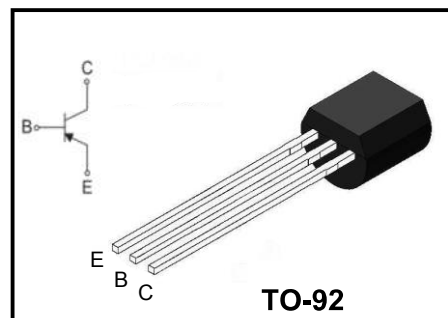


Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

**1W Output Amplifier of Potable Radios
in Class B Push-pull Operation.**

- ♦ High total power dissipation. ($P_C=625\text{mW}$)
- ♦ High Collector Current. ($I_C=500\text{mA}$)
- ♦ Complementary to S9013
- ♦ Excellent h_{FE} linearity.



Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	-40	V
Collector-Emitter Voltage	BV_{CEO}	-30	V
Emitter-Base Voltage	BV_{EBO}	-5	V
Collector Current	I_C	-500	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = -100\mu\text{A}$, $I_E = 0$	-40			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-20			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -100\mu\text{A}$, $I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -25\text{V}$, $I_E = 0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3\text{V}$, $I_C = 0$			-100	nA
DC current gain	h_{FE1}	$V_{CE} = -1\text{V}$, $I_C = -50\text{mA}$	64		350	
	h_{FE2}	$V_{CE} = -1\text{V}$, $I_C = -500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$			0.6	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$			1.2	V

h_{FE} 2 Classification

Classification	S9012-D	S9012-E	S9012-F	S9012-G	S9012-H	S9012-I
Range	64-91	78-112	96-135	112-166	144-202	200-350

