

isc Silicon NPN RF Transistor

2SC4197

DESCRIPTION

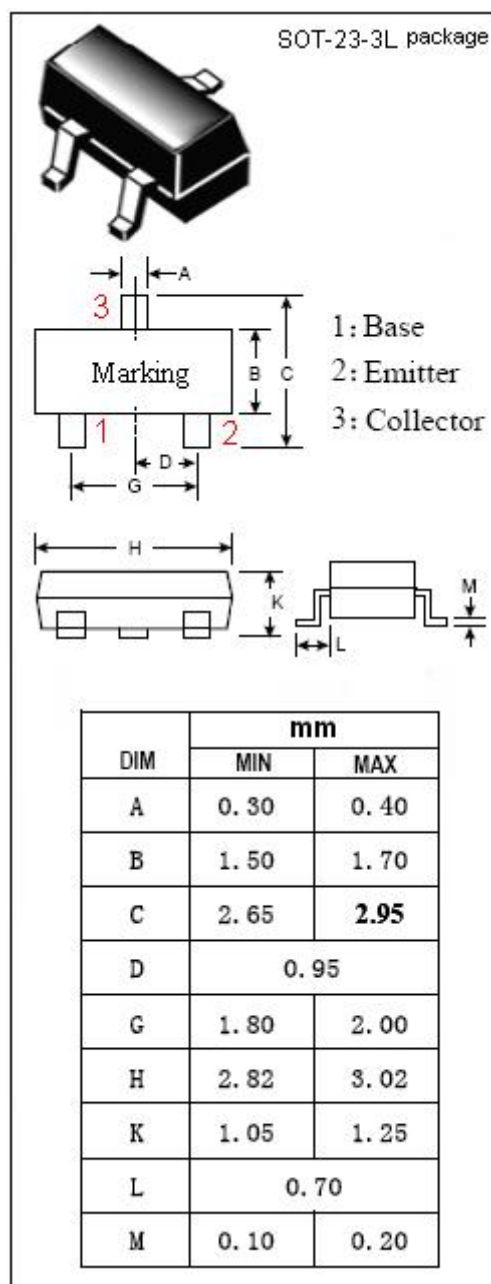
- Low Noise
- High Gain Bandwidth Product
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for UHF frequency converter, wide band amplifier applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	13	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current-Continuous	50	mA
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	0.15	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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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	25			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 20mA ; I _B = 4mA			0.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 15V; I _E = 0			0.1	μA
I _{CEO}	Collector Cutoff Current	V _{CE} = 13V; R _{BE} = ∞			10	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 3V; I _C = 0			0.3	μA
h _{FE}	DC Current Gain	I _C = 5mA ; V _{CE} = 5V	50		180	
f _T	Current-Gain—Bandwidth Product	I _C = 20mA ; V _{CE} = 5V	3.0	3.8		GHz
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f= 1.0MHz		0.85	1.3	pF
CG	Conversion Gain	I _C = 0.8mA ; V _{CC} = 5V; f _{in} = 900MHz		19		dB
NF	Noise Figure	f _{osc} = 930MHz(-5dB), f _{out} = 30MHz		8		dB

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