

Il BF 155 è un transistor per uso IF - RF - VHF e UHF in contenitore metallico piccolo a 4 pin tipo To72.

Prodotto dalla ST, è molto simile ad altri transistor per RF come BF180 , 183 , 689 , 763 , 2N2857 , 2N 3904 ecc...

Le caratteristiche sono anche simili ad altri transistor più noti come ad esempio il BFY90 , BFX89 ecc...

Le applicazioni più comuni sono :
circuiti oscillatori dalle HF alle UHF
amplificatore uso generale IF , RF , VHF e UHF.
E' una valida alternativa al più costoso e ormai obsoleto BFY90 , praticamente per ogni tipo di applicazione di uso generale di segnale per RF fino 800 MHz.

Qui sotto è riportata una tabella di comparazione tra il BF155 e il BFY90 più 4 pagine del suo data sheet .

BF 155 is a transistor for IF - RF - VHF - UHF in case To72 (small metallic 4 pins) manufactured from ST.

Its specifications are quite similar to other types like BF180 , 183 , 689 , 763 , 2N2857 , 2N 3904 etc...it is also very similar to the well known BFY90 and BFX89 .

Some common applications are :
oscillator circuits from HF to UHF ,
general purpose IF RF VHF UHF amplifiers.
It is also a good alternative to the obsolete type BFY90 , it can be used in any general purpose RF signal applications .

Below there is quick cross reference table between BF155 and BFY90 , there are also 4 pages of data sheet .



	BF 155	BFY 90
Ic max	20 mA	25 mA
P tot	200 mW	200 mW
Ft	800 MHz typ @ 2.5 mA	1.1 GHz typ @ 2 mA
h_{FE}	> 20	> 25
Gain	typ 10dB @ 800 MHz	typ 8dB @ 800 MHz
Cre	typ 0.4 pF	typ 0.6 pF
f max max oscillation frequency	2.5 GHz	
Case	To72 metallic 4 pin	

BF 155**EPITAXIAL PLANAR NPN****UHF AMPLIFIER AND MIXER-OSCILLATOR**

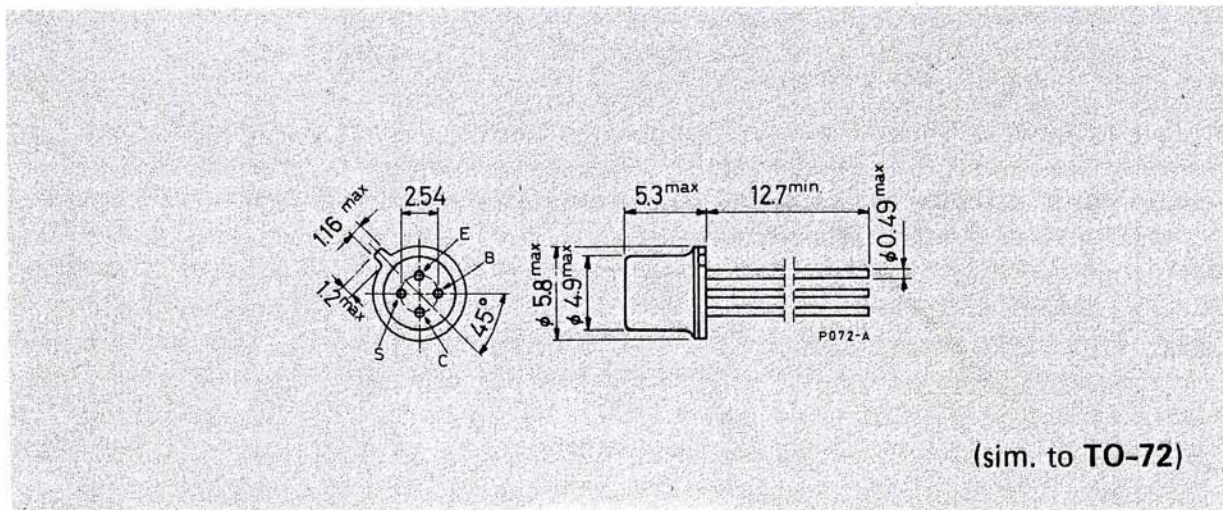
The BF 155 is a silicon planar epitaxial NPN transistor in a TO-72 metal case.
It is specifically designed for UHF amplifier and mixer-oscillator applications up to 900MHz.

ABSOLUTE MAXIMUM RATINGS

V_{CBO}	Collector-base voltage ($I_E = 0$)	40	V
V_{CEO}	Collector-emitter voltage ($I_B = 0$)	40	V
V_{EBO}	Emitter-base voltage ($I_C = 0$)	3	V
I_C	Collector current	20	mA
P_{tot}	Total power dissipation at $T_{amb} \leq 25^\circ\text{C}$	200	mW
	at $T_{case} \leq 25^\circ\text{C}$	300	mW
T_{stg}, T_j	Storage and junction temperature	-55 to 200	$^\circ\text{C}$

MECHANICAL DATA

Dimensions in mm



BF 155**THERMAL DATA**

$R_{th\ j-case}$	Thermal resistance junction-case	max	580	°C/W
$R_{th\ j-amb}$	Thermal resistance junction-ambient	max	875	°C/W