Typical Characteristics

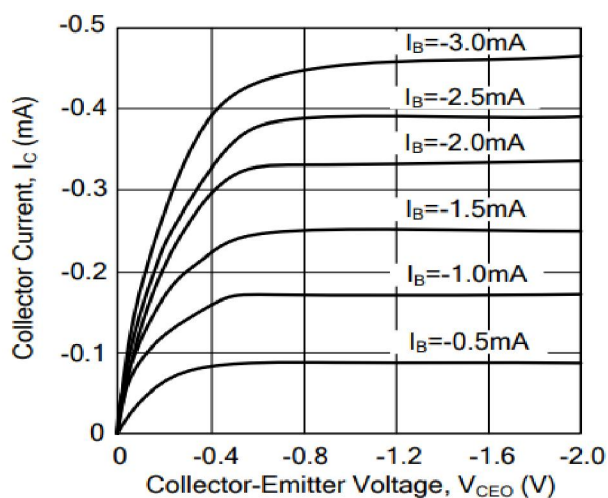


Figure 1. Static Characteristic

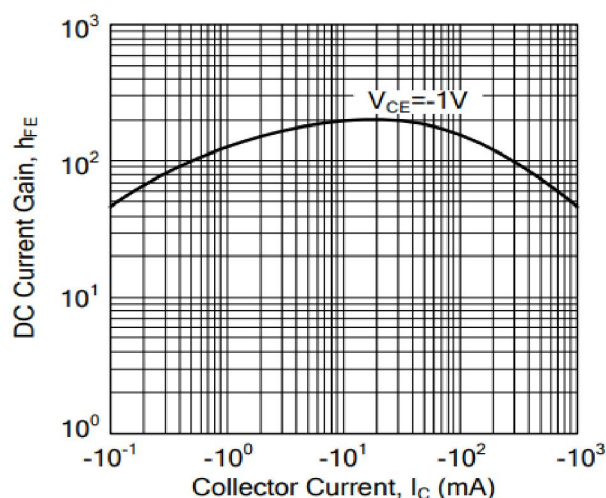


Figure 2. DC current Gain

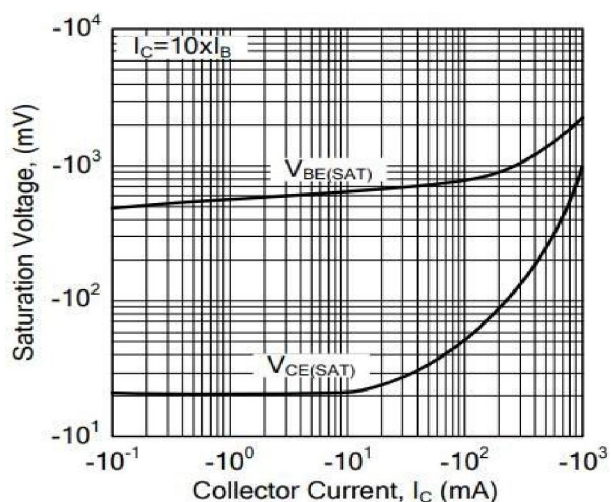


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

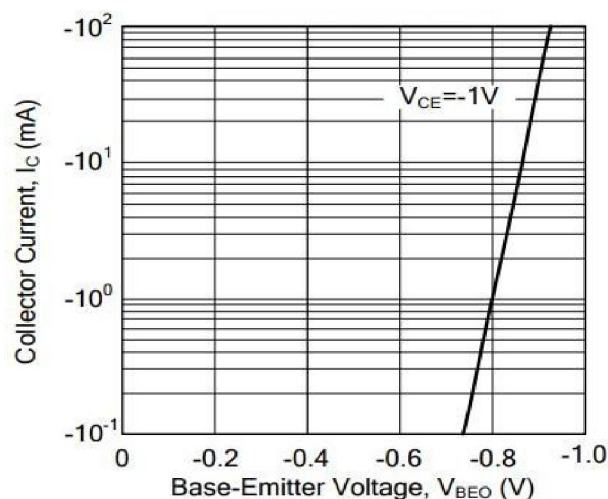


Figure 4. Base-Emitter On Voltage

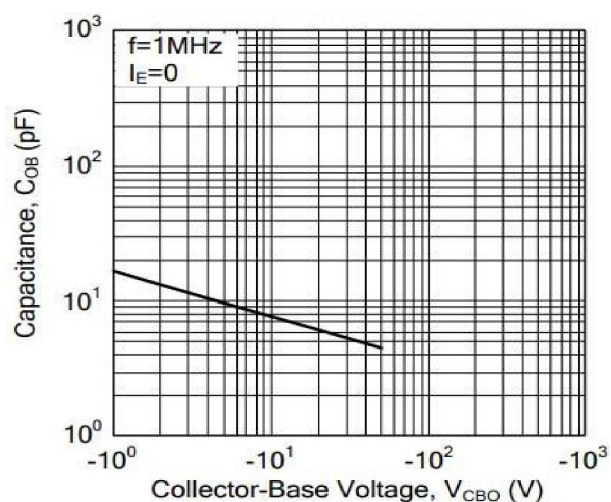


Figure 5. Collector Output Capacitance

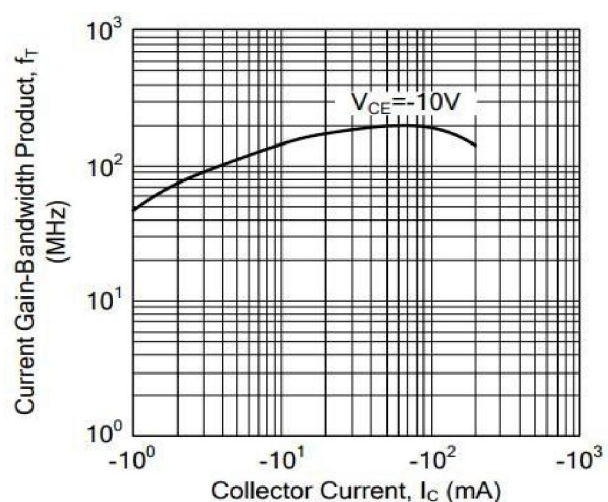


Figure 6. Current Gain Bandwidth Product

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

Disclaimer

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