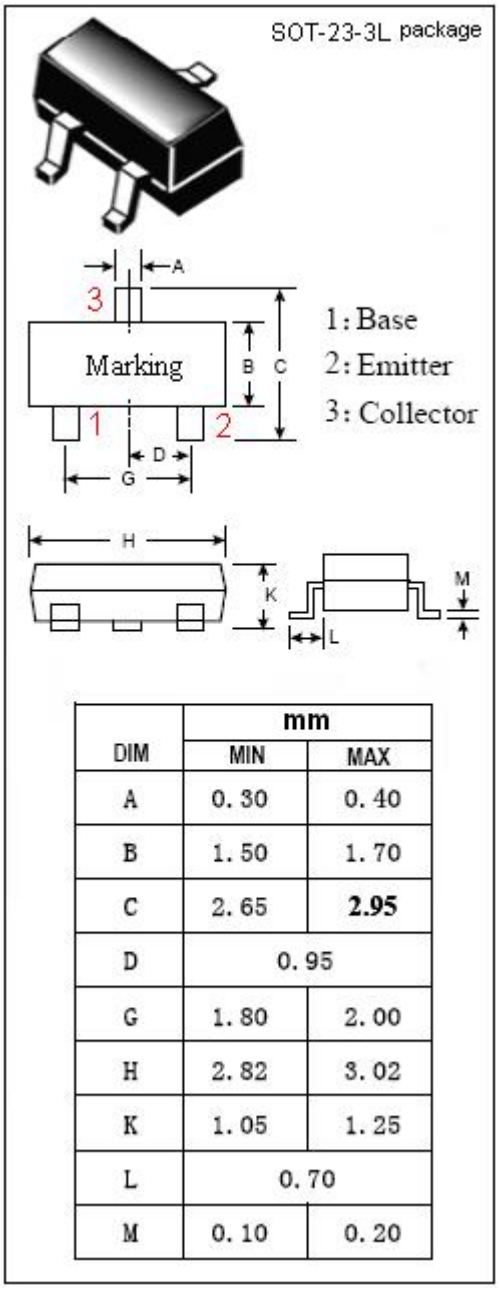
isc Silicon NPN RF Transistor 2SC5191

DESCRIPTION

- Low Voltage Operation ,Low Phase Distortion
- Low Noise
  NF = 1.5 dB TYP. @V_{CE} = 3 V, I_C = 7 mA, f = 2 GHz
  NF = 1.7 dB TYP. @V_{CE} = 1 V, I_C = 3 mA, f = 2 GHz
- Large Absolute Maximum Collector Current
  I_C = 100 mA
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in low-noise and small signal amplifiers from VHF ~ UHF band.



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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	9	V
V_{CEO}	Collector-Emitter Voltage	6	V
V_{EBO}	Emitter-Base Voltage	2	V
I_C	Collector Current-Continuous	100	mA
P_C	Collector Power Dissipation @T_C=25℃	0.2	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

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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}= 5V; I_E= 0			0.1	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1V; I_C= 0			0.1	μA
h_{FE}	DC Current Gain	I_C= 3mA ; V_{CE}= 1V	80		160	
$f_{T(1)}$	Current-Gain—Bandwidth Product	I_C= 3mA ; V_{CE}= 1V;f= 2.0GHz	4	4.5		GHz
$f_{T(2)}$	Current-Gain—Bandwidth Product	I_C= 20mA ; V_{CE}= 3V;f= 2.0GHz		8.5		GHz
C_{re}	Feed-Back Capacitance	I_E= 0 ; V_{CB}= 1V;f= 1.0MHz		0.75	0.85	pF
$\|S_{21e}\|^2_{(1)}$	Insertion Power Gain	I_C= 3mA ; V_{CE}= 1V;f= 2.0GHz	2.5	3.5		dB
$\|S_{21e}\|^2_{(2)}$	Insertion Power Gain	I_C= 20mA ; V_{CE}= 3V;f= 2.0GHz		6.5		dB
$NF_{(1)}$	Noise Figure	I_C= 3mA ; V_{CE}= 1V;f= 2.0GHz		1.7	2.5	dB
$NF_{(2)}$	Noise Figure	I_C= 7mA ; V_{CE}= 3V;f= 2.0GHz		1.5		dB

◆ h_{FE} Classification

Rank	FB
Marking	T88
h_{FE}	80-160

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