isc Silicon NPN RF Transistor 2SC5227

DESCRIPTION

- High Gain Bandwidth Product
  f_T = 7 GHz TYP.
- High Gain, Low Noise Figure
  $|S_{21e}|^2$ = 12 dB TYP., NF = 1.0 dB TYP @ f = 1 GHz
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

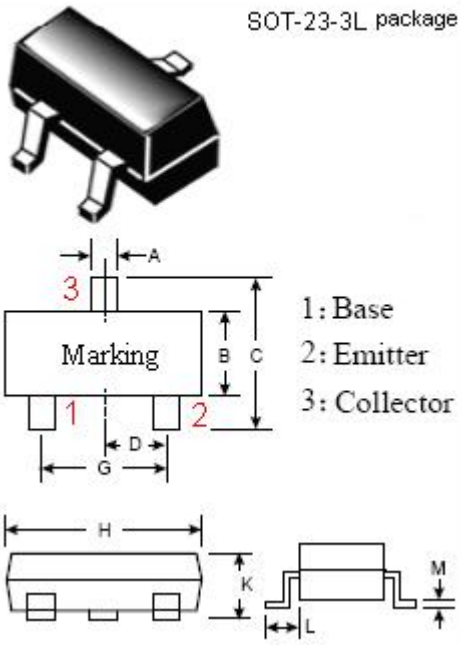
APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base Voltage	2	V
I_C	Collector Current-Continuous	70	mA
P_C	Collector Power Dissipation @T_C=25℃	0.2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

SOT-23-3L package



DIM	mm MIN	MAX
A	0.30	0.40
B	1.50	1.70
C	2.65	2.95
D	0.95	
G	1.80	2.00
H	2.82	3.02
K	1.05	1.25
L	0.70	
M	0.10	0.20

isc Silicon NPN RF Transistor 2SC5227

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			10	μA
h_{FE}	DC Current Gain	I_C= 20mA ; V_{CE}= 5V	60		270	
$\|S_{21e}\|^2$	Insertion Power Gain	I_C= 20mA ; V_{CE}= 5V; f= 1GHz	9	12		dB
$\|S_{21e}\|^2$	Insertion Power Gain	I_C= 3mA ; V_{CE}= 2V; f= 1GHz		8		dB
f_T	Current-Gain—Bandwidth Product	I_C= 20mA ; V_{CE}= 5V	5	7		GHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V;f= 1.0MHz		0.75	1.2	pF
C_{re}	Feedback Capacitance	I_E= 0 ; V_{CB}= 10V;f= 1.0MHz		0.5		pF
NF	Noise Figure	I_C= 7mA ; V_{CE}= 5V;f= 1GHz		1.0	1.8	dB

◆ **h_{FE} Classification**

3	4	5
60-120	90-180	135-270

isc Silicon NPN RF Transistor 2SC5227

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.