

NPN Silicon Epitaxial Planar Transistor

High Frequency Low Noise Amplifier.

Features:

- $NF=1.8dB$ TYP. @ $f=0.9GHz$, $V_{CE}=10V$, $I_C=10mA$
- High Gain
 $|S_{21e}|^2=13dB$ TYP. @ $f=0.9GHz$, $V_{CE}=8V$, $I_C=40mA$

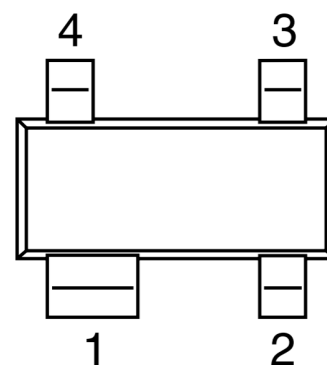
Description:

The BFG540 is a low supply voltage transistor designed for VHF, UHF low noise amplifier.

Marking: N37

PIN CONNECTIONS

1. collector 2. base 3&4. emitter



SOT143

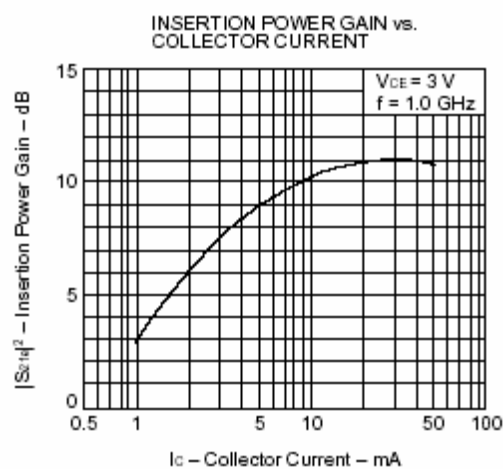
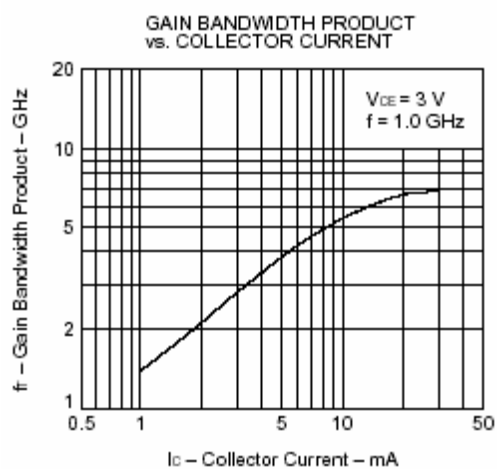
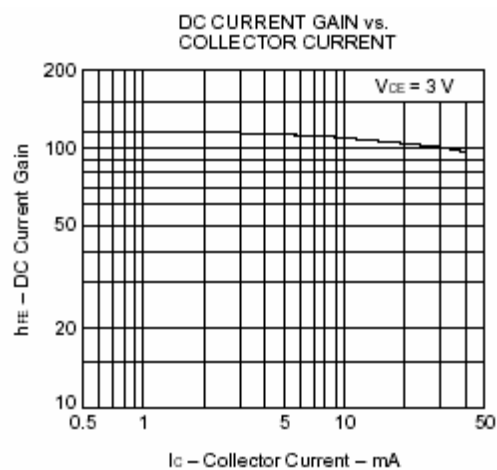
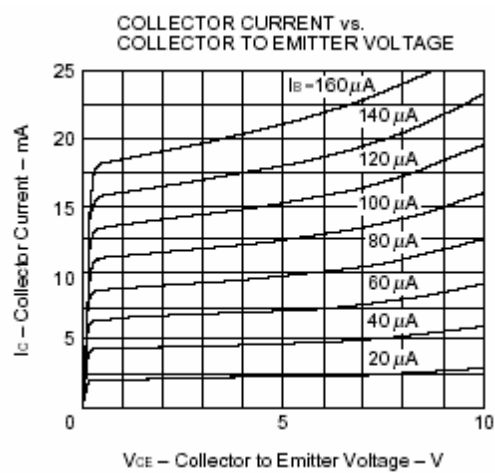
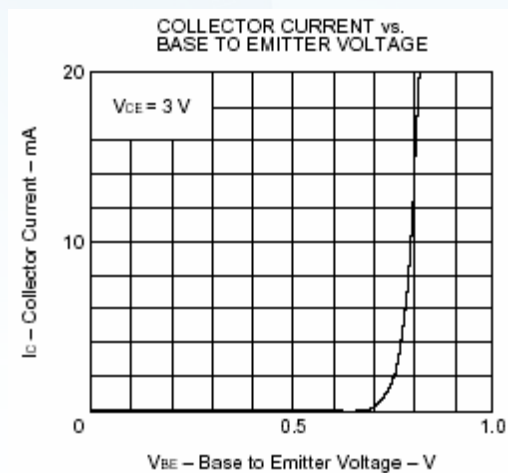
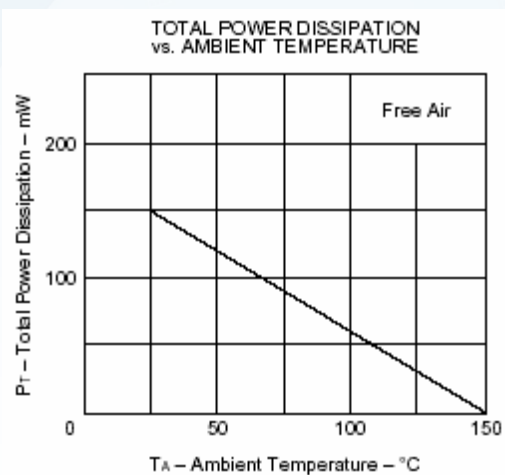
Absolute Maximum Ratings ($T_a = 25^\circ C$)

