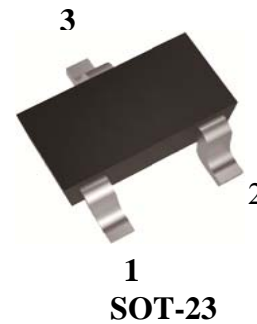


NPN SILICON RF TRANSISTOR

- Ultra high frequency low noise transistor
- Silicon epitaxial bipolar process.
- High power gain, low noise figure,
- high dynamic range and ideal current characteristics,
- SOT-23 chip package, mainly used in VHF, UHF and CATV
- high frequency wideband low noise amplifier.



1: Base 2: Emitter 3: Collector

Feature

High gain: $|S_{21e}|^2$ TYP. Value is 11.5dB @ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$
 Low noise: NF TYP. Value is 1.3dB @ $V_{CE}=10V$, $I_C=7mA$, $f=1GHz$
 f_T (TYP.): TYP. Value is 7GHz @ $V_{CE}=10V$, $I_C=20mA$, $f=1GHz$

Absolute Maximum Ratings $T_A=25^\circ C$ Unless Otherwise noted

PARAMETER	SYMBLE	MAXIMUM VALUE	UNIT
Collector-base breakdown voltage	V_{CBO}	20	V
Collector-emitter breakdown voltage	V_{CEO}	12	V
Emitter-base breakdown voltage	V_{EBO}	2.5	V
Collector current	I_C	100	mA
Collector Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-65 ~ +150 $^\circ C$	$^\circ C$

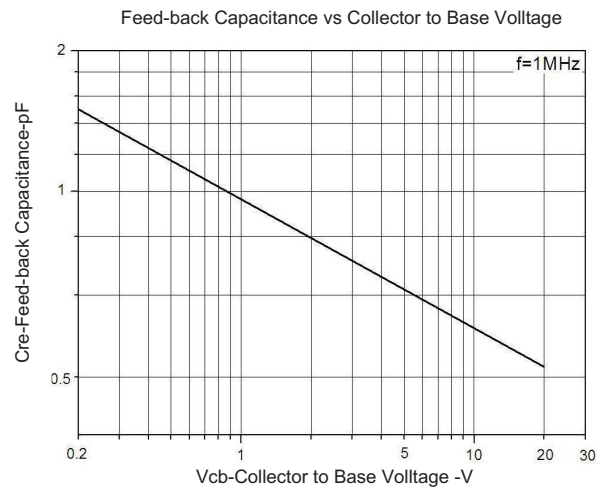
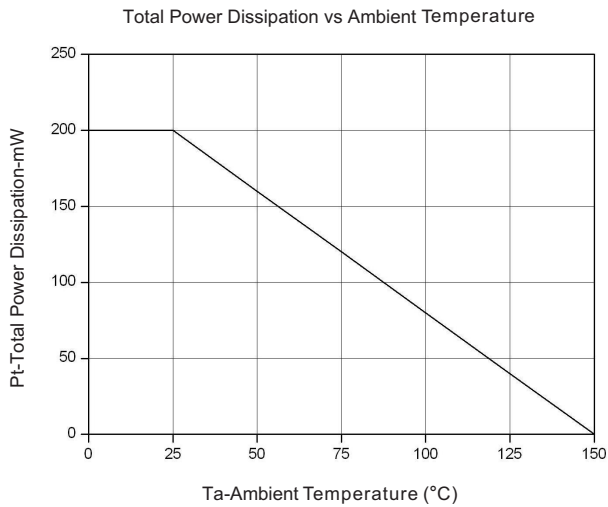
hFE Classification (@ $V_{CE}=10V, I_C=20mA$)

