

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



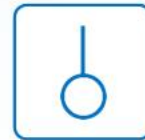
MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	BFG425W-B
▶ Overseas	Part Number	BFG425W-B
▶ Equivalent	Part Number	BFG425W-B

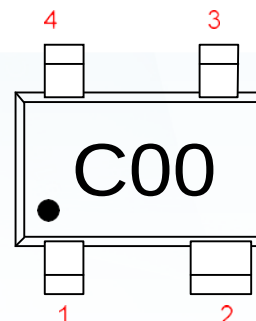
EV is the abbreviation of name EVVO

●Description

The BFG425W-B NPN silicon RF transistor provides low noise and high gain amplification is packaged in a 4-pin SOT343 plastic package.

●Features

Low-noise : NF= 1.1 dB typ (f= 2 GHz).
 High gain : $|S_{21e}|^2 = 17.5$ dB typ (f= 2 GHz)
 High cut-off frequency : $f_T=29$ GHz typ ($V_{CE}=3$ V)



●Typical Applications

DBS
 LNB DRO
 DVB
 Cable
 ISM
 General Purpose

Pin #	Description
1	Collector
2, 4	Emitter
3	Base

●Absolute Maximum Ratings

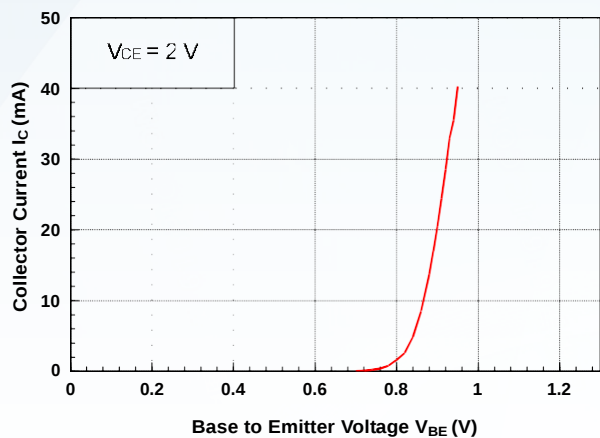
Symbol	Parameters	Conditions	Min.	Max.	Unit
V_{CBO}	Collector to Base Voltage	Open Emitter	-	10	V
V_{CEO}	Collector to Emitter Voltage	Open Base	-	4.0	V
V_{EBO}	Emitter to Base Voltage	Open Collector	-	1	V
I_C	Collector Current		-	35	mA
P_{tot}	Total Power Dissipation		-	150	mW
T_j	Junction Temperature		-	150	°C
T_{stg}	Storage Temperature		-65	150	°C

●Electrical Characteristics

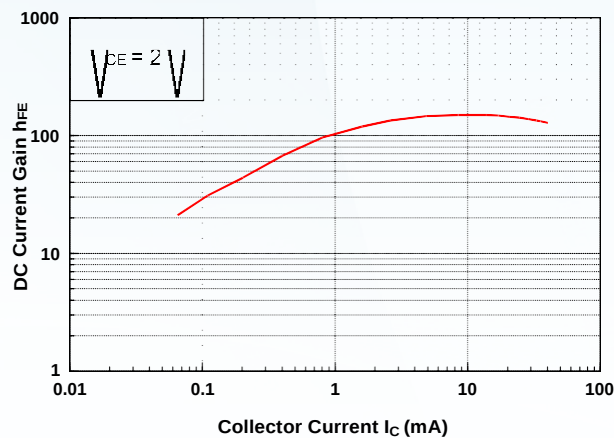
$T_a = 25$ °C; unless otherwise specified.

