

WLA0105A

0.2 – 0.55 GHz, Super Low Noise Amplifier

August 2016, REV A



Key Features

- 0.2 ~ 0.55 GHz, 50 Ohm impedance
- 0.55 dB noise figure
- 42 dB gain
- 1.2:1 VSWR
- 18 dBm P_{1dB}
- Precision machined housing
- RoHS compliant

Applications

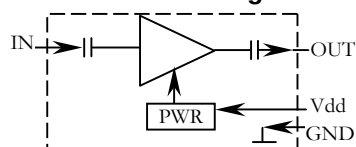
- VHF & UHF
- Receiver amplifiers
- RF bench tests
- Measurement
- Cellular base station applications



Absolute Maximum Ratings

Input CW RF Power	10 dBm
Maximum DC Voltage, V _{dd}	-0.5, +20
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Functional Block Diagram



Ordering Information

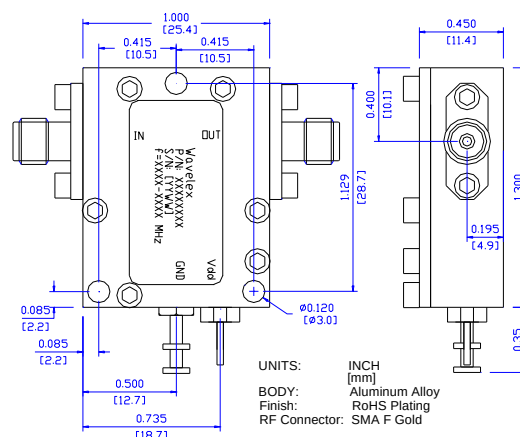
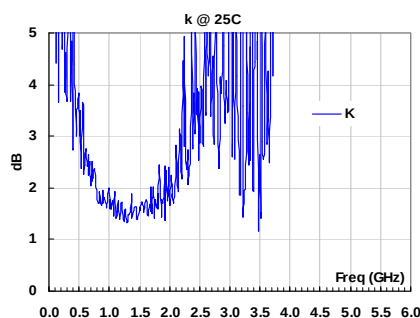
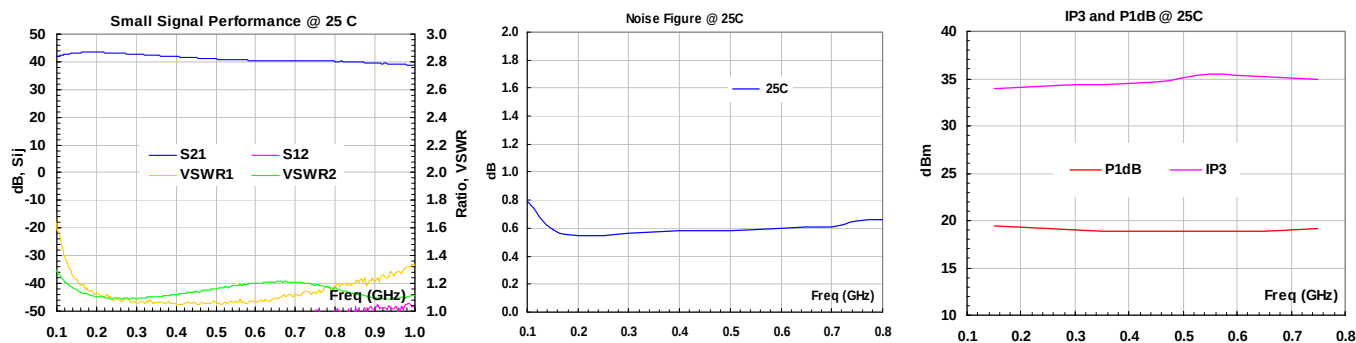
Model	Connectors
WLA0105A	SMA Female

Marking: WLA0105A

Specifications (Tested at +25°C)

tem	Symbol	Test Constraints	Min	Nom	Max	Unit
Frequency Range	BW	50 Ohm Impedance	0.2		0.55	GHz
Gain	S ₂₁	0.2 – 0.55 GHz	40	42	44	dB
Noise Figure	NF	0.2 – 0.55 GHz		0.55	0.7	dB
VSWR	SWR _i	0.2 – 0.55 GHz, all RF ports		1.2:1	1.4:1	Ratio
Gain Flatness	ΔG	0.2 – 0.55 GHz		+/- 1.0	+/- 1.5	dB
Reverse Isolation	S ₁₂	0.2 – 0.55 GHz		60		dB
Output Power 1dB Compression Point	P _{1dB}	0.2 – 0.55 GHz		18		dBm
Output-Third-Order Interception point	IP ₃	Two-Tone, P _{out} = 0 dBm each, 1 MHz separation		35		dBm
Current Consumption	I _{dd}	V _{dd} = +12.0 V		90		mA
Power Supply Operating Voltage	V _{dd}		+7	+12	+16	V
Operating Temperature	T _o		-40		+85	°C
Thermal Resistance	R _{th,c}	Junction to case			215	°C/W

Typical Performance



Outline, IP-3

Specifications and information are subject to change without notice.