



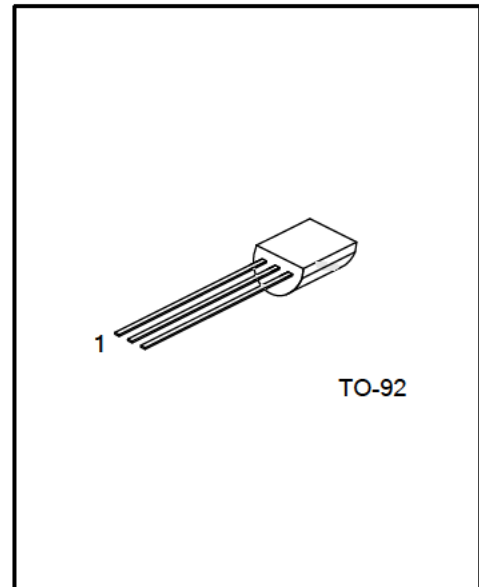
BC556/557/558

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 h_{FE} (4) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

BC556	BC557	BC558

■ **ABSOLUTE MAXIMUM RATING** ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-80	V
		-50	V
		-30	V
Collector-Emitter Voltage	V_{CEO}	-65	V
		-45	V
		-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	I_C	-100	mA
Power Collector Dissipation	P_C	625	mW
Linear Derating Factor above ($T_A=25^\circ\text{C}$)		5	mW/ $^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$

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_{JA}	200	$^\circ\text{C/W}$
Junction to Case	θ_{JC}	83.3	$^\circ\text{C/W}$

