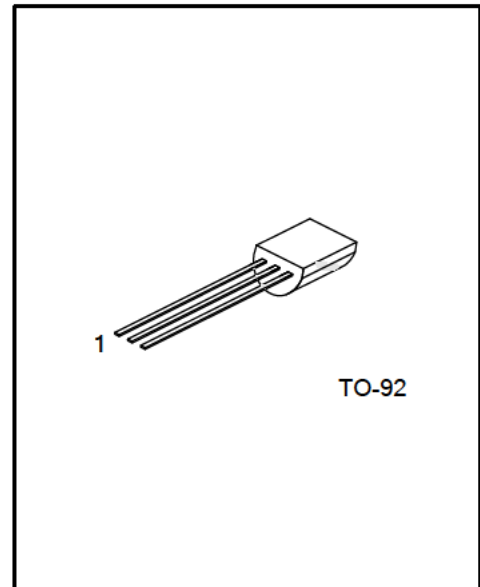
## BC556/557/558

PNP SILICON TRANSISTOR

### SWITCHING AND AMPLIFIER APPLICATIONS

#### FEATURES

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



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BC556L-x-T92-B	BC556G-x-T92-B	TO-92	C	B	E	Tape Box
BC556L-x-T92-K	BC556G-x-T92-K	TO-92	C	B	E	Bulk
BC557L-x-T92-B	BC557G-x-T92-B	TO-92	C	B	E	Tape Box
BC557L-x-T92-K	BC557G-x-T92-K	TO-92	C	B	E	Bulk
BC558L-x-T92-B	BC558G-x-T92-B	TO-92	C	B	E	Tape Box
BC558L-x-T92-K	BC558G-x-T92-K	TO-92	C	B	E	Bulk

Note: Pin Assignment: C: Collector B: Base E: Emitter

<p>BC556L-x-T92-B</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) refer to CLASSIFICATION OF <math>h_{FE}</math> (4) L: Lead Free, G: Halogen Free and Lead Free</p>
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#### MARKING

BC556	BC557	BC558

# BC556/557/558

## PNP SILICON TRANSISTOR

### ■ ABSOLUTE MAXIMUM RATING (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V <sub>CBO</sub>	BC556	-80	V
		BC557	-50	V
		BC558	-30	V
Collector-Emitter Voltage	V <sub>CEO</sub>	BC556	-65	V
		BC557	-45	V
		BC558	-30	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5	V	
Collector Current (DC)	I <sub>C</sub>	-100	mA	
Power Collector Dissipation	P <sub>C</sub>	625	mW	
Linear Derating Factor above (T <sub>A</sub> =25°C)		5	mW/°C	
Junction Temperature	T <sub>J</sub>	150	°C	
Storage Temperature	T <sub>STG</sub>	-55~+150	°C	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ <sub>JA</sub>	200	°C/W
Junction to Case	θ <sub>JC</sub>	83.3	°C/W