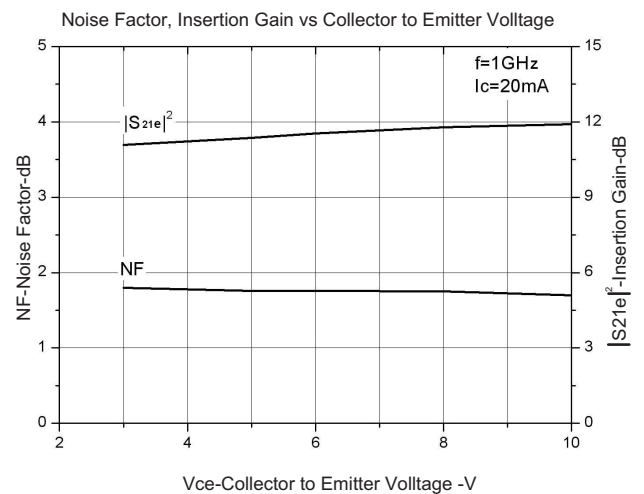
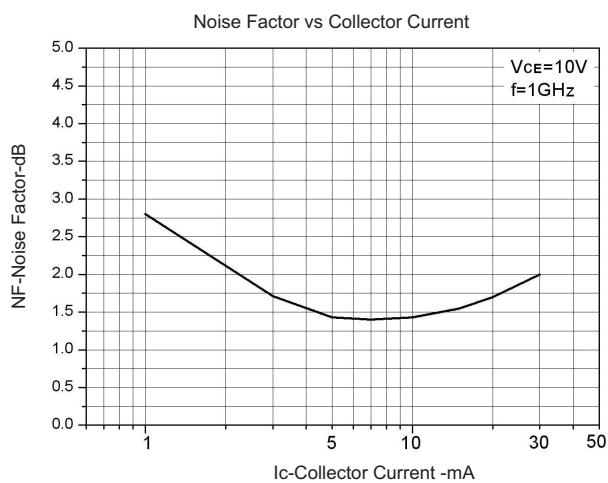
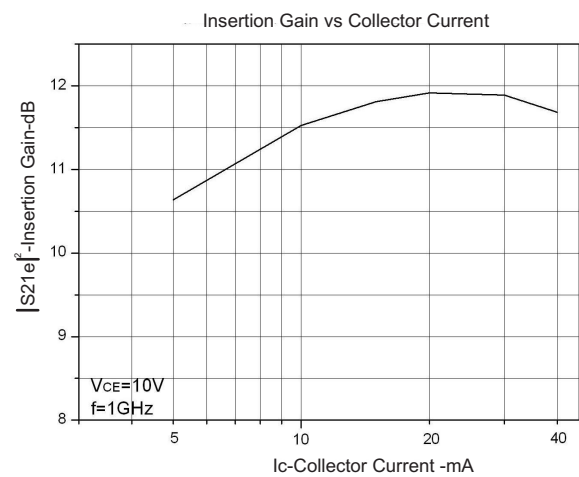
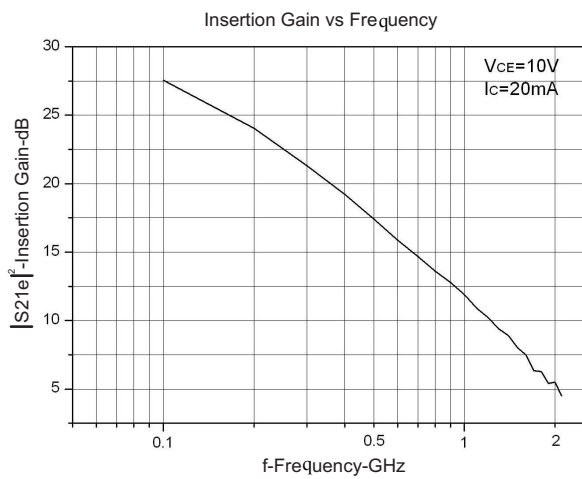
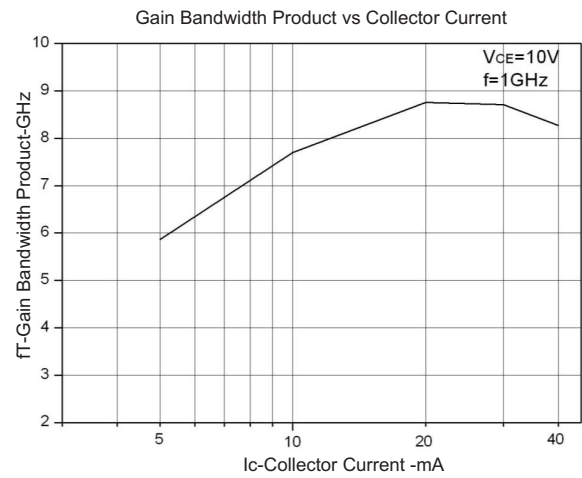
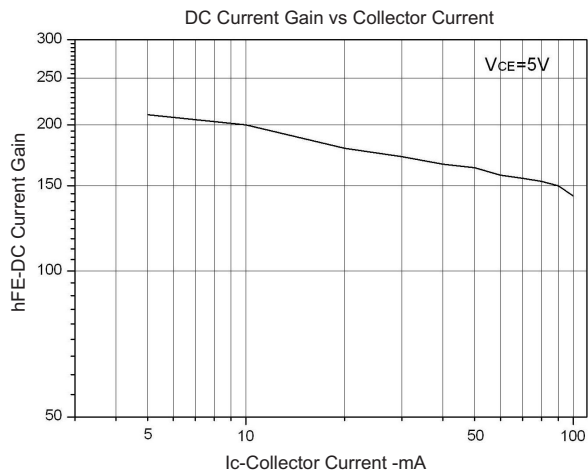
Classification	B	C	D
Marking	R24	R25	
hFE	90-140	120-180	170-250

