

DESCRIPTION

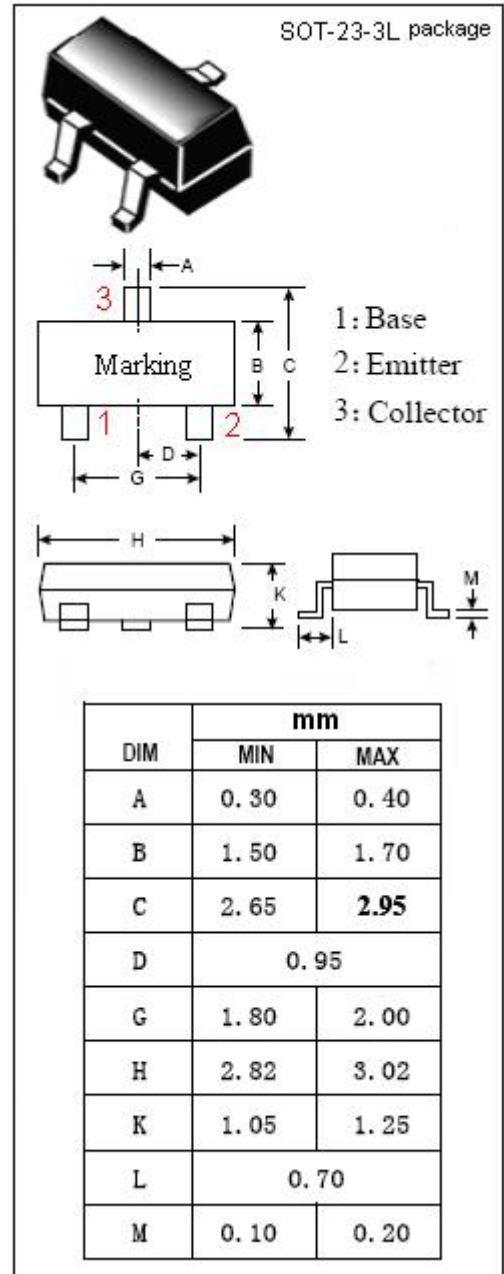
- High Gain Bandwidth Product
 $f_T = 7.8 \text{ GHz TYP.}$
- High power gain and low noise figure ;
 $PG = 12 \text{ dB TYP.}, NF = 1.0 \text{ dB typ. @ } f = 900 \text{ MHz}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in UHF ~ VHF wide band amplifier.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

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°C	0.7	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon NPN RF Transistor

2SC5890

ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 10 μA ; I _E = 0	20			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 12V; I _E = 0			1	μA
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	μA
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

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