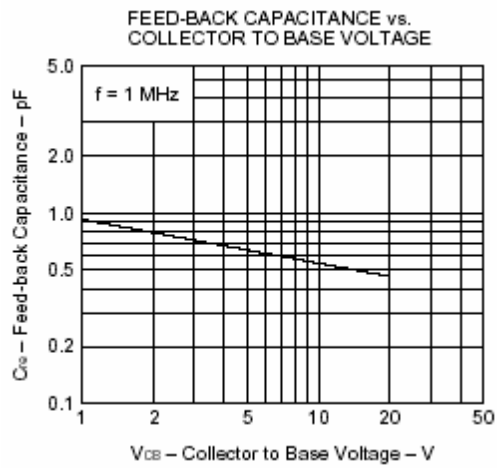
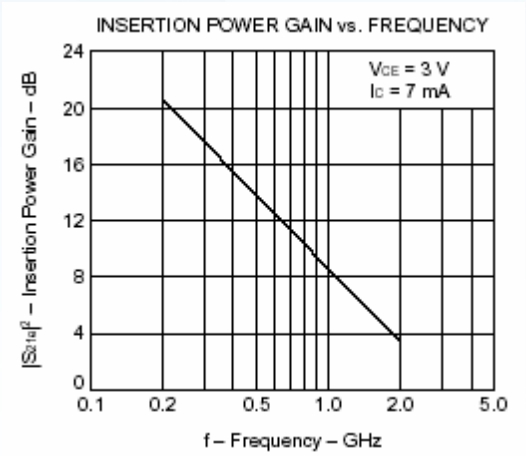
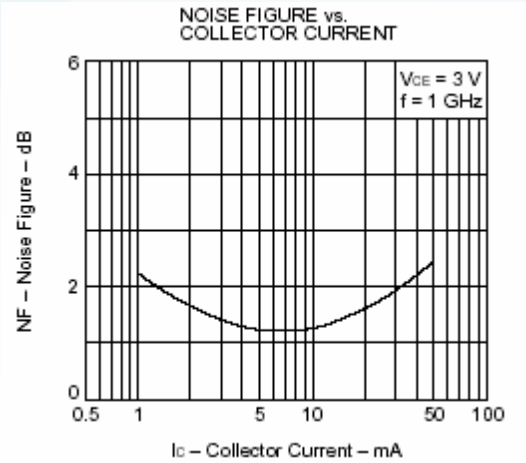
	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	20	V
Collector Emitter Voltage	V_{CEO}	12	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_S	-65 to +150	$^\circ C$

Characteristics at $T_{amb}=25\text{ °C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=5V$, $I_C=15mA$	h_{FE}	100	-	250	-
Collector Cutoff Current at $V_{CB}=10V$	I_{CBO}	-	-	1.0	μA
Emitter Cutoff Current at $V_{EB}=1V$	I_{EBO}	-	-	1.0	μA
Gain Bandwidth Product at $V_{CE}=8V$, $I_C=40mA$	f_T	-	9	-	GHz
Feed back Capacitance ¹⁾ at $V_{CE}=8V$, $f=1MHz$	C_{re}	-	0.65	1.5	pF
Insertion Power Gain at $V_{CE}=8V$, $I_C=40mA$, $f=0.9GHz$	$ S_{21e} ^2$	7	13	-	dB
Noise Figure at $V_{CE}=10V$, $I_C=10mA$, $f=0.9GHz$	NF	-	1.8	2.5	dB

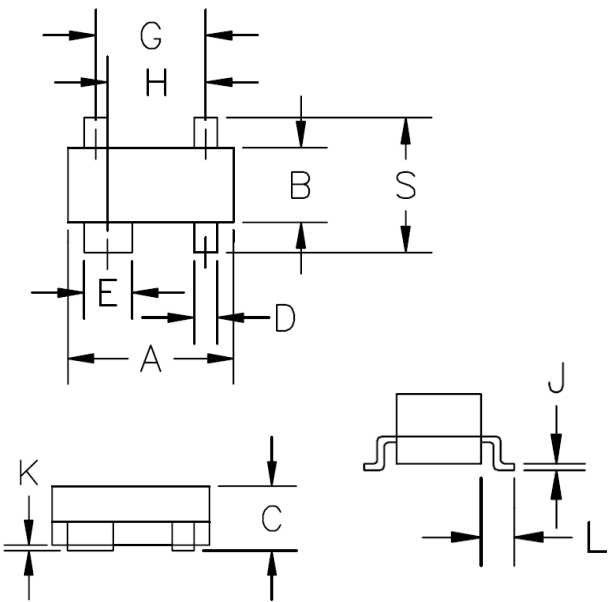
¹⁾ Measured with 3 terminal bridge, Emitter and case should be grounded.





Package Outline
Plastic surface mounted package

SOT-143



DIMENSIONS					
DIM ^N	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	—
B	.047	.055	1.20	1.40	—
C	.031	.047	.80	1.20	—
D	.014	.018	.37	.510	—
E	.030	.035	.76	.940	—
G	.076	BSC	1.92	BSC	—
H	.068	BSC	1.72	BSC	—
J	.003	.005	.085	.180	—
K	.002	.005	.013	0.10	—
L	.010	.022	—	.55	REF
S	.082	.104	2.10	2.64	—

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