Symbol	Parameters	Conditions	Min.	Typ.	Max.	Unit
h_{FE}	DC Current Gain	$V_{CE}=2$ V, $I_C=5$ mA	100	150	200	-
f_T	Gain Bandwidth Product	$V_{CE}=3$ V, $I_C=30$ mA	-	29	-	GHz
$ S_{21e} ^2$	Insertion Power Gain	$V_{CE}=2$ V, $I_C=20$ mA, f=2 GHz	14.5	17.5	-	dB
NF	Noise Figure	$V_{CE}=2$ V, $I_C=5$ mA, f=2 GHz	-	1.1	1.5	dB
MAG	Maximum Available Power Gain	$V_{CE}=2$ V, $I_C=20$ mA, f=2 GHz	-	19.5	-	dB
MSG	Maximum Stable Power Gain	$V_{CE}=2$ V, $I_C=20$ mA, f=2 GHz	-	20.5	-	dB
$P_{O(1\text{ dB})}$	Gain 1 dB Compression Output Power	$V_{CE}=3$ V, $I_C=25$ mA, f=2 GHz	-	13.5	-	dBm

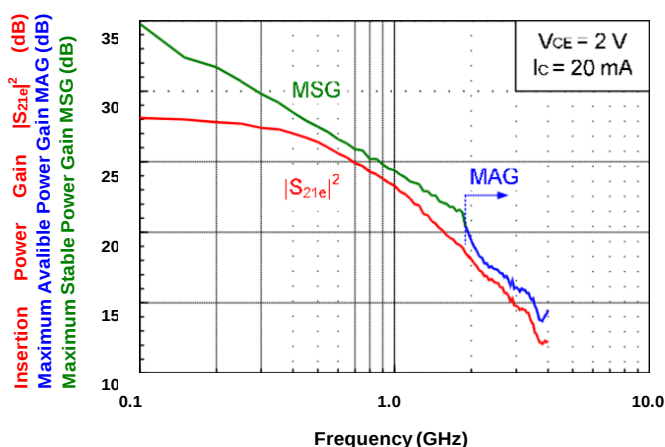
● Typical Characteristics ($T_a = 25^\circ\text{C}$)



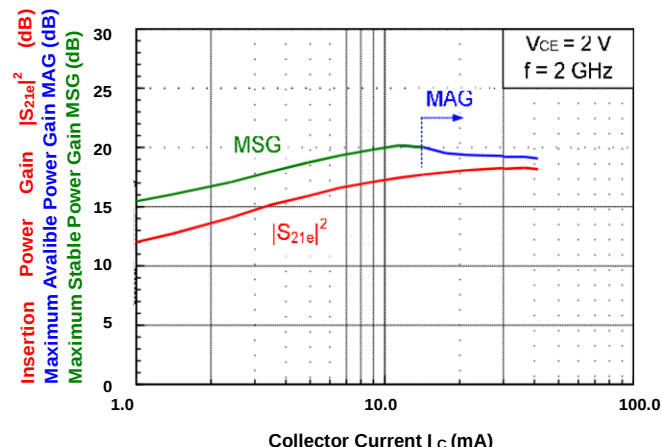
Collector Current vs. Base to Emitter Voltage