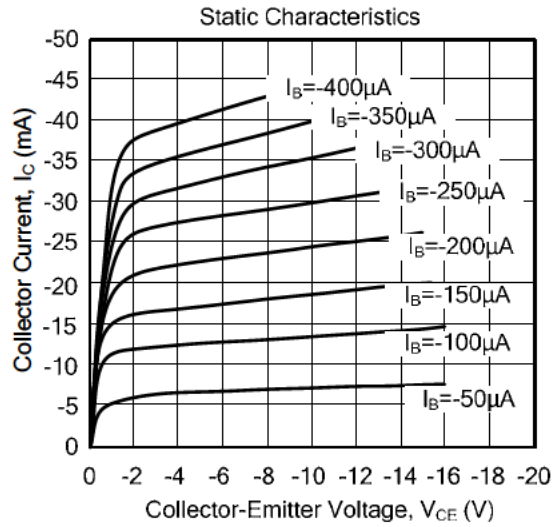
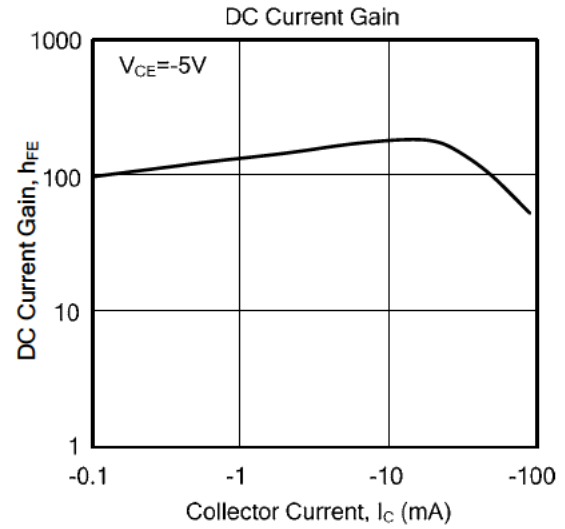
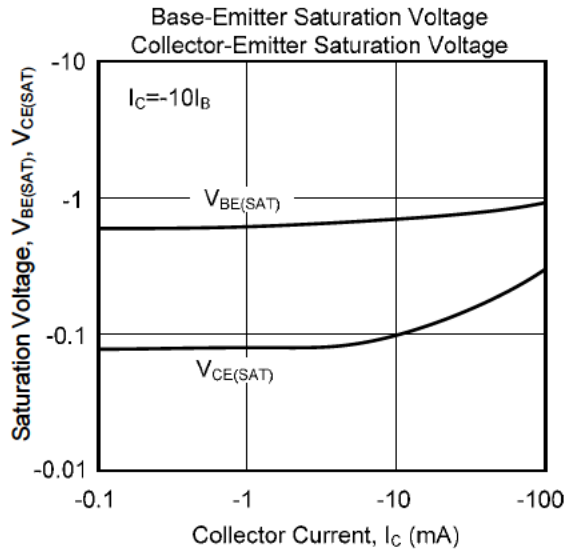
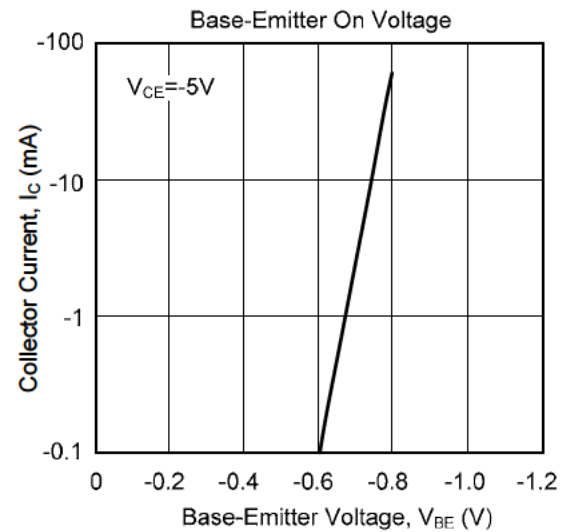
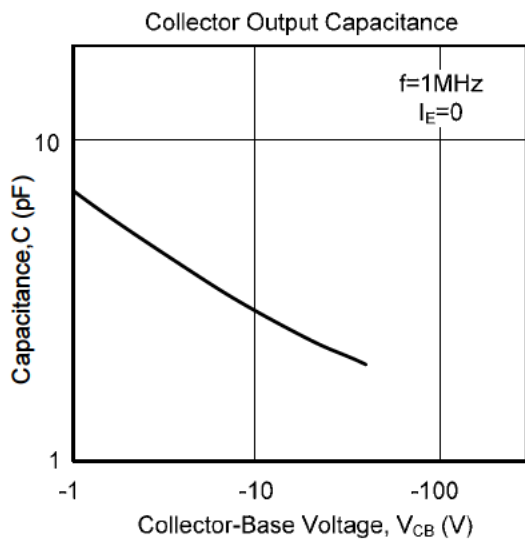
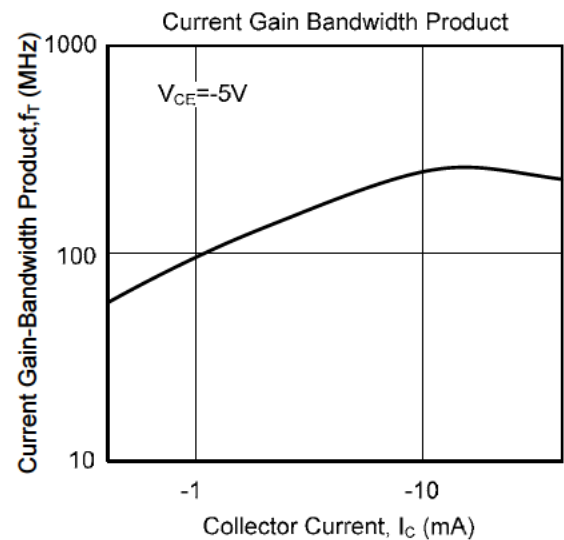
■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=-10\text{mA}, I_B=0$	-65			V
			-45			V
			-30			V
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=-100\mu\text{A}$	-80			V
			-50			V
			-30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=-10\mu\text{A}, I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$I_E=0, V_{CB}=-30\text{V}$			-15	nA
DC Current Gain	h_{FE}	$V_{CE}=-5\text{V}, I_C=2\text{mA}$	110		800	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-90	-300	mV
		$I_C=-100\text{mA}, I_B=-5\text{mA}$		-250	-650	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-700		mV
		$I_C=-100\text{mA}, I_B=-5\text{mA}$		-900		mV
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-600	-660	-750	mV
		$V_{CE}=-5\text{V}, I_C=-10\text{mA}$			-800	mV
Current Gain Bandwidth Product	f_T	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=10\text{MHz}$		150		MHz
Output Capacitance	C_{OB}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Noise Figure	NF	$V_{CE}=-5\text{V}, I_C=-200\mu\text{A}$ $f=1\text{KHz}, R_G=2\text{K}\Omega$		2	10	dB

■ **CLASSIFICATION OF h_{FE}**

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

TYPICAL CHARACTERISTICS



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