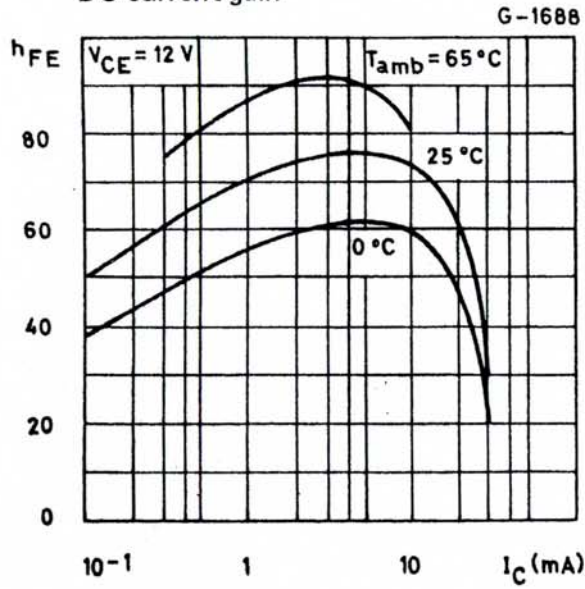
ELECTRICAL CHARACTERISTICS ($T_{amb} = 25^{\circ}C$ unless otherwise specified)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector cutoff current ($I_E = 0$)			100	nA
$V_{(BR)CBO}$	Collector-base breakdown voltage ($I_E = 0$)	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage ($I_B = 0$)	40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage ($I_C = 0$)	3			V
V_{BE}	Base-emitter voltage			0.85	V
h_{FE}	DC current gain	20	70		—
f_T	Transition frequency		800		MHz
C_{re}	Reverse capacitance		0.4		pF
NF *	Noise figure		7	9	dB
G_{pb}^*	Power gain	8	10		dB
f_{max}	Maximum oscillation frequency		2.5		GHz

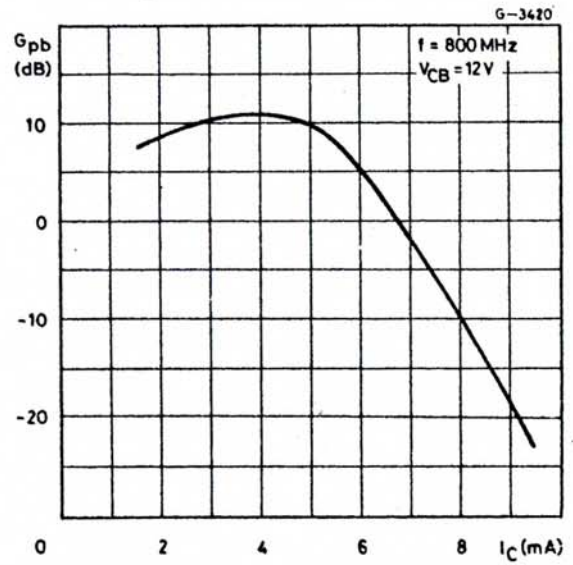
* See TEST CIRCUIT

BF 155

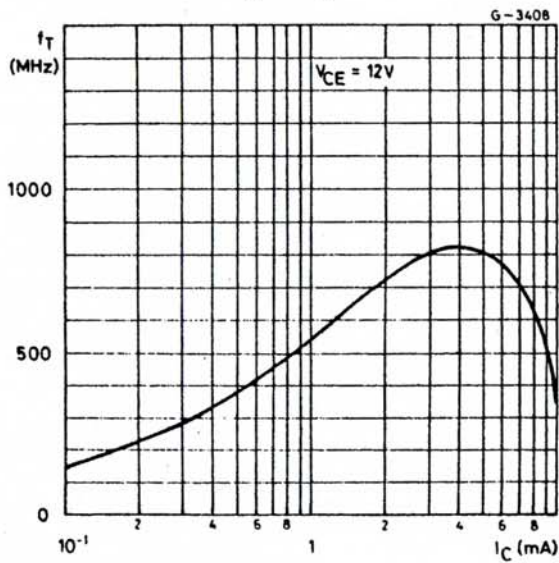
DC current gain



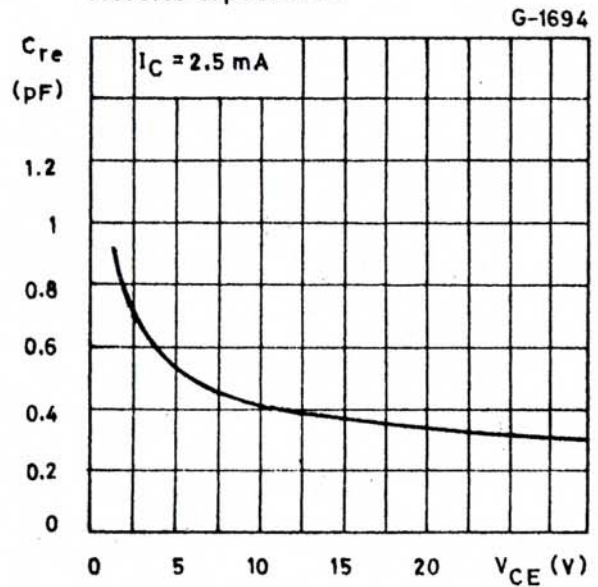
Power gain vs. collector current



Transition frequency



Reverse capacitance



BF 155

TEST CIRCUIT

Power gain and noise figure

