

**SPM0101**

Monolithic Microwave IC

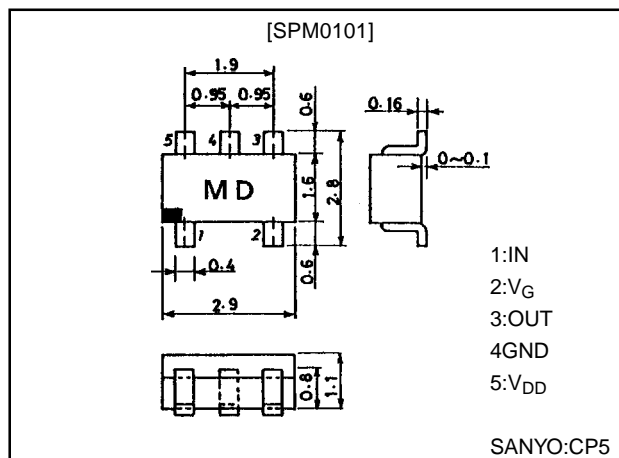
Ultrasmall Low-noise Amplifiers**Features**

- 1.Reduced noise and increased sensitivity.
- 2.Even further miniaturization achieved by the adoption of a miniature molded package (2.9×1.6mm).
- 3.Inclusion of input and output matching circuits means that no external circuits are required.
- 4.Suitable for 1st stage of receiver amp.

Package Dimensions

unit:mm

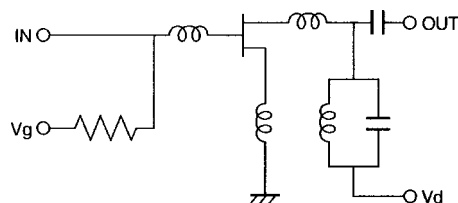
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**Specifications****Absolute Maximum Ratings at Ta = 25°C**

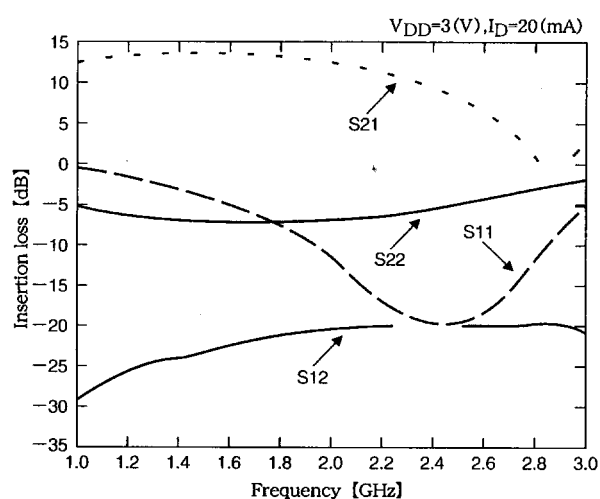
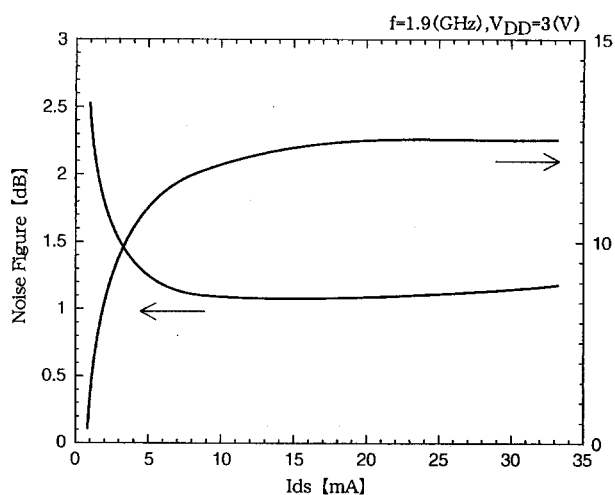
Parameter	Symbol	Conditions	Ratings	Unit
Maximum Supply Voltage	$V_{DD\ max}$		5	V
Gate Voltage	V_G		-2	V
Total Allowable Power Dissipation	P_T		0.25	W
Channel Temperature	T_{ch}		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain Current	I_D	$V_{DD}=3V, V_G=0$	20	35	50	mA
Noise Factor	NF	$V_{DD}=3V, I_D=20mA, f=1.9GHz$		1.1	1.4	dB
Linear Gain	GL	$V_{DD}=3V, I_D=20mA, f=1.9GHz$		12.5		dB
VSWR (input)		$V_{DD}=3V, I_D=20mA, f=1.9GHz$		2.1		-
VSWR (output)		$V_{DD}=3V, I_D=20mA, f=1.9GHz$		2.1		-

Equivalent Circuit

Frequency Characteristics



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