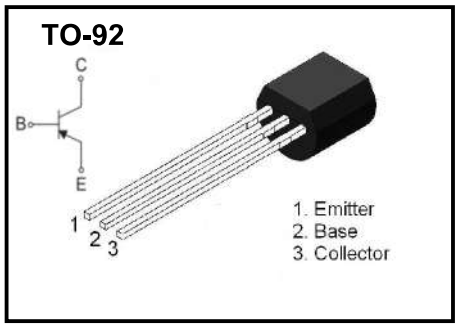
PNP Audio Frequency Amplifier Applications

Low Noise Amplifier Applications

High voltage and high current: V_{CEO} = 50V (min),
I_C = 150 mA (max)
Complementary to 2SC1815.



Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	-50	V
Collector-Emitter Voltage	BV_{CEO}	-50	V
Emitter-Base Voltage	BV_{EBO}	-5	V
Collector Current	I_C	-150	mA
Collector Power Dissipation	P_C	400	mW
Junction Temperature、Storage Temperature	Tj、Tstg	-55～＋150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = -100μA，I_E = 0	-50			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = -1mA，I_B = 0	-50			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = -100μA，I_C = 0	-5			V
Collector cut-off current	I_{CBO}	V_{CB} = -50V，I_E = 0			-0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB} = -5V，I_C = 0			-0.1	μA
DC current gain	h_{FE1}	V_{CE} = -6V，I_C = -2mA	70		400	
	h_{FE2}	V_{CE} = -6V，I_C = -150mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -100mA，I_B = -10mA			-0.3	V
base -emitter saturation voltage	$V_{BE(sat)}$	I_C = -100mA，I_B = -10mA			-1.0	V
Transition frequency	f_T	V_{CE} = -10V，I_B = -1mA	80			MH_Z

