isc 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
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

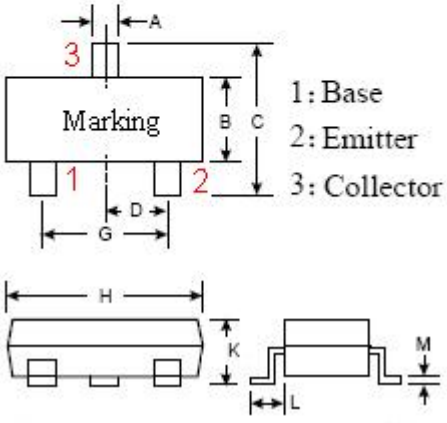
APPLICATIONS

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

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	V
I_C	Collector Current-Continuous	60	mA
P_C	Collector Power Dissipation @T_C=25℃	0.1	W
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature Range	-55~125	℃

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

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

◆ **h_{FE} Classification**

O	Y
80-160	120-240

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