

## 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 stages.

The BC262 is intended for general purpose applications.

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

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	$\mu\text{A}$
		$V_{CB} = -20\text{ V}$ BC262 BC263	-	-	-50	nA
		$V_{CB} = -20\text{ V}$ $T_j = 150^\circ\text{C}$ BC262 BC263	-	-	-50	$\mu\text{A}$
$V_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -2\text{ mA}$ $I_B = 0$ BC261	-45	-	-	V
		BC262	-25	-	-	
		BC263	-25	-	-	
$V_{CES}$	Collector- Emitter Voltage ( $V_{BE} = 0$ )	$I_C = -10\ \mu\text{A}$ $V_{BE} = 0$ BC261	-50	-	-	V
		BC262	-30	-	-	
		BC263	-30	-	-	
$V_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\ \mu\text{A}$ $I_C = 0$ BC261	-5	-	-	V
		BC262				
		BC263				

## PNP BC261 – BC262 – BC263

### ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=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
			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	-	-
			BC262			
			BC263			
$F$	Noise figure	$I_C = -200 \mu\text{A}$ $V_{CE} = -5 \text{ V}$ $f = 1 \text{ kHz}$ $R_g = 2 \text{ k}\Omega$	BC261	-	-	10
			BC262			10
			BC263			4
$C_c$	Collector capacitance	$I_E = 0$ $V_{CB} = -10 \text{ V}$ $f = 1 \text{ MHz}$	BC261	-	-	6
			BC262			
			BC263			

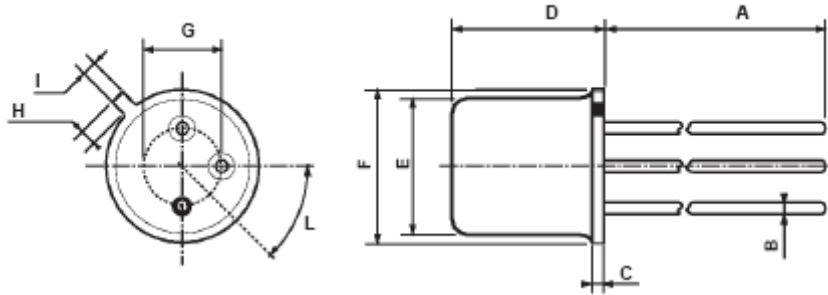
### THERMAL CHARACTERISTICS

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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### ECHANICAL 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

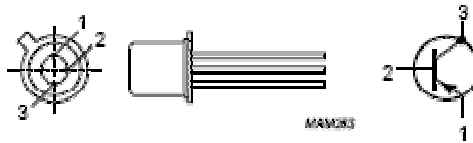


Fig.1 Simplified outline (TO-18) and symbol.

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