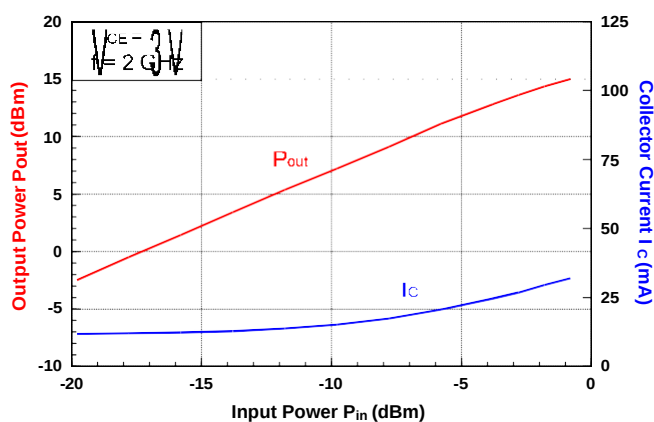
DC Current Gain vs. Collector Current



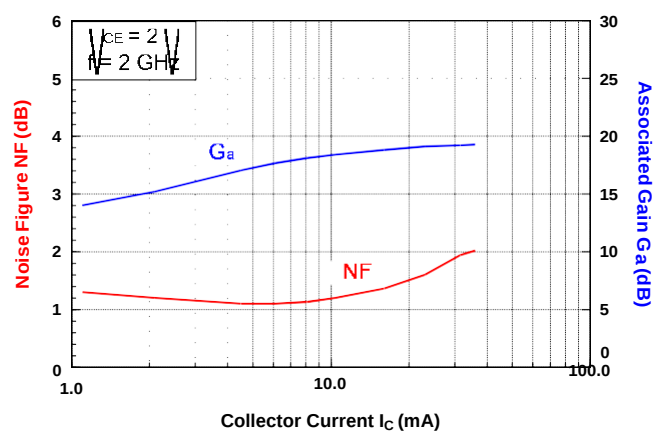
Insertion Power Gain, MAG, MSG vs. Frequency



Insertion Power Gain, MAG, MSG vs. I_C

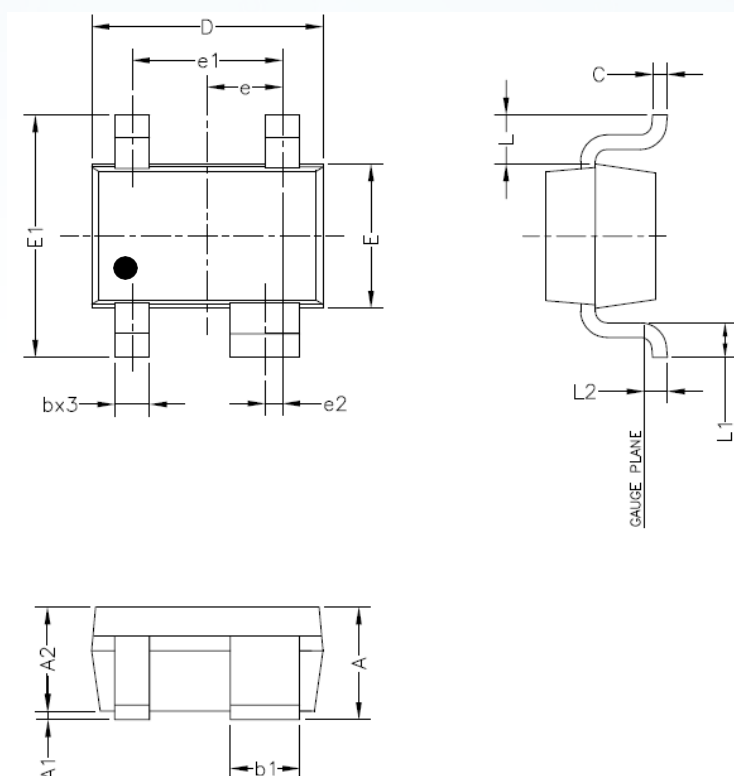


Output Power, Collector Current vs. Input Power



Noise Figure, Associated Gain vs. Collector Current

● SOT343 Package Drawing



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	.036	.044
A1	0.025	0.10	.001	.004
A2	0.875	1.00	.035	.040
b	0.20	0.40	.008	.016
b1	0.40	0.60	.015	.024
C	0.10	0.15	.004	.006
D	1.90	2.10	.076	.084
E	1.15	1.35	.046	.054
E1	2.00	2.30	.080	.091
e	0.65 BSC.		.026 BSC.	
e1	1.30 BSC		.052 BSC.	
e2	0.15 BSC.		.006 BSC.	
L	0.425 REF.		.017 REF.	
L1	0.25	0.45	.010	.018
L2	0.200 REF.		.007 REF.	

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