

Silicon NPN RF Transistor

2SC5463

DESCRIPTION

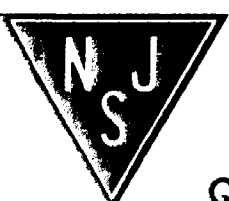
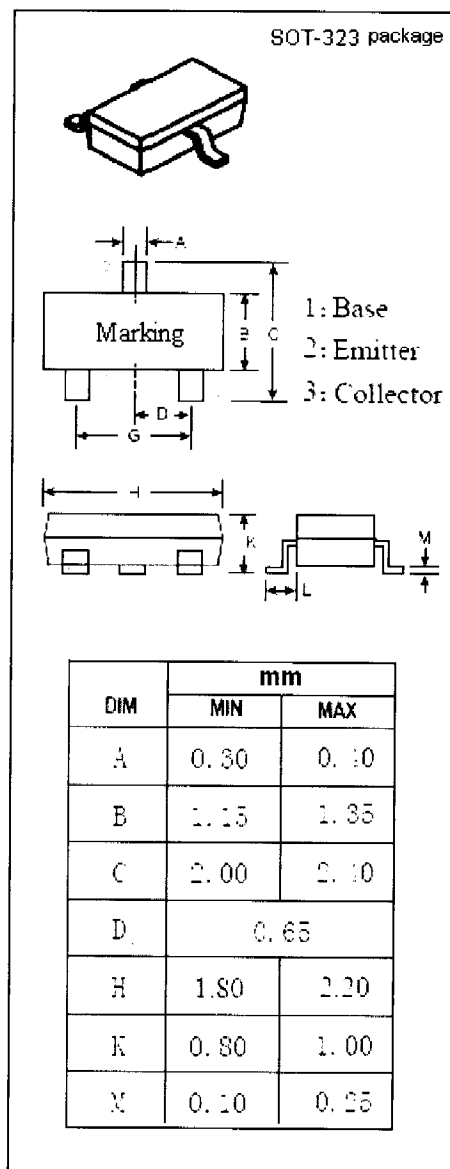
- Low Noise Figure
 NF = 1.1 dB TYP. @V_{CE} = 8 V, I_C = 5 mA, f = 1 GHz
- High Gain
 $|S_{21e}|^2 = 12$ dB TYP. @V_{CE} = 8 V, I_C = 15 mA, f = 1 GHz

APPLICATIONS

- Designed for use in VHF~ UHF band low noise amplifier.

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	3	V
I _C	Collector Current-Continuous	60	mA
P _C	Collector Power Dissipation @T _C =25°C	0.1	W
T _J	Junction Temperature	125	°C
T _{stg}	Storage Temperature Range	-55~125	°C



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Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	$V_{CB}=10\text{V}; I_E=0$			1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=1\text{V}; I_C=0$			1	μA
h_{FE}	DC Current Gain	$I_C=15\text{mA}; V_{CE}=8\text{V}$	80		240	
f_T	Current-Gain—Bandwidth Product	$I_C=15\text{mA}; V_{CE}=8\text{V}$	5	7		GHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=8\text{V}; f=1\text{MHz}$		0.8		pF
C_{re}	Reverse Transfer Capacitance	$I_E=0; V_{CB}=8\text{V}; f=1\text{MHz}$		0.55		pF
$ S_{21e} ^2$	Insertion Power Gain	$I_C=15\text{mA}; V_{CE}=8\text{V}; f=500\text{MHz}$	9.5	12.5		dB
$ S_{21e} ^2$	Insertion Power Gain	$I_C=15\text{mA}; V_{CE}=8\text{V}; f=1\text{GHz}$	8	12		dB
NF	Noise Figure	$I_C=5\text{mA}; V_{CE}=8\text{V}; f=500\text{MHz}$		1		dB
NF	Noise Figure	$I_C=5\text{mA}; V_{CE}=8\text{V}; f=1\text{GHz}$		1.1	2	dB

◆ h_{FE} Classification

O	Y
80-160	120-240