

Silicon NPN RF Transistor

MMBR920L

DESCRIPTION

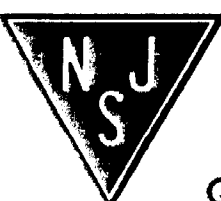
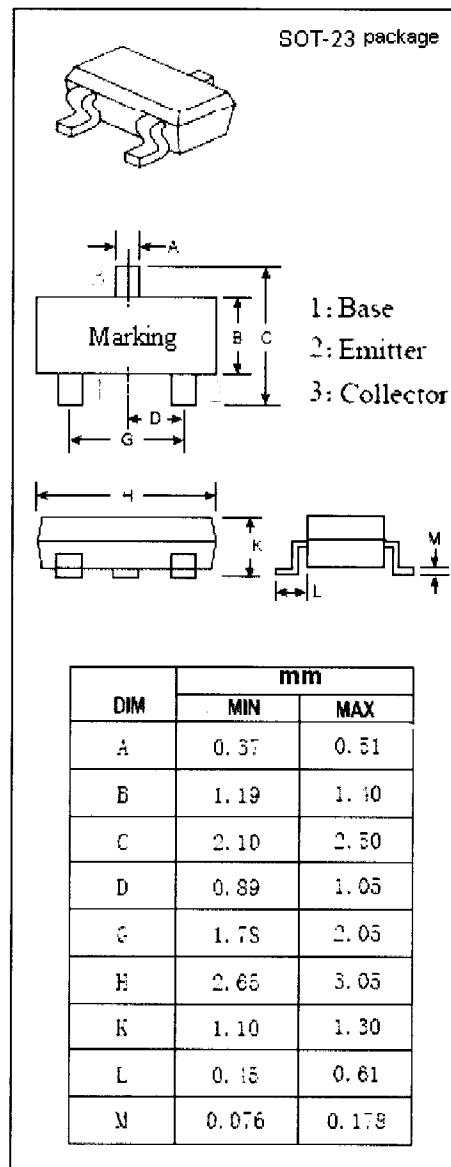
- Low Noise
 NF= 2.4dB TYP. @ f= 500MHz
- High Gain
 G_{pe}= 15dB TYP. @ f= 500MHz

APPLICATIONS

- Designed for thick and thin-film circuits using surface mount components and requiring low-noise , high-gain signal amplification at frequencies to 1 GHz.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	20	V
V _{CEO}	Collector-Emitter Voltage	15	V
V _{EBO}	Emitter-Base Voltage	3	V
I _C	Collector Current-Continuous	35	mA
P _C	Collector Power Dissipation @T _C = 25°C	0.35	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



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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	$I_C=0.1\text{mA}; I_E=0$	20			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	2			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=10\text{V}; I_E=0$			50	nA
h_{FE}	DC Current Gain	$I_C=14\text{mA}; V_{CE}=10\text{V}$	25		250	
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	$I_C=14\text{mA}; V_{CE}=10\text{V}; f=0.5\text{GHz}$		4.5		GHz
NF	Noise Figure	$I_C=2\text{mA}; V_{CE}=10\text{V}; f=0.5\text{GHz}$		2.4		dB
NF	Noise Figure	$I_C=2\text{mA}; V_{CE}=10\text{V}; f=1\text{GHz}$		3.0		dB
G_{pe}	Common-Emitter Amplifier Power Gain	$I_C=2\text{mA}; V_{CE}=10\text{V}; f=0.5\text{GHz}$		15		dB
G_{pe}	Common-Emitter Amplifier Power Gain	$I_C=2\text{mA}; V_{CE}=10\text{V}; f=1\text{GHz}$		10		dB