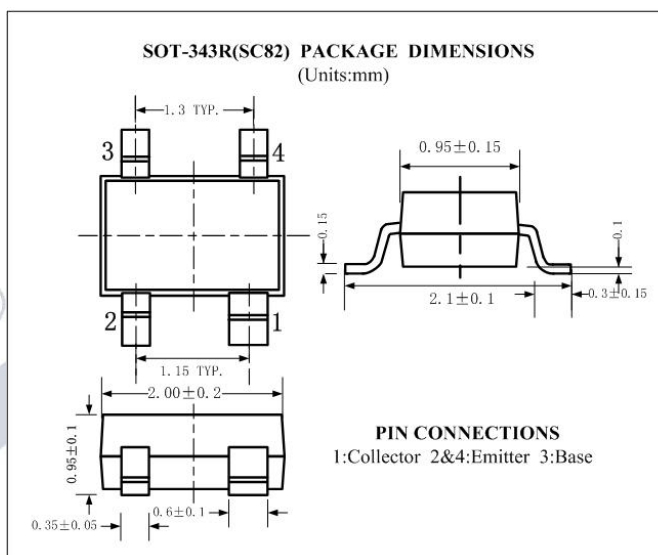


DESCRIPTION

- Low Noise Figure
NF = 1.3 dB TYP.
@V_{CE} = 6 V, I_C = 5 mA, f = 1GHz
- High Gain
|S₂₁|² = 18dB TYP.
@V_{CE} = 6 V, I_C = 30 mA, f = 1GHz
- 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°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	20	V
V _{CEO}	Collector-Emitter Voltage	12	V
V _{EBO}	Emitter-Base Voltage	2	V
I _C	Collector Current-Continuous	100	mA
P _C	Collector Power Dissipation @T _C =25°C	700	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C

isc Silicon NPN RF Transistor

BFP196W

ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA ; I _B = 0	12			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V; I _E = 0			100	nA
h _{FE}	DC Current Gain	I _C = 30mA ; V _{CE} = 6V	50	100	250	
f _T	Current-Gain—Bandwidth Product	I _C = 30mA ; V _{CE} = 8V	8.5	9		GHz
C _{re}	Feedback Capacitance	I _E = 0 ; V _{CB} = 6V; f= 1MHz		0.4		pF
C _e	Emitter capacitance	I _C =i _C =0; V _{EB} =0.5V; f=1MHz		1.5		pF
C _c	Collector capacitance	I _E =i _E =0; V _{CB} =8V; f=1MHz		0.6		pF
S ₂₁ ²	Insertion Power Gain	I _C = 30mA ; V _{CE} = 6V; f= 1GHz	17	18		dB
NF	Noise Figure	I _C = 5mA ; V _{CE} = 6V; f= 1GHz		1.3		dB
		I _C = 5mA ; V _{CE} = 6V; f= 2GHz		2.0		

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