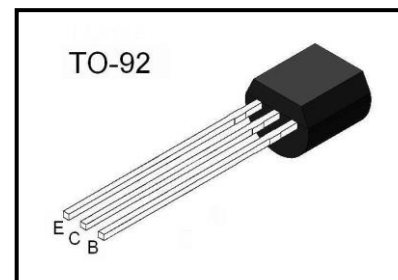


PNP Audio Frequency Amplifier Applications
Low Noise Amplifier Applications

High voltage and high current: $V_{CEO} = 50V$ (min),
 $I_C = 150\text{ mA}$ (max)

Complementary to 2SC1815.



Absolute Maximum Ratings (Ta=25°C)

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	T_j 、 T_{stg}	-55~+150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = -100\mu A$, $I_E = 0$	-50			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-50			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -100\mu A$, $I_C = 0$	-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}	$V_{CE} = -6V$, $I_C = -2\text{mA}$	70		400	
	h_{FE2}	$V_{CE} = -6V$, $I_C = -150\text{mA}$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-0.3	V
base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-1.0	V
Transition frequency	f_T	$V_{CE} = -10V$, $I_B = -1\text{mA}$	80			MHz

h_{FE1} Classification

Classification	2SA1015-O	2SA1015-Y	2SA1015-GR
h_{FE}	70-140	120-240	200-400

Typical Characteristics

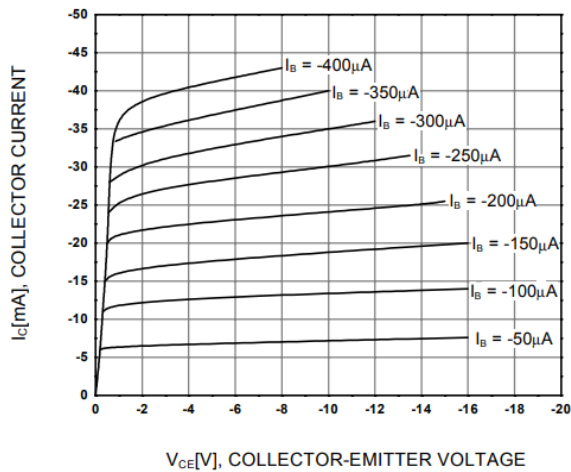


Fig.1 Static characteristics

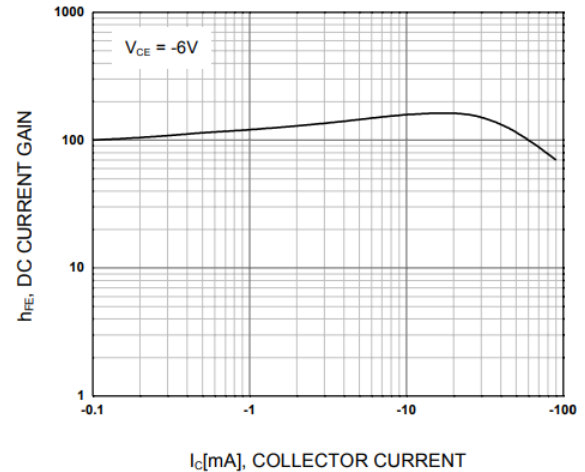
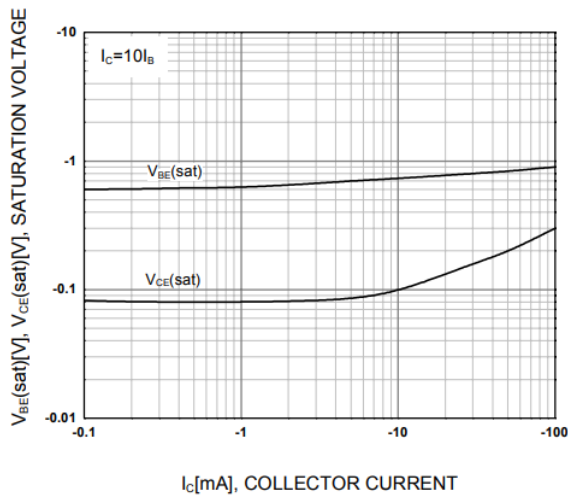


