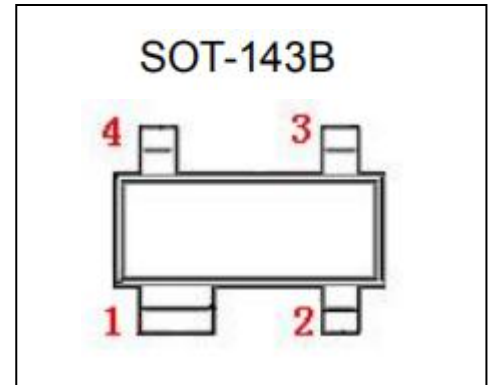


isc Silicon NPN RF Transistor
BFG540,BFG540/X
DESCRIPTION

- Low Noise Figure
NF = 1.8 dB TYP. @ $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 0.9\text{ GHz}$
- High Gain
 $|S_{21e}|^2 = 13\text{ dB}$ TYP. @ $V_{CE} = 8\text{ V}$, $I_C = 40\text{ mA}$, $f = 0.9\text{ GHz}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in low noise ,high-gain amplifiers and linear broadband amplifiers.


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base Voltage	2.5	V
I_C	Collector Current-Continuous	120	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.2	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

isc Silicon NPN RF Transistor
BFG540,BFG540/X
ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

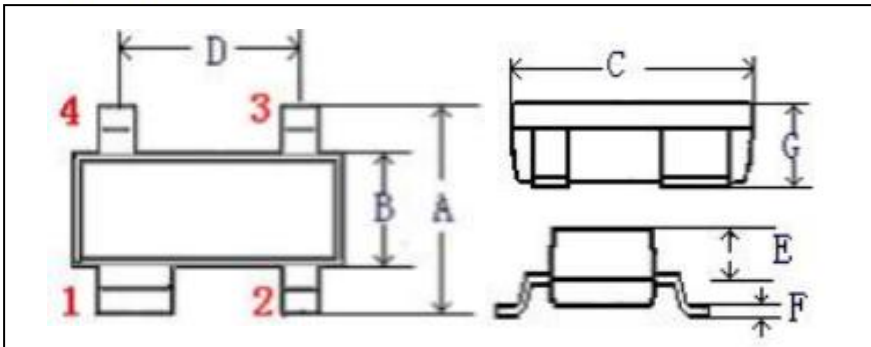
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CBO}	Collector-Emitter Breakdown Voltage	I _C = 1uA ; I _B = 0	20			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 15mA ; V _{CE} = 5V	90	150	250	
f _T	Current-Gain—Bandwidth Product	I _C = 40mA ; V _{CE} = 8V; f= 1GHz		9		GHz
C _{re}	Feedback Capacitance	I _E = 0 ; V _{CB} = 8V; f= 1MHz		0.65	1	pF
S _{21e} ²	Insertion Power Gain	I _C = 40mA ; V _{CE} = 8V; f= 0.9GHz		13		dB
NF	Noise Figure	I _C = 10mA ; V _{CE} = 10V; f= 0.9GHz		1.8		dB

◆ h_{FE} Classifications

B	C	D
90-130	120-180	170-250

PACKAGE INFORMATION

PRODUCT	PACKAGE	PIN			
		1	2	3	4
FCG540	SOT-143B	Collector	Base	Emitter	Emitter
FCG540/X	SOT-143B	Collector	Emitter	Base	Emitter

SC Silicon NPN RF Transistor
BFG540,BFG540/X
PACKAGE SIZE DRAWING
SOT-143B


DIM	mm	
	MIN	MAX
A	2.4	2.5
B	1.2	1.4
C	2.8	3
D	1.9	
E	0.45	0.55
F	0.09	0.15
G	0.9	1.1
H	1.7	

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