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

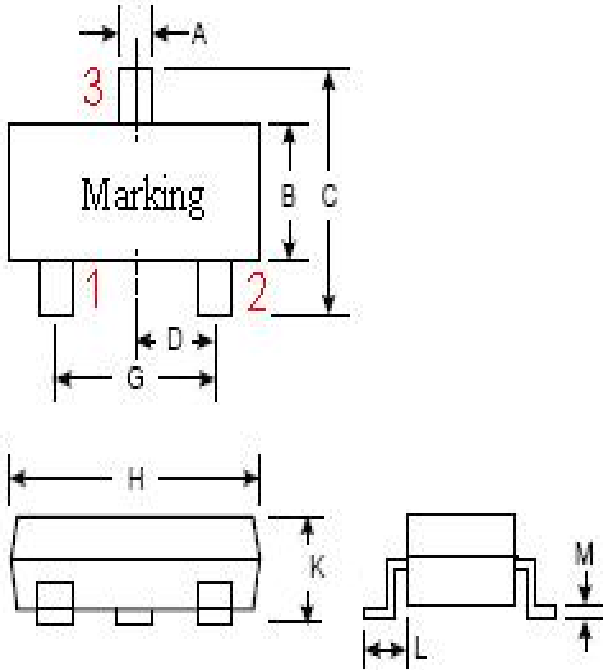
PARAMETER	SYMBLE	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Collector-base breakdown voltage	VCBO	20			v	$I_C=1.0\mu\text{A}$
Collector cut-off current	ICBO			0.1	μA	$V_{CB}=10\text{V}$
Emitter cut-off current	IEBO			0.1	μA	$V_{EB}=1\text{V}$
Transit frequency	f_r	5	7		GHz	$V_{CE}=10\text{V}, I_C=20\text{mA}$
Output feedback capacitor	Cre		0.65		pF	$V_{CB}=10\text{V}, I_E=0\text{mA}, f=1\text{MHz}$
Power gain	$ S_{21e} ^2$	11	11.5		dB	$V_{CE}=10\text{V}, I_C=20\text{mA}, f=1\text{GHz}$
Noise factor	NF		1.3	1.8	dB	$V_{CE}=10\text{V}, I_C=7\text{mA}, f=1\text{GHz}$

Typical characteristic curves ($T_A = 25^{\circ}\text{C}$)





PACKAGE OUTLINE



SOT-23		
Symbols	Min (mm)	Max (mm)
A	0.3	0.5
B	1.2	1.4
C	2.25	2.55
D	0.95	
G	1.8	2
H	2.8	3
K	0.9	1.15
L	0.55	
M	0.08	0.15

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Shikues manufacturer](#):

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [BC557/116](#) [BSW67A](#) [NJVMJD148T4G](#) [NTE123AP-10](#) [NTE153MCP](#) [NTE16](#)
[NTE195A](#) [NTE92](#) [C4460](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [2SC2712S-GR,LF](#) [2SC5488A-TL-H](#)
[2SD2150T100R](#) [SP000011176](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC2412KT146S](#) [2SD1816S-TL-E](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#)
[MJE340](#) [US6T6TR](#) [NJL0281DG](#) [732314D](#) [CPH3121-TL-E](#) [CPH6021-TL-H](#) [873787E](#) [IMZ2AT108](#) [UMX21NTR](#) [MCH6102-TL-E](#)
[NJL0302DG](#) [2N3583](#) [30A02MH-TL-E](#) [NSV40301MZ4T1G](#) [NTE13](#) [NTE26](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [STX83003-AP](#)