



# BC261 BC262 BC263

PNP HIGH GAIN, LOW NOISE  
SILICON PLANAR EPITAXIAL TRANSISTOR



### GENERAL DESCRIPTION :

The BC261, BC262 and BC263 are PNP silicon planar epitaxial transistors.

The BC261 is intended for audio amplifier driver stage.

The BC262 is intended for general purpose applications.

The BC263 is intended for low noise, high gain pre-amplifier stage.

### MECHANICAL OUTLINE

TO-18



CBE

### ABSOLUTE MAXIMUM RATINGS :

	BC261	BC262	BC263
Continuous Power Dissipation @ $T_A=25^{\circ}\text{C}$ , P max	360mW	360mW	360mW
Continuous Collector Current, $I_C$ max	-200mA	-200mA	-200mA
Maximum Collector Junction Temperature, $T_j$	200 $^{\circ}\text{C}$	200 $^{\circ}\text{C}$	200 $^{\circ}\text{C}$
Storage Temperature Range, $T_{stg}$	-65 to +200 $^{\circ}\text{C}$	-65 to +200 $^{\circ}\text{C}$	-65 to +200 $^{\circ}\text{C}$
Collector-Base Voltage, $V_{CBO}$	-45V	-20V	-20V
Collector-Emitter Voltage, $V_{CEO}$	-45V	-20V	-20V
Emitter-Base Voltage, $V_{EBO}$	-5V	-5V	-5V

### ELECTRICAL CHARACTERISTICS @ $T_A=25^{\circ}\text{C}$ (unless otherwise stated) :

PARAMETER	SYMBOL	BC261		BC262		BC263		UNIT	TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX		
Collector Cutoff Current	$I_{CBO}$	-	-50	-	-	-	-	nA	$V_{CB}=-45V$
Collector Cutoff Current	$I_{CBO}$	-	-50	-	-	-	-	uA	$V_{CB}=-45V$ $T_A=150^{\circ}\text{C}$
Collector Cutoff Current	$I_{CBO}$	-	-	-50	-50	-	-	nA	$V_{CB}=-20V$
Collector Cutoff Current	$I_{CBO}$	-	-	-50	-50	-	-	uA	$V_{CB}=-20V$ $T_A=150^{\circ}\text{C}$
Emitter Cutoff Current	$I_{EBO}$	-100	-	-100	-	-100	-	nA	$V_{EB}=-4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-250	-	-250	-	-250	-	mV	$I_C=-10mA$ $I_B=-0.5mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-600	-	-600	-	-600	-	mV	$I_C=-100mA$ $I_B=-5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-900	-	-900	-	-900	-	mV	$I_C=-10mA$ $I_B=-0.5mA$
D.C. Current Gain	$h_{FE}$	-	-	-	-	40	-	-	$V_{CE}=-5V$ $I_C=-10mA$
Small Signal Current Gain	$h_{fe}$	125	500*	125	500*	125	500*	-	$V_{CE}=-5V$ $I_C=-2mA$
Transition Frequency	$f_T$	150	-	150	-	150	-	MHz	$V_{CE}=-5V$ $I_C=-10mA$
Collector-Base Capacitance	$C_{ob}$	6	-	6	-	6	-	pF	$V_{CB}=-10V$ $f=1MHz$
Noise Figure	N.F.	6	-	6	-	6	-	dB	$V_{CE}=-2V$ $I_C=-0.2mA$
Noise Figure	N.F..	-	-	-	-	2.5	-	dB	$R_S=2Kohm$ $BW=200Hz$ $I_C=-0.2mA$
									$f=30Hz$ to 15KHz

\* When Group C is required, this gain limit becomes 900.

FAX: 3-410321

----- CONTINUE -----

\* CURRENT GAIN GROUPINGS :

PARAMETER	GROUP	BC261A		BC261B		BC261C		TEST CONDITIONS
		MIN	MAX	MIN	MAX	MIN	MAX	
$h_{fe}$		125	260	240	500	450	900	$V_{CE} = -5V$ $I_C = -2mA$ $f = 1KHz$