

isc Silicon NPN RF Transistor
2SC4901
DESCRIPTION

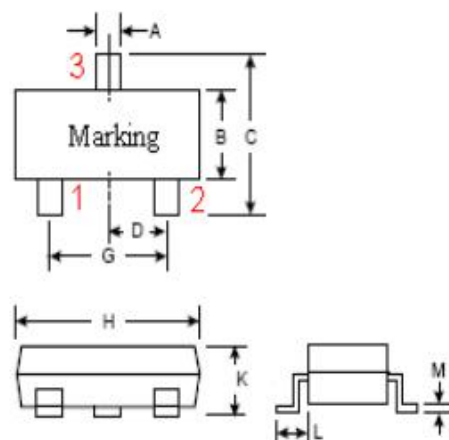
- High gain bandwidth product
 $f_T = 9 \text{ GHz (Typ) @ } V_{CE}=5\text{V, } I_C=20\text{mA, } f=0.9\text{GHz}$
- High gain, low noise figure
 $|S_{21e}|^2 = 13.5 \text{ dB @ } V_{CE}=5\text{V, } I_C=20\text{mA, } f=0.9\text{GHz,}$
 $NF = 1.6\text{dB (Typ) @ } V_{CE}=5\text{V, } I_C=5\text{mA, } f=0.9\text{GHz}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- UHF / VHF wide band amplifier

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

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 @ $T_C=25^\circ\text{C}$	100	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



SOT-323 1: Base 2: Emitter 3: Collector

DIM	MIN	MAX
A	0.200	0.400
B	1.150	1.350
C	2.150	2.450
D	0.650	
G	1.200	1.400
H	2.000	2.200
K	0.900	1.100
L	0.525	
M	0.080	0.150

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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CBO}	Collector-Base Breakdown Voltage	I _C = 1uA ; I _E = 0	15			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V ; I _E = 0			0.1	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			0.1	uA
h _{FE}	DC Current Gain	I _C = 20mA ; V _{CE} = 5V	60	150	300	
C _{OB}	Output Capacitance	V _{CB} =10V, I _E =0mA, f=1MHz		0.65	1	pF
f _T	Current-Gain—Bandwidth Product	V _{CE} =5V, I _C =20mA	7	9		GHz
S _{21e} ²	Power gain	V _{CE} =5V, I _C =5mA, f=0.9GHz		13.3		dB
		V _{CE} =5V, I _C =20mA, f=0.9GHz		13.5		dB
NF	Noise figure	V _{CE} =5V, I _C =5mA, f=0.9GHz		1.6	2.5	dB

◆ h_{FE} Classifications

A	B	C	D	E
60-100	90-140	130-180	170-250	250-300

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