isc Silicon NPN RF Transistor MMBR920L

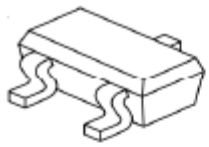
DESCRIPTION

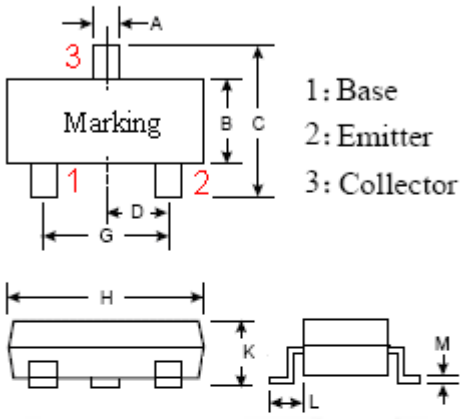
- Low Noise
  NF= 2.4dB TYP. @ f= 500MHz
- High Gain
  G_{pe}= 15dB TYP. @ f= 500MHz

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.

SOT-23 package





DIM	mm MIN	mm MAX
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
G	1.78	2.05
H	2.65	3.05
K	1.10	1.30
L	0.45	0.61
M	0.076	0.178

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	0.35	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 1mA ; I_B= 0	15			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= 0.1mA ; I_C= 0	2			V
I_{CBO}	Collector Cutoff Current	V_{CB}= 10V; I_E= 0			50	nA
h_{FE}	DC Current Gain	I_C= 14mA ; V_{CE}= 10V	25		250	
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V; f= 1MHz			1.0	pF
f_T	Current-Gain—Bandwidth Product	I_C= 14mA ; V_{CE}= 10V; f= 0.5GHz		4.5		GHz
NF	Noise Figure	I_C= 2mA ; V_{CE}= 10V; f= 0.5GHz		2.4		dB
NF	Noise Figure	I_C= 2mA ; V_{CE}= 10V; f= 1GHz		3.0		dB
G_{pe}	Common-Emitter Amplifier Power Gain	I_C= 2mA ; V_{CE}= 10V; f= 0.5GHz		15		dB
G_{pe}	Common-Emitter Amplifier Power Gain	I_C= 2mA ; V_{CE}= 10V; f= 1GHz		10		dB