isc Silicon NPN RF Transistor 2SC4591

DESCRIPTION

- High Current-Gain Bandwidth Product
  f_T= 9.0GHz TYP. @V_{CE} = 5 V, I_C = 20 mA
- Low Noise
  NF = 1.2 dB TYP. @V_{CE} = 5 V, I_C = 5 mA, f = 900 MHz
- High Power Gain
  PG = 12.5 dB TYP. @V_{CE} = 5 V, I_C = 20 mA, f = 900 MHz
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

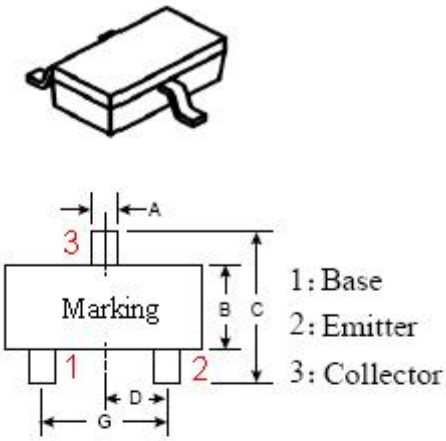
APPLICATIONS

- Designed for VHF, UHF low noise amplifier.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	9	V
V_{EBO}	Emitter-Base Voltage	1.5	V
I_C	Collector Current-Continuous	50	mA
P_C	Collector Power Dissipation @T_C=25℃	0.15	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 10μA ; I_E= 0	15			V
I_{CBO}	Collector Cutoff Current	V_{CB}= 12V; I_E= 0			1.0	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 9V; R_{BE}= ∞			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1.5V; I_C= 0			10	μA
h_{FE}	DC Current Gain	I_C= 20mA ; V_{CE}= 5V	40		250	
f_T	Current-Gain—Bandwidth Product	I_C= 20mA ; V_{CE}= 5V	6.5	9.0		GHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 5V; f= 1MHz		0.8	1.5	pF
PG	Power Gain	I_C= 20mA ; V_{CE}= 5V; f= 900MHz	9.5	12.5		dB
NF	Noise Figure	I_C= 5mA ; V_{CE}= 5V; f= 900MHz		1.2	2.5	dB