

Silicon NPN RF Transistor

MMBR571L

DESCRIPTION

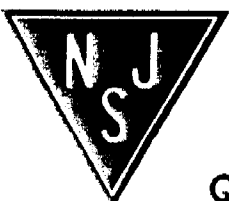
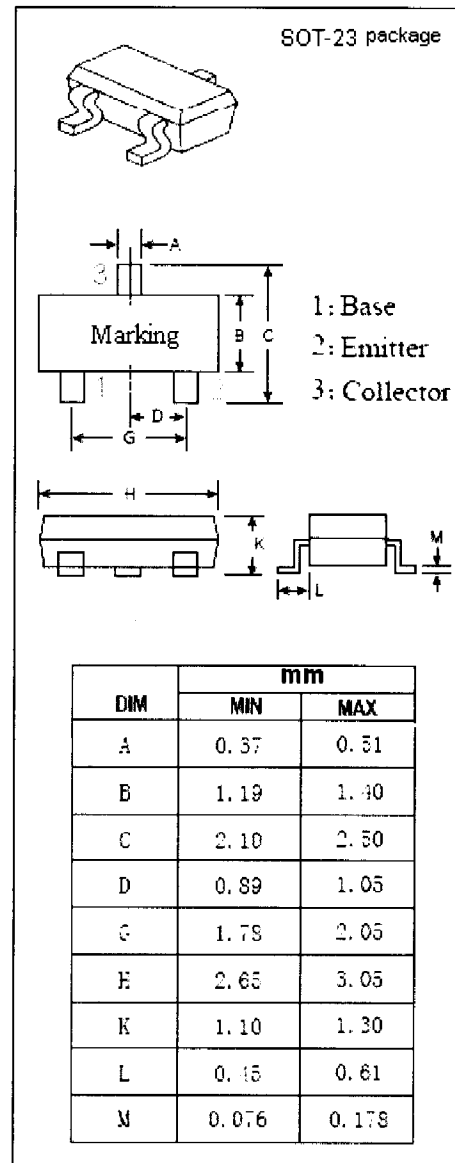
- Low Noise
- High Current-Gain Bandwidth Product
 $f_T = 8.0 \text{ GHz TYP. @ } I_C = 50 \text{ mA}$
- High Gain
 $G_{NF} = 16.5 \text{ dB TYP. @ } I_C = 10\text{mA, } f = 0.5 \text{ GHz}$

APPLICATIONS

- Designed for low noise , wide dynamic range front-end amplifiers and low-noise VCO'S.

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	3	V
I_C	Collector Current-Continuous	80	mA
P_C	Collector Power Dissipation @ $T_c = 75^\circ\text{C}$	0.33	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)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA ; I _B = 0	10			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 0.1mA ; I _E = 0	20			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50 μ A ; I _C = 0	3			V
I _{CBO}	Collector Cutoff Current	V _{CB} = 8V ; I _E = 0			10	μ A
h _{FE}	DC Current Gain	I _C = 30mA ; V _{CE} = 5V	50		300	
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V ; f= 1MHz		0.7	1.0	pF
f _T	Current-Gain—Bandwidth Product	I _C = 50mA ; V _{CE} = 5V ; f= 1GHz		8		GHz
G _{NF}	Gain@Noise Figure	I _C = 10mA ; V _{CE} = 5V ; f= 0.5GHz		16.5		dB
G _{NF}	Gain@Noise Figure	I _C = 10mA ; V _{CE} = 5V ; f= 1GHz		10.5		dB
NF	Noise Figure	I _C = 10mA ; V _{CE} = 5V ; f= 0.5GHz		2.0		dB
NF	Noise Figure	I _C = 10mA ; V _{CE} = 5V ; f= 1GHz		2.6		dB

