

PNP BC261 – BC262 – BC263

LOW NOISE GENERAL PURPOSE AUDIO AMPLIFIERS

They are silicon planar epitaxial PNP transistors mounted in TO-18 metal package.

The BC261 is intended for audio amplifier driver tages.

The BC262 is intended for general purpose applications.

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

Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol		BC261	BC262	BC263	Unit
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-45	-25	-25	V
V_{CES}	Collector- Emitter Voltage ($V_{BE} = 0$)	-50	-30	-30	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5			V
I_C	Collector Current	-100			mA
I_{CM}	Collector Peak Current	-200			mA
P_D	Total Power Dissipation @ $T_{amb} = 25^\circ$	300			mW
T_J	Junction Temperature	175			$^\circ\text{C}$
T_{Stg}	Storage Temperature range	-55 to +150			$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

$T_J = 25^\circ\text{C}$ unless otherwise specified

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
I_{CBO}	Collector Cutoff Current $I_E = 0$	$V_{CB} = -45\text{ V}$ BC261	-	-	-50	nA
		$V_{CB} = -45\text{ V}$ $T_J = 150^\circ\text{C}$ BC261	-	-	-50	μA
		$V_{CB} = -20\text{ V}$ BC262 BC263	-	-	-50	nA
		$V_{CB} = -20\text{ V}$ $T_J = 150^\circ\text{C}$ BC262 BC263	-	-	-50	μA
V_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -2\text{ mA}$ $I_B = 0$ BC261	-45	-	-	V
		BC262	-25	-	-	
		BC263	-25	-	-	
V_{CES}	Collector- Emitter Voltage ($V_{BE} = 0$)	$I_C = -10\text{ }\mu\text{A}$ $V_{BE} = 0$ BC261	-50	-	-	V
		BC262	-30	-	-	
		BC263	-30	-	-	
V_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -10\text{ }\mu\text{A}$ $I_C = 0$ BC261	-5	-	-	V
		BC262				
		BC263				

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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

Symbol	Ratings	Test Condition(s)		Min	Typ	Max	Unit
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C = -10 \text{ mA}$ $I_B = -0.5 \text{ mA}$	BC261	-	-	-300	mV
			BC262				
			BC263				
		$I_C = -100 \text{ mA}$ $I_B = -5 \text{ mA}$	BC261	-	-500	-	
			BC262				
			BC263				
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	$I_C = -10 \text{ mA}$ $I_B = -0.5 \text{ mA}$	BC261	-	-	-900	
			BC262				
			BC263				
		$I_C = -100 \text{ mA}$ $I_B = -5 \text{ mA}$	BC261	-	-850	-	
			BC262				
			BC263				
H_{fe}	Small Signal Current Gain	$I_C = -2 \text{ mA}$ $V_{CE} = 5 \text{ V}$ $f = 1 \text{ KHz}$	BC261A	125	-	260	-
			BC262A				
			BC263A				
			BC261B	240	-	500	
			BC262B				
			BC263B				
			BC261C	450	-	900	
			BC262C				
BC263C							
f_T	Transition frequency	$I_C = -10 \text{ mA}$ $V_{CE} = -5 \text{ V}$ $f = 100 \text{ MHz}$	BC261	150	-	-	MHz
			BC262				
			BC263				
F	Noise figure	$I_C = -200 \text{ }\mu\text{A}$ $V_{CE} = -5 \text{ V}$ $f = 1\text{kHz}$ $R_g = 2\text{k}\Omega$	BC261	-	-	10	db
			BC262	-	-	10	
			BC263	-	-	4	
C_C	Collector capacitance	$I_E = 0$ $V_{CB} = -10 \text{ V}$ $f = 1\text{MHz}$	BC261	-	-	6	pF
			BC262				
			BC263				

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-a}	Thermal Resistance, Junction to mounting base	500	°C/W
R_{thJ-c}	Thermal Resistance, Junction to ambient in free air	200	°C/W

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MECHANICAL DATA CASE TO-18

DIMENSIONS (mm)		
	min	max
A	12.7	-
B	-	0.49
C	0.9	-
D	-	5.3
E	-	4.9
F	-	5.8
G	2.54	-
H	-	1.2
I	-	1.16
L	45°	-

Pin 1 :	emitter
Pin 2 :	base
Pin 3 :	Collector
Case :	Collector

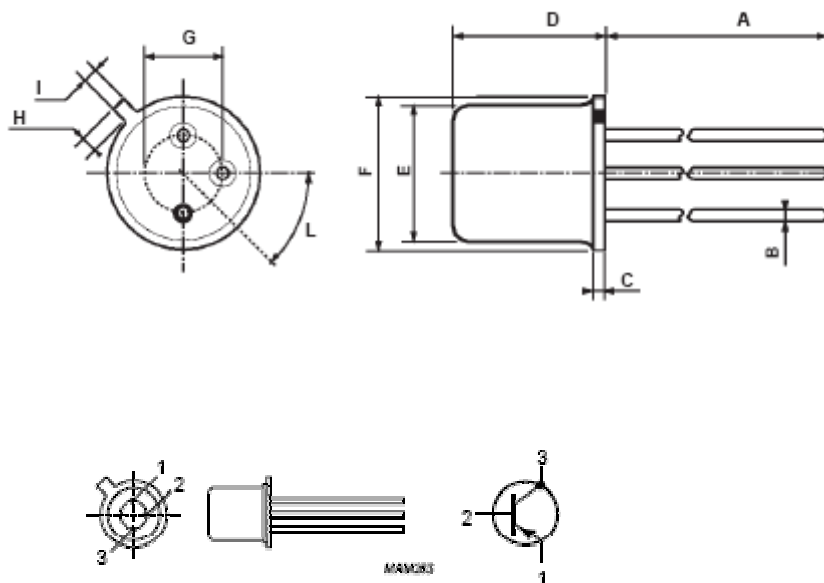


Fig.1 Simplified outline (TO-18) and symbol.

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