



SPM0103A

Low-Noise GaAs Amplifier MMIC

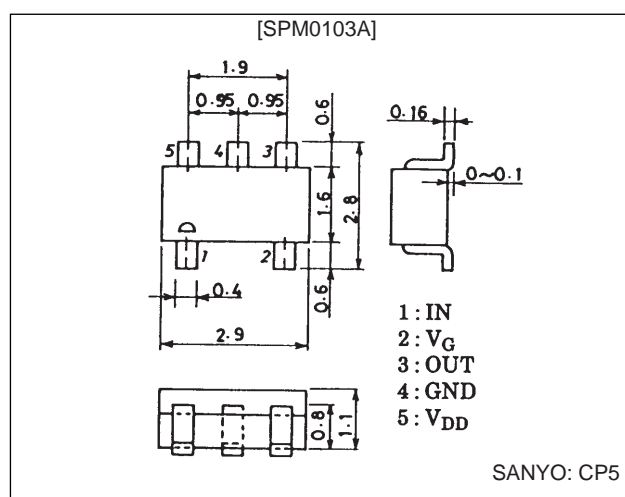
Features

- Low-voltage, low-current operation
- Compact mini-mold package
- No matching circuits needed for I/O
- Low noise
- Ideal for use as first stage for mobile communications receiver amplifier

Package Dimensions

unit: mm

7272-CP5



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Power supply voltage	V_{DD}		5	V
Gate voltage	V_G		-2	V
Allowable power dissipation	P_D		0.25	W
Operating temperature	T_{opr}	$V_{DD} = 3\text{ V}$, $I_D = 60\text{ mA}$ or less	-30 to +90	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to +150	$^\circ\text{C}$
Junction temperature	T_j		150	$^\circ\text{C}$

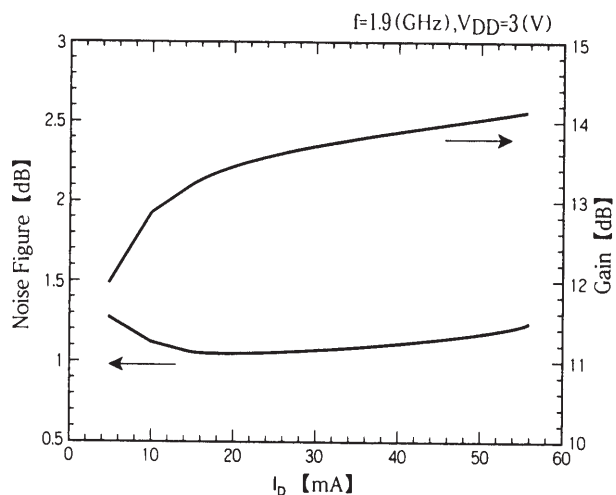
Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain current I_D	I_D	$V_{DD} = 3\text{ V}$, $V_G = 0$	50	70	95	mA
Noise figure	NF	$V_{DD} = 3\text{ V}$, $I_D = 25\text{ mA}$, $f = 1.9\text{ GHz}$		1.1	1.5	dB
Linear gain	G_L	$V_{DD} = 3\text{ V}$, $I_D = 25\text{ mA}$, $f = 1.9\text{ GHz}$		12		dB
VSWR (input)		$V_{DD} = 3\text{ V}$, $I_D = 25\text{ mA}$, $f = 1.9\text{ GHz}$		2.1		
VSWR (output)		$V_{DD} = 3\text{ V}$, $I_D = 25\text{ mA}$, $f = 1.9\text{ GHz}$		2.1		

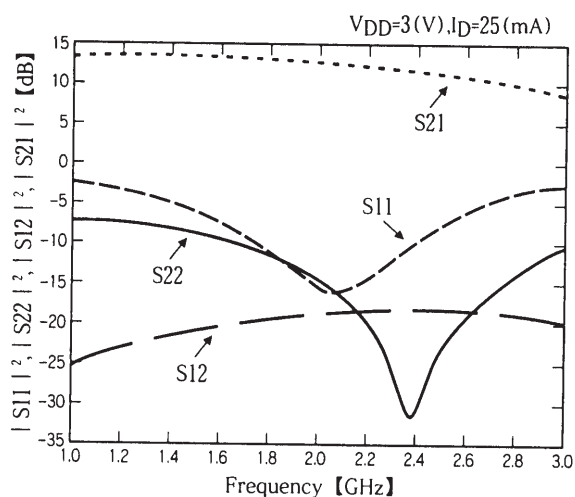
Individual component name indication: MJ

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Current-Dependent Characteristics



Frequency Characteristics



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