

New Generation Ka-band Low Noise Amplifier (R&D)

Mass of new LNA is 30% lighter than previous design



Previous Design

New LNA

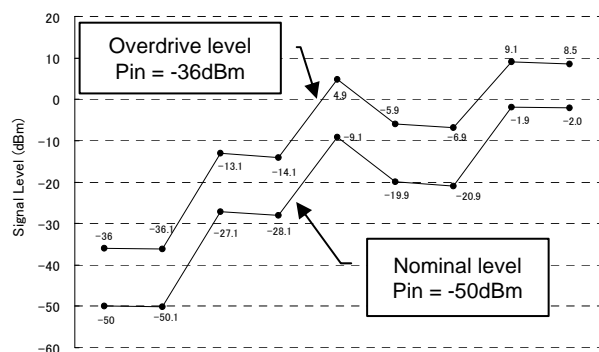
Features

- o 30% mass reduction from previous design
- o Gain selectable in the range of 43 to 53dB
- o Wide bandwidth of 3,000MHz
- o Outstanding Noise Figure performance of 1.7dB at 23degC (typical)
- o Heritage of over 1,130 LNA, which include 66 Ka-band units

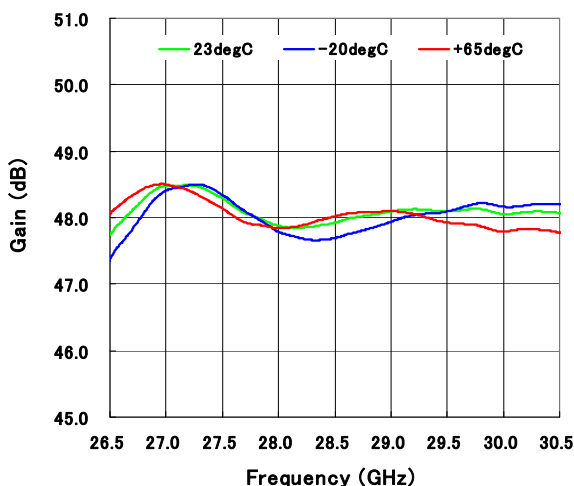
Specification Table

Parameter	Unit	Performance
Frequency Range	GHz	27.0 to 30.0
Usable Bandwidth	MHz	3000
Gain	dB	43 to 53
Gain Flatness	dBp-p	0.7 max
Gain Stability over temperature	dBp-p	0.5 nom
Noise Figure at 23degC	dB	1.7 nom
at 65degC		2.1 nom
Amplitude linearity (OICP)	dBm	19 nom
Phase shift (at Pin=-40dBm)	deg	1.0 max
Input Return Loss	dB	20 min
Output Return Loss	dB	20 min
Power Consumption	W	0.9 max
Mass	g	85 max
Size(L x W x H)	mm	87 x 45 x 47
RF input /Output interface	-	WR28
DC interface	-	9pins MDM
Temperature Range	degC	-20 to +65

Level Diagram



Gain / Gain Stability



NF Data at All Temperature

