

Silicon NPN RF Transistor

MMBR901L

DESCRIPTION

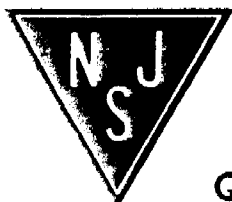
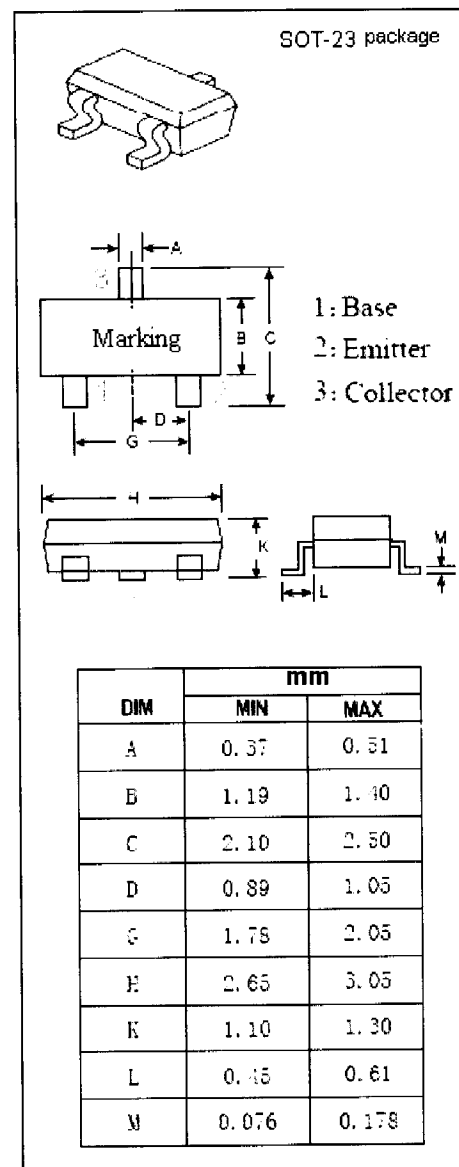
- Low Noise
- High Power Gain-
 $G_{pe} = 12.0 \text{ dB TYP. @ } f = 1 \text{ GHz}$

APPLICATIONS

- Designed for use in high gain, low noise, small signal amplifiers for operation up to 2.5GHz.

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	15	V
V_{EBO}	Emitter-Base Voltage	2	V
I_C	Collector Current-Continuous	30	mA
P_C	Collector Power Dissipation @ $T_C=75^\circ\text{C}$	0.3	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

$T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	15			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}; I_E=0$	25			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	2			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=15\text{V}; I_E=0$			0.05	μA
h_{FE}	DC Current Gain	$I_C=5\text{mA}; V_{CE}=5\text{V}$	50		200	
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$			1.0	pF
f_T	Current-Gain—Bandwidth Product	$I_C=15\text{mA}; V_{CE}=10\text{V}; f=1\text{GHz}$		3.8		GHz
G_{pe}	Common-Emitter Amplifier Gain	$I_C=5\text{mA}; V_{CC}=6\text{V}; f=1\text{GHz}$		12		dB
NF_{min}	Minimum Noise Figure	$I_C=5\text{mA}; V_{CE}=6\text{V}; f=1\text{GHz}$		1.9		dB