

isc Silicon NPN RF Transistor

2SC5065

DESCRIPTION

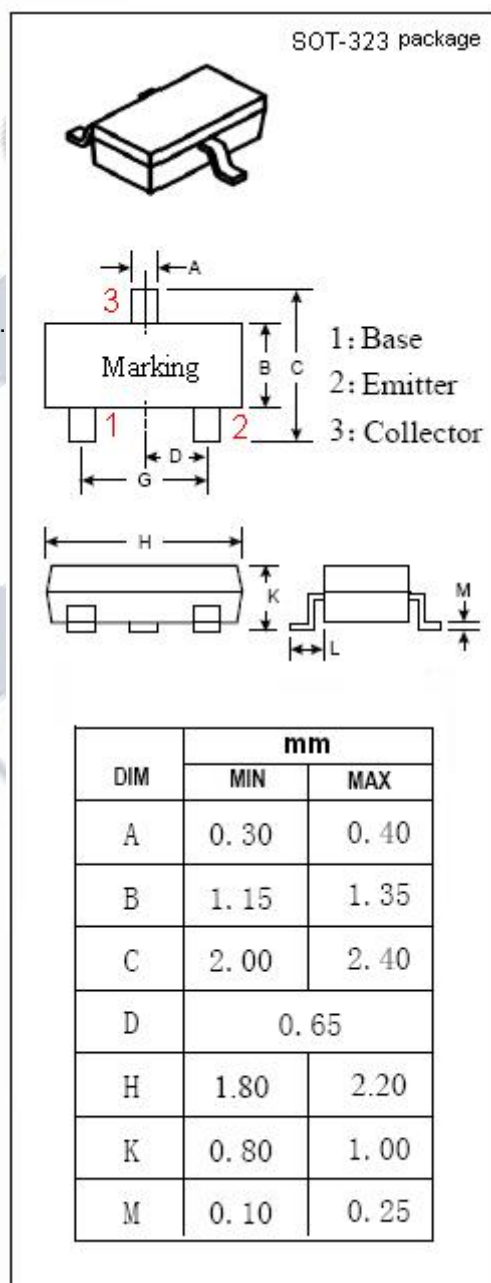
- Low Noise and High Gain
 $NF = 1.1 \text{ dB TYP.}, |S_{21e}|^2 = 12 \text{ dB TYP.}$
 $@V_{CE} = 5 \text{ V}, f = 1.0 \text{ GHz}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for VHF~UHF band low noise amplifier applications.

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	12	V
V_{EBO}	Emitter-Base Voltage	3.0	V
I_C	Collector Current-Continuous	30	mA
I_B	Base Current-Continuous	15	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	0.1	W
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$



isc Silicon NPN RF Transistor**2SC5065****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			1.0	μ A
h _{FE}	DC Current Gain	I _C = 10mA ; V _{CE} = 5V	80		240	
f _T	Current-Gain—Bandwidth Product	I _C = 10mA ; V _{CE} = 5V	5	7		GHz
C _{re}	Feed-Back Capacitance	I _E = 0 ; V _{CB} = 5V; f= 1.0MHz		0.45	0.9	pF
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 5V; f= 1.0MHz		0.7		pF
S _{21e} ²	Insertion Power Gain	I _C = 10mA ; V _{CE} = 5V; f= 500MHz		17		dB
S _{21e} ²	Insertion Power Gain	I _C = 10mA ; V _{CE} = 5V; f= 1.0GHz	8.5	12		dB
NF	Noise Figure	I _C = 3mA ; V _{CE} = 5V; f= 500MHz		1		dB
NF	Noise Figure	I _C = 3mA ; V _{CE} = 5V; f= 1.0GHz		1.1	2.0	dB

◆ h_{FE} Classification

O	Y
80-160	120-240