

isc Silicon NPN RF Transistor

PBR941

DESCRIPTION

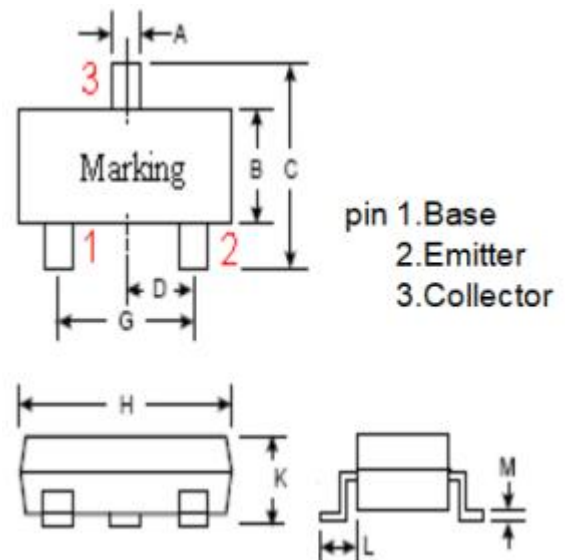
- High gain bandwidth product
 $f_T = 8 \text{ GHz (Typ)}$ @ $V_{CE}=6V, I_C=30mA, f=1GHz$
- High gain, low noise figure
 $|S_{21e}|^2 = 12\text{dB}$ @ $V_{CE}=6V, I_C=30mA, f=1GHz$
 $NF = 2\text{dB (Typ)}$ @ $V_{CE}=6V, I_C=5mA, f=1GHz$
- Minimum Lot-to-Lot variations for robust device performance and 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	20	V
V_{CEO}	Collector-Emitter Voltage	10	V
V_{EBO}	Emitter-Base voltage	1.5	V
I_C	Collector Current-Continuous	50	mA
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	360	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$



SOT-23		
符号	最小值 (mm)	最大值 (mm)
A	0.3	0.5
B	1.2	1.4
C	2.25	2.55
D	0.95	
G	1.8	2
H	2.8	3
K	0.9	1.15
L	0.55	
M	0.08	0.15

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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 = 1μA ; I _E = 0	20			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 10V ; I _E = 0			0.1	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			0.1	μA
h _{FE-1}	DC Current Gain	I _C = 5mA ; V _{CE} = 6V	50		200	
h _{FE-2}	DC Current Gain	I _C = 15mA ; V _{CE} = 6V		100		
C _{re}	Feedback Capacitance	V _{CB} =10V, I _E =0mA, f=1MHz		0.65		pF
f _T	Current-Gain—Bandwidth Product	V _{CE} =6V, I _C =30mA, f=1GHz		8		GHz
S _{21e} ²	Power gain	V _{CE} =6V, I _C =30mA, f=1GHz		12		dB
NF	Noise figure	V _{CE} =6V, I _C =5mA, f=1GHz		2		dB

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