isc Silicon NPN RF Transistor 2SC5065

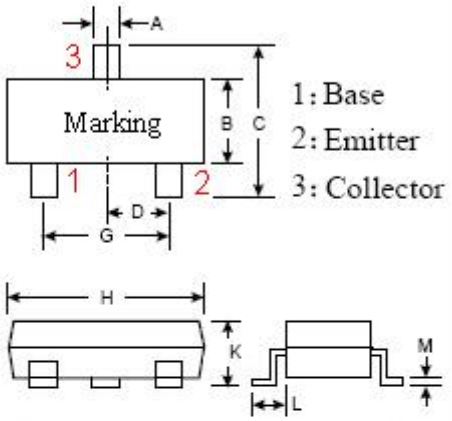
DESCRIPTION

- Low Noise and High Gain
  NF = 1.1 dB TYP., $|S_{21e}|^2$= 12 dB TYP.
  @V_{CE} = 5 V, f = 1.0 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.

SOT-323 package



DIM	mm	
	MIN	MAX
A	0. 30	0. 40
B	1. 15	1. 35
C	2. 00	2. 40
D	0. 65	
H	1.80	2.20
K	0. 80	1. 00
M	0. 10	0. 25

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	0.1	W
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature Range	-55~125	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	V_{CB}= 10V; I_E= 0			1.0	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1V; I_C= 0			1.0	μA
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

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