

Wideband Amplifier MMIC: SMA3101 for Satellite Receiver Down Converter

Silicon RF Device

The industry's highest Gain*: 25dB for wideband (f=0.1~2.2GHz)

*as of Feb. 23, 2009

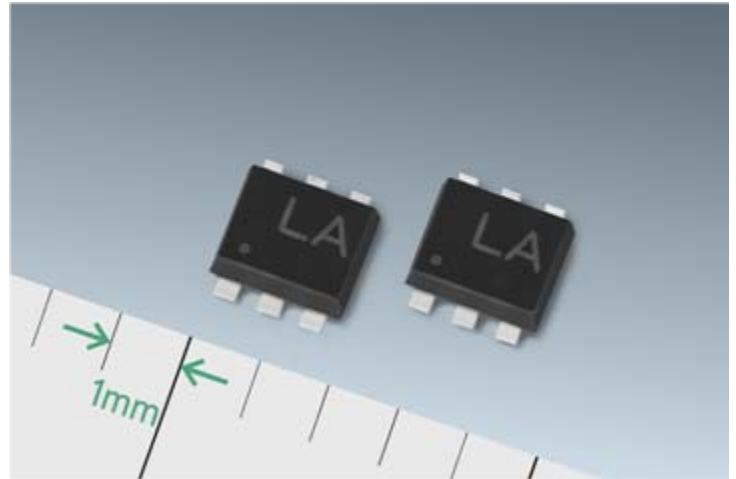
SMA3101

Sample available: from Mar. 2009

Mass production: from Jun. 2009

Output: 1MPcs ~ 3MPcs/Month
(from June 2010)

Sample price: \$0.8

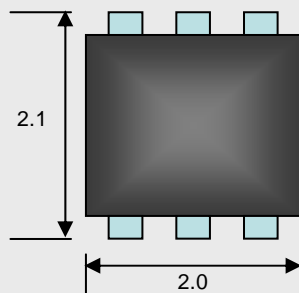


Features

- The industry's highest* gain (Gp=25dB)for wideband (f=0.1~2.2GHz)
- 3GHz RF operation
- Silicon LNB devices are environmentally-friendly and low-cost.

* as of Feb. 23 2009

SMA3101 Specification



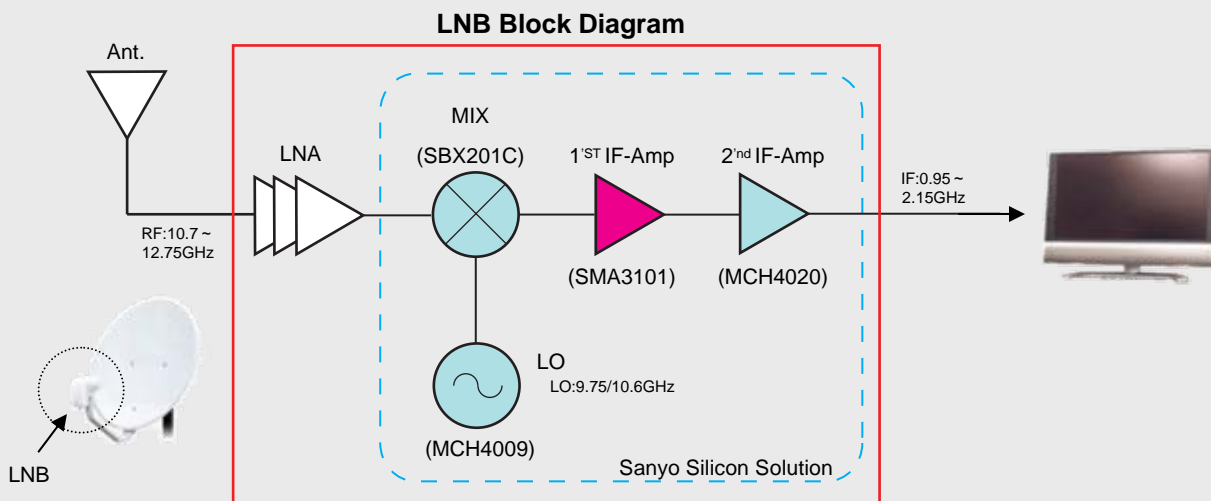
Unit: mm (typ.)



Device	Package (size) [mm]	Voltage supply Vcc [V]	Current Icc [mA]	Gp [dB]	fu [GHz]	Po(1dB) [dBm]	OIP3 [dBm]
				Vcc=5V f=2.2GHz	Vcc=5V 3dB lower (vs. 1GHz gain)	Vcc=5V f=2.2GHz	Vcc=5V f=2.2GHz
SMA3101	MCPH6 (2.0 x 2.1 x 0.85)	5	10	25	3.0	- 4	6.5 (reference)

* Information in this document including price and specifications is as of the time of press release, and is subject to change without notice.

Sanyo's Solution for LNB



Bipolar Transistor

Device	Package	VCEO [V]	IC [mA]	S ₂₁ e ² (@2GHz)			Block
				VCE	IC	[dB]	
MCH4009	MCPH4	3.5	40	3	20	17	LO/IF Amp.
MCH4020	MCPH4	8	150	5	50	17.5 (1GHz)	LO/IF Amp.

MMIC

Device	Package	Vcc [V]	Icc [mA]	Gp [dB]	f _u [GHz]	NF [dB]	Block
SMA3101	MCPH6	5.0	10	25	3.0	4.0	IF Amp.

SBD

Device	Package	Conversion Loss [dB]	Forward Voltage [mV]	Inter-terminal Capacitance [pF]	Block
SBX201C	CP	6.8	280	0.25	Mixer

Comparison in Power Gain