h_{FE1} Classification

Classification	2SA1015-O	2SA1015-Y	2SA1015-GR
hFE	70-140	120-240	200-400

Typical Characteristics

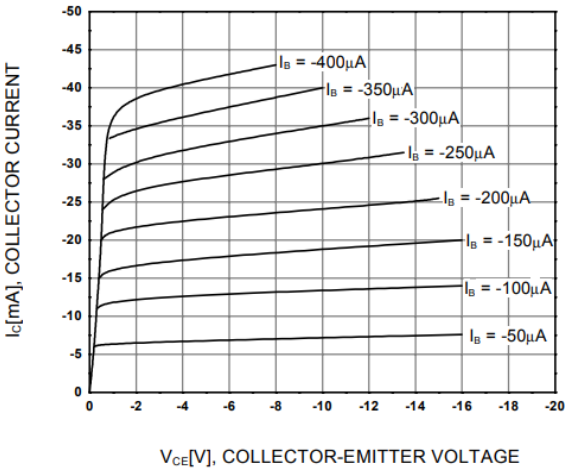


Fig.1 Static characteristics

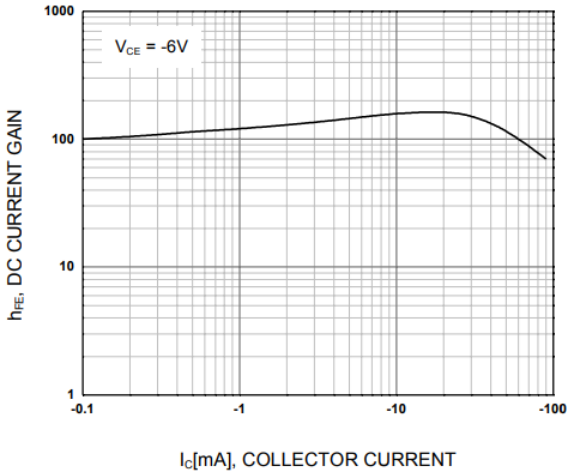


Fig.2 DC Current Gain

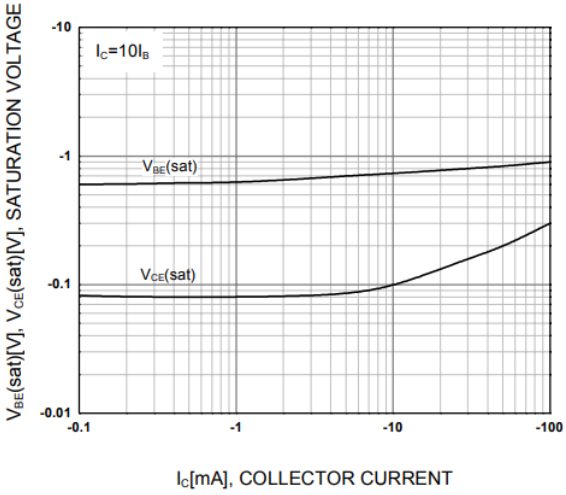


Fig.3 Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

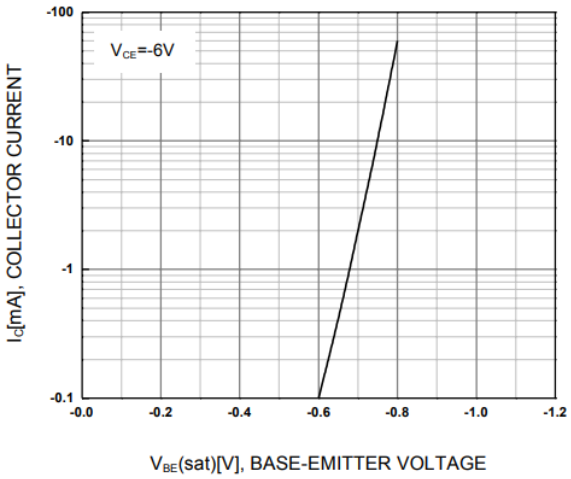


Fig.4 Base-Emitter on voltage

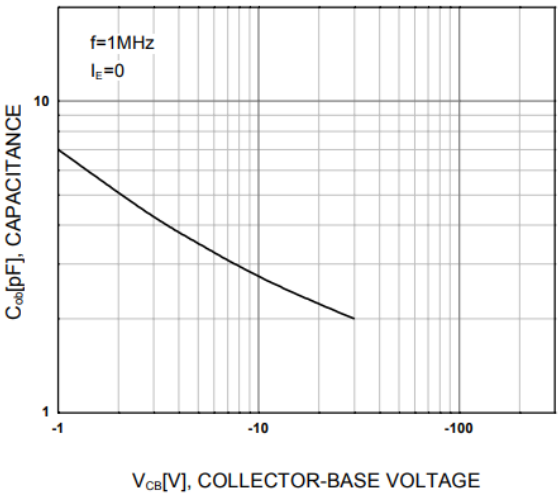


Fig.5 Collector Output Capacitance

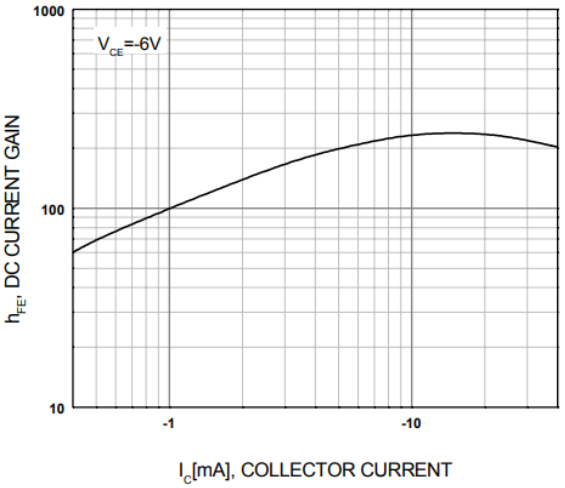


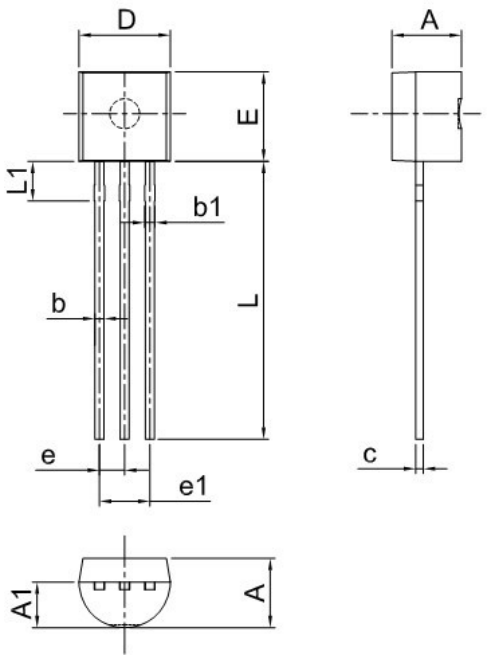
Figure 6. Current Gain Bandwidth Product

Ordering information

Package	Packing Description	Base Quantity
TO-92	Bulk	1000pcs/Bag
	Tape	2000pcs/Box

Package Dimensions

TO-92



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

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