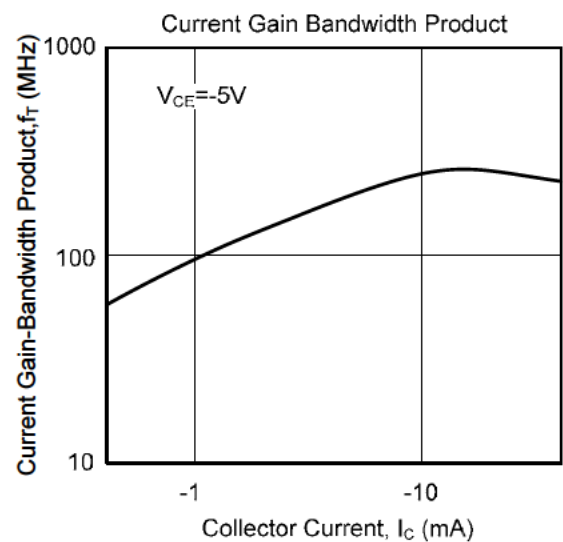
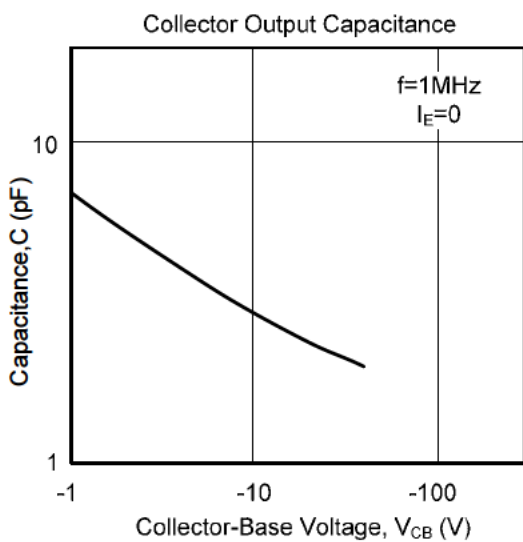
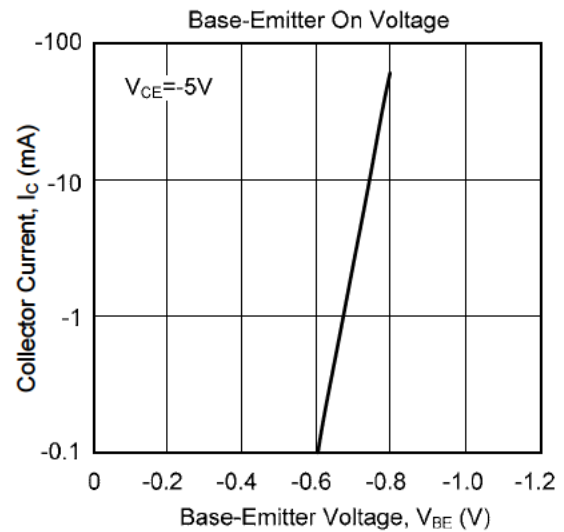
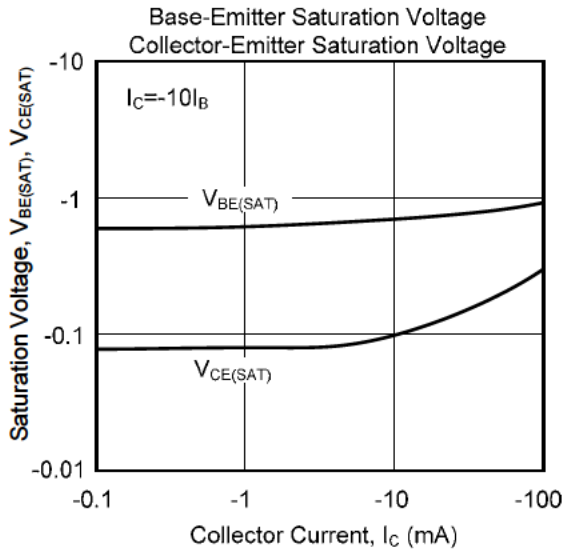
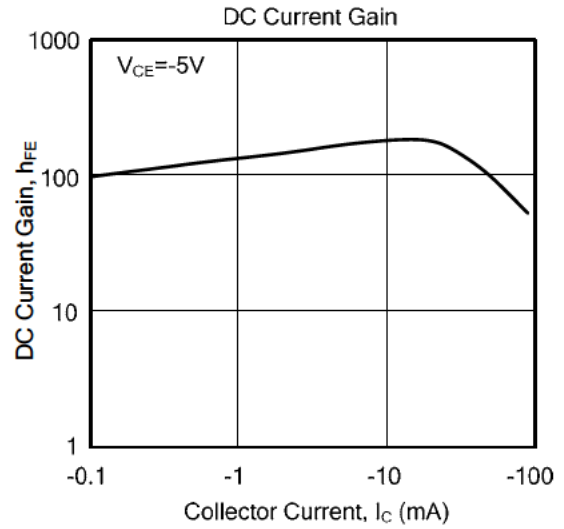
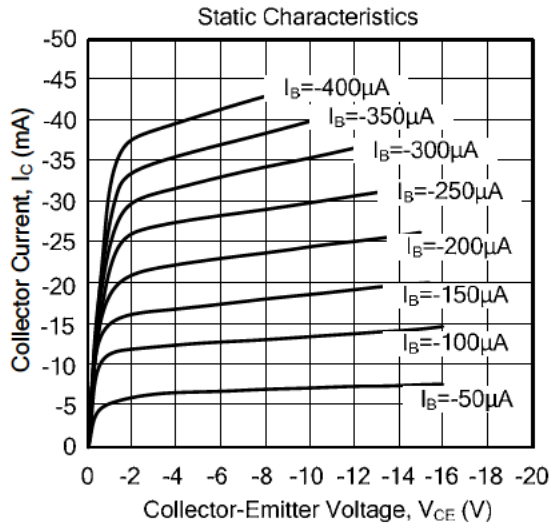
### ■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> = 0	BC556	-65		V
			BC557	-45		V
			BC558	-30		V
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	I <sub>C</sub> = -100μA	BC556	-80		V
			BC557	-50		V
			BC558	-30		V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5.0		V	
Collector Cut-Off Current	I <sub>CBO</sub>	I <sub>E</sub> = 0, V <sub>CB</sub> = -30 V			-15	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = 2mA	110		800	
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> = -0.5mA		-90	-300	mV
		I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA		-250	-650	mV
Base-Emitter Saturation Voltage	V <sub>BE(SAT)</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> = -0.5mA		-700		mV
		I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA		-900		mV
Base-Emitter Turn-On Voltage	V <sub>BE(ON)</sub>	V <sub>CE</sub> = -5 V, I <sub>C</sub> = -2mA	-600	-660	-750	mV
		V <sub>CE</sub> = -5 V, I <sub>C</sub> = -10mA			-800	mV
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA, f = 10MHz		150		MHz
Output Capacitance	C <sub>OB</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1MHz			6	pF
Noise Figure	NF	V <sub>CE</sub> = -5V, I <sub>C</sub> = -200μA f = 1KHz, R <sub>G</sub> = 2KΩ		2	10	dB

### ■ CLASSIFICATION OF h<sub>FE</sub>

RANK	A	B	C
h <sub>FE</sub>	110 - 220	200 - 450	420 - 800

## TYPICAL CHARACTERISTICS



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