

RF AMPLIFIER MODEL QBH-5695

Available as: QBH-5695PM, 4 Pin Surface Mount (SM3)

Features

- Superior Phase Noise Performance
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta =-55 °C to +85 °C
Frequency	10 - 600 MHz	10 - 600 MHz
Gain (dB)	13.0	12.0 Min.
Power @ 1 dB Comp. (dBm)	+27.0	+26.0 Min
Reverse Isolation (dB)	-17	-15 Max.
VSWR In	1.5:1	2.0:1 Max.
Out	1.5:1	2.0:1 Max.
Noise figure (dB)	7.0	9.0 Max.
Power Vdc	+15	+15
mA	195	205 Max.

Typical Intermodulation Performance at 25°C

Second Order Harmonic Intercept Point +48 dBm (Typ.)
Second Order Two Tone Intercept Point +42 dBm (Typ.)
Third Order Two Tone Intercept Point +40 dBm (Min.)

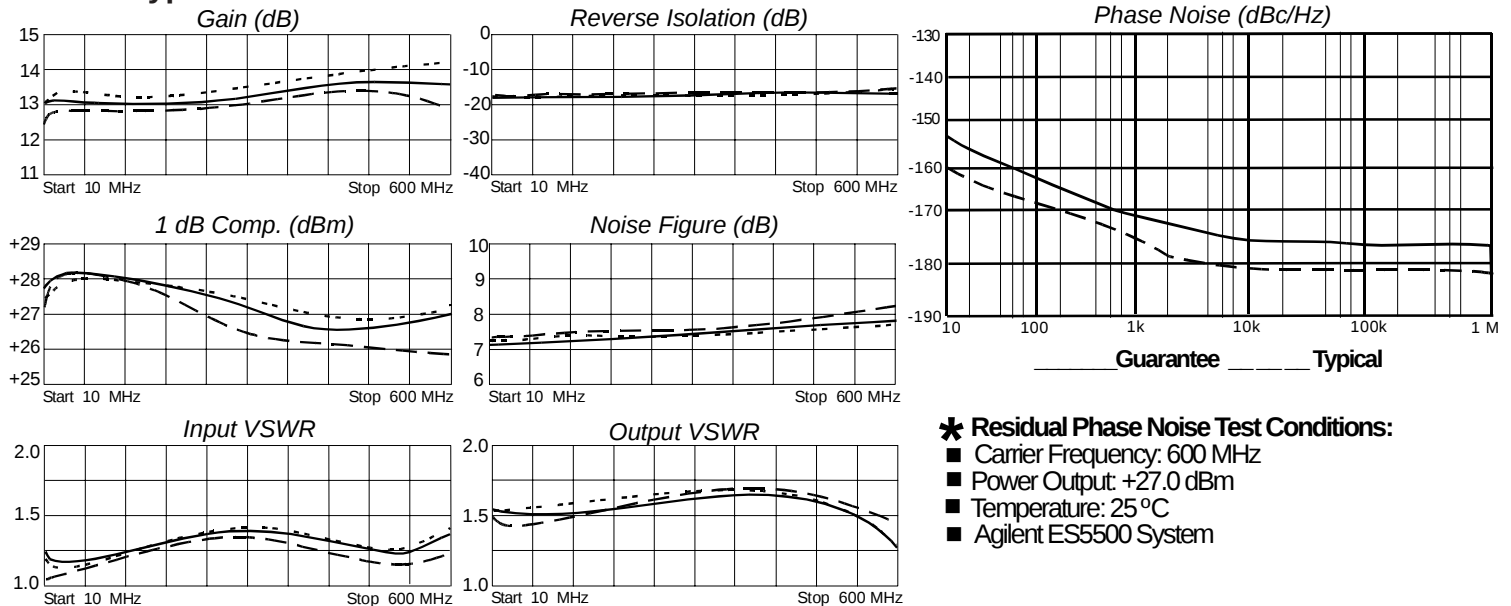
Maximum Ratings

Ambient Operating Temperature -55 °C to +100 °C
Storage Temperature -65 °C to +125 °C
Case Temperature +125 °C
DC Voltage +18 Volts
Continuous RF Input Power +13 dBm
Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
Maximum Peak Power 0.5 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
10 Hz	-160	-155
100 Hz	-167	-162
1 kHz	-176	-171
10 kHz	-181	-176
100 kHz	-182	-177
1 MHz	-182	-177

Typical Performance Data



Legend ——— +25 °C --- +85 °C -55 °C

* Residual Phase Noise Test Conditions:

- Carrier Frequency: 600 MHz
- Power Output: +27.0 dBm
- Temperature: 25 °C
- Agilent ES5500 System

Linear S-Parameters Data

FREQ. MHz	-- S11 -- Mag Ang	-- S21 -- Mag Ang	-- S12 -- Mag Ang	-- S22 -- Mag Ang
10	0.11 -61.9	4.70 -172.3	0.11 8.8	0.23 151.8
250	0.02 -83.6	4.66 116.7	0.11 -34.4	0.14 148.5
500	0.01 -171.7	4.55 54.5	0.12 -70.5	0.14 124.8
750	0.02 126.7	4.49 -7.5	0.13 -109.3	0.15 97.0
1000	0.05 15.7	4.51 -70.8	0.14 -151.2	0.13 40.7
1200	0.12 -44.2	4.58 -123.8	0.15 173.5	0.13 -25.7
1300	0.16 -70.8	4.60 -151.8	0.15 155.1	0.14 -68.5



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