isc Silicon NPN RF Transistor 2SC5890

DESCRIPTION

- High Gain Bandwidth Product
  f_T = 7.8 GHz TYP.
- High power gain and low noise figure ;
  PG = 12 dB TYP., NF = 1.0 dB typ. @ f = 900 MHz
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

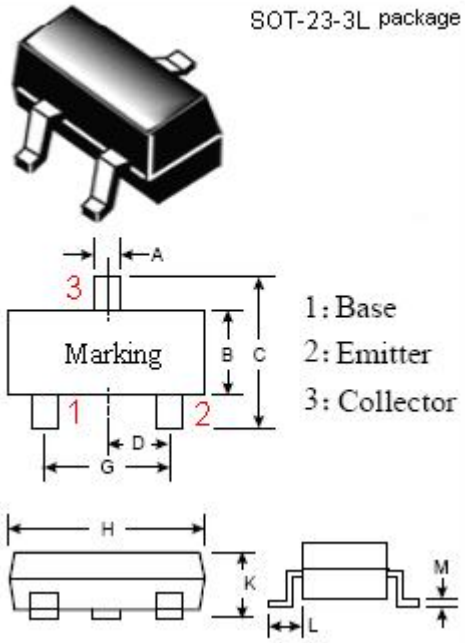
APPLICATIONS

- Designed for use in UHF ~ VHF wide band 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	1.5	V
I_C	Collector Current-Continuous	75	mA
P_C	Collector Power Dissipation @T_C=25℃	0.7	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

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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= 10 μ A ; I_E= 0	20			V
I_{CBO}	Collector Cutoff Current	V_{CB}= 12V; I_E= 0			1	μ A
I_{CEO}	Collector Cutoff Current	V_{CE}= 9V; R_{BE}= ∞			1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1.5V; I_C= 0			10	μ A
h_{FE}	DC Current Gain	I_C= 20mA ; V_{CE}= 5V	100		200	
f_T	Current-Gain—Bandwidth Product	I_C= 30mA ; V_{CE}= 5V ;f= 1 GHz	5.5	7.8		GHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 5V;f= 1.0MHz		0.9	1.5	pF
C_{re}	Reverse Transfer Capacitance	I_E= 0 ; V_{CB}= 5V;f= 1.0MHz		0.85		pF
$\|S_{21e}\|^2$	Insertion Power Gain	I_C= 30mA ; V_{CE}= 5V;f= 1GHz		11		dB
PG	Power Gain	I_C= 30mA ; V_{CC}= 5V;f= 900MHz	9.5	12		dB
NF	Noise Figure	I_C= 5mA ; V_{CC}= 5V;f= 900MHz		1.0	1.9	dB