Fig.2 DC Current Gain



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

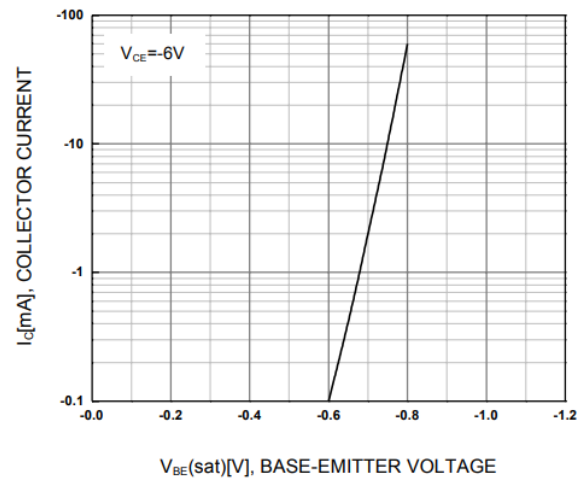


Fig.4 Base-Emitter on voltage

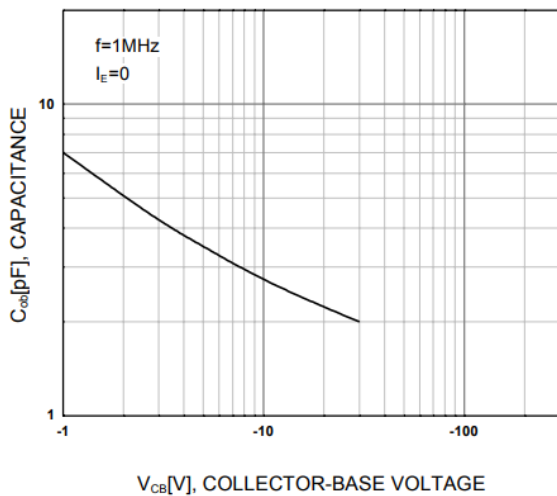


Fig.5 Collector Output Capacitance

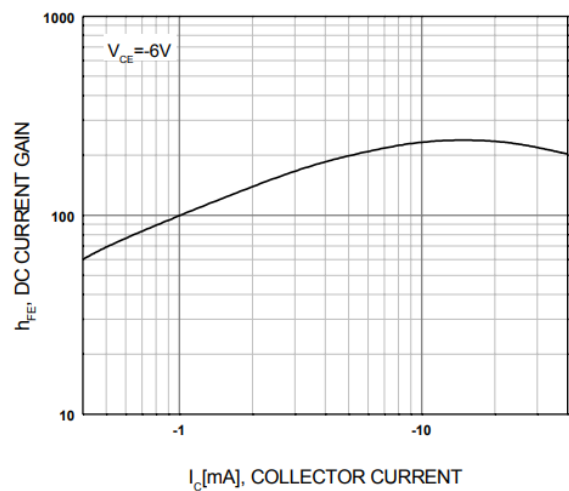
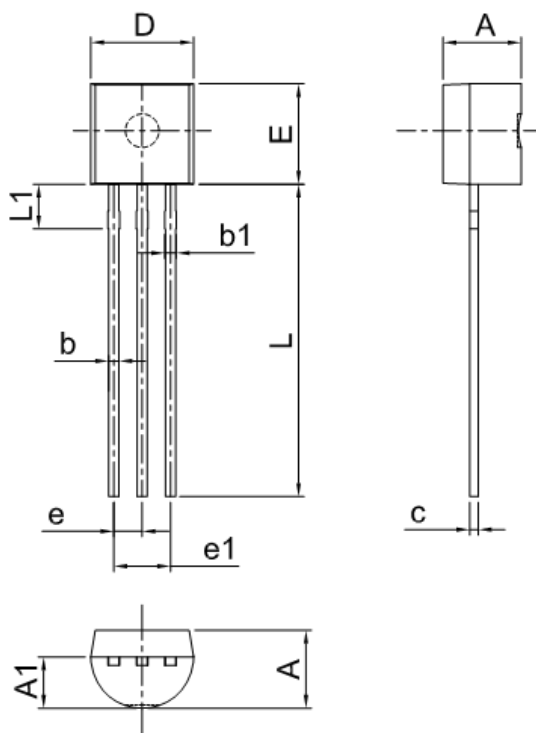


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Symbol	Min.	Typ	Max.
A	3.30	3.50	3.70
A1	2.10	2.30	2.50
b	0.40	0.45	0.50
b1	0.50	0.55	0.60
c	0.35	0.40	0.45
D	4.45	4.55	4.65
E	4.45	4.55	4.65
e	1.17	1.27	1.37
e1	2.34	2.54	2.64
L	13.50	14.00	14.50
L1	1.80	2.00	2.20

Package	Packing Method	Pack Quantity
TO-92	Bulk	1000pcs/Bag
TO-92	Tape	2000pcs/Box