



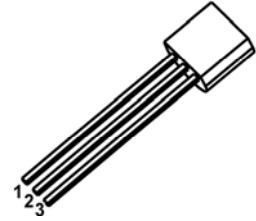
## TO-92 Plastic-Encapsulate Transistors

### BC556/BC557/BC558 TRANSISTOR (PNP)

#### FEATURES

- High Voltage
- Complement to BC546,BC547,BC548

TO - 92



1. COLLECTOR
2. BASE
3. EMITTER

#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	BC556	-80
		BC557	-50
		BC558	-30
$V_{CEO}$	Collector-Emitter Voltage	BC556	-65
		BC557	-45
		BC558	-30
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-0.1	A
$P_C$	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^{\circ}\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC556	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -0.1mA, I <sub>E</sub> =0	-80			V
	BC557			-50			
	BC558			-30			
Collector-emitter breakdown voltage	BC556	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-2mA, I <sub>B</sub> =0	-65			V
	BC557			-45			
	BC558			-30			
Emitter-base breakdown voltage		V <sub>(BR)EBO</sub>	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5			V
Collector cut-off current	BC556	I <sub>CBO</sub>	V <sub>CB</sub> =-70V, I <sub>E</sub> =0			-0.1	μA
	BC557		V <sub>CB</sub> =-45V, I <sub>E</sub> =0			-0.1	μA
	BC558		V <sub>CB</sub> =-25V, I <sub>E</sub> =0			-0.1	μA
Collector cut-off current	BC556	I <sub>CEO</sub>	V <sub>CE</sub> =-60V, I <sub>B</sub> =0			-0.1	μA
	BC557		V <sub>CE</sub> =-40V, I <sub>B</sub> =0			-0.1	μA
	BC558		V <sub>CE</sub> =-25V, I <sub>B</sub> =0			-0.1	μA
Emitter cut-off current		I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0			-0.1	μA
DC current gain		h <sub>FE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	120		800	
Collector-emitter saturation voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA			-0.3	V
			I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA			-0.65	V
Base-emitter saturation voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =-0.5mA			-0.8	V
			I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA			-1	V
Base-emitter voltage		V <sub>BE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	-0.55		-0.7	V
			V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA			-0.82	V
Collector output capacitance		C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz			6	pF
Transition frequency	BC556	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=100MHz		150		MHz
	BC557				150		MHz
	BC558				150		MHz

**CLASSIFICATION of h<sub>FE</sub>**

RANK	A	B	C
RANGE	120-220	180-460	420-800