R.Borumandi 9431023

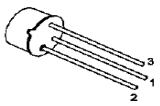
BC107 PLOT hFE vs IC:

SGS-THOMSON MICROELECTRONICS

BC107
BC108

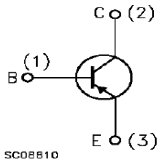
LOW NOISE GENERAL PURPOSE AUDIO AMPLIFIERS

DESCRIPTION
The BC107 and BC108 are silicon planar epitaxial NPN transistors in TO-18 metal case. They are suitable for use in driver stages, low noise input stages and signal processing circuits of television reveivers. The PNP complemet for BC107 is BC177.



TO-18

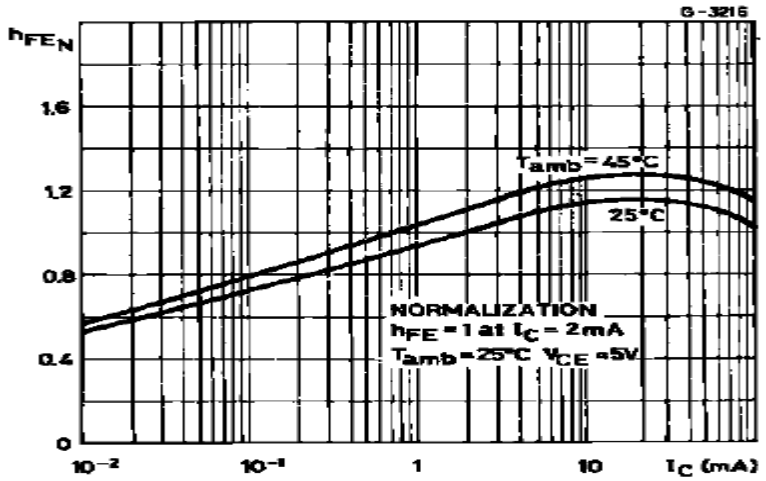
INTERNAL SCHEMATIC DIAGRAM



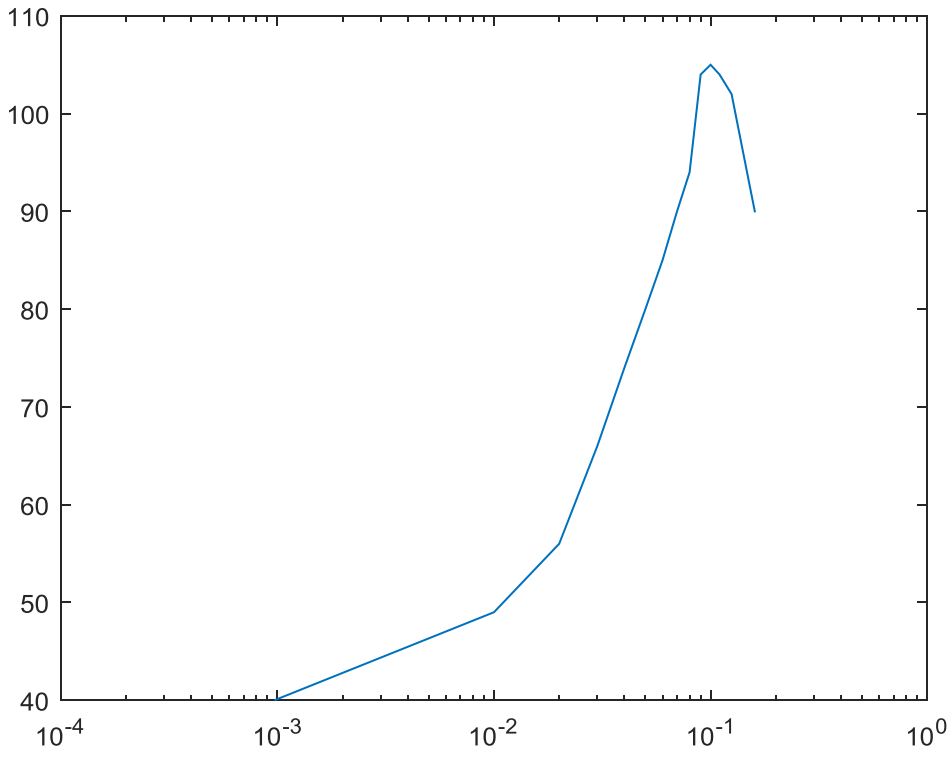
ABSOLUTE MAXIMUM RATINGS

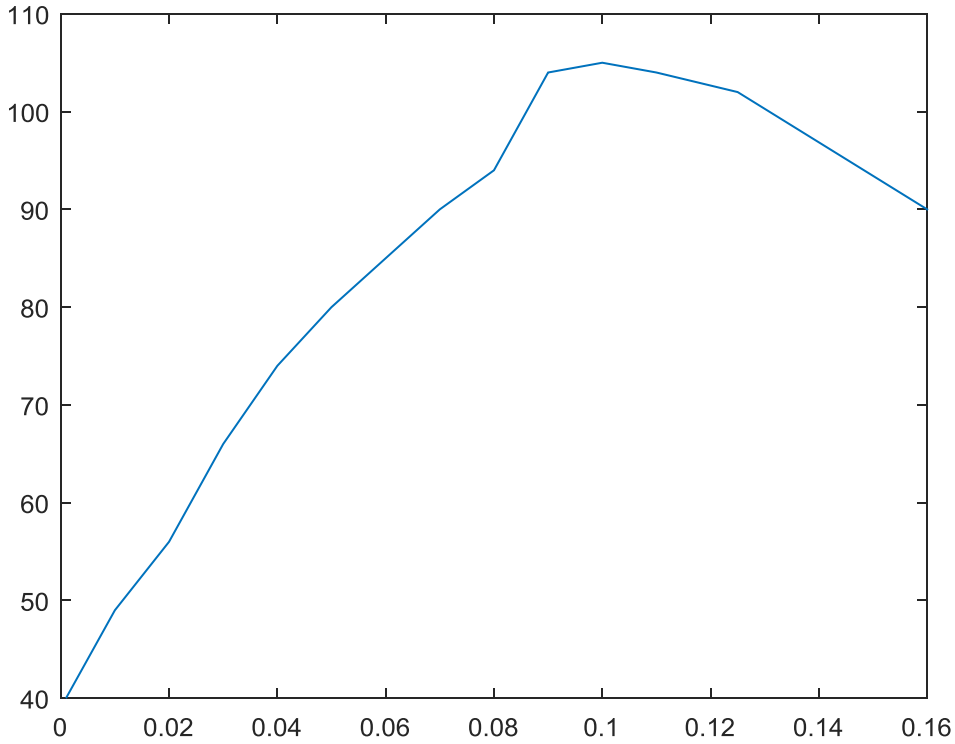
Symbol	Parameter	Value		Unit
		BC107	BC108	
V_{CBO}	Collector-Base Voltage (I_E = 0)	50	30	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	45	20	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	6	5	V
I_C	Collector Current	100		mA
P_{tot}	Total Dissipation at $T_{amb} \leq 25\ ^oC$ at $T_{case} \leq 25\ ^oC$	0.3 0.75		W W
T_{stg}	Storage Temperature	-55 to 175		^oC
T_j	Max. Operating Junction Temperature	175		^oC

DC Normalized Current Gain.




```
%BC107-hFE plot vs IC
hFE=[40 49 56 66 74 80 85 90 94 104 105 104 102 90];%beta
IC=[.97*10^-3 10*10^-3 20*10^-3 30*10^-3 40*10^-3 50*10^-3 60*10^-3 70*10^-3
80*10^-3 90*10^-3 100*10^-3 110*10^-3 125*10^-3 160*10^-3 ];%A
semilogx(IC,hFE);
figure;
plot(IC,hFE,'ro');
figure;
plot(IC,hFE);
```


110
100
90
80
70
60
50
40
10^-4
10^-3
10^-2
10^-1
10^0



The end