



71707A Microwave Downconverter

1.5 GHz to 26.5 GHz

Data Sheet

Product Specifications

General Specifications

Frequency Range: 1.5 GHz to 26.5 GHz

Input Power: -40 dBm minimum, +30 dBm maximum

IF Output Frequency Range: 5 MHz to 1200 MHz,br>

Level: 0 to +5 dBm

Local Oscillator Frequency Range:

2.4 GHz to 25.8 GHz

Frequency Resolution: 600 MHz

Spectral Purity Specifications

Phase noise performance varies with tuning sensitivity. The following table shows the combined phase noise performance of the Agilent 71707A (set-up with 0.05 ppm tuning sensitivity) using an Agilent 8662A synthesized signal generator as an RF reference source to the Agilent 3048A phase noise measurement system. All values are in units of dBc/Hz.

Input Frequency

1.5 to 3 GHz Typical Specification	3 to 4.2 GHz Typical Specification	4.2 to 6 GHz Typical Specification
Offset from carrier (Hz)	Offset from carrier (Hz)	Offset from carrier (Hz)
10: -80 -73	10: -77 -72	10: -74 -69
100: -100 -92	100: -97 -92	100: -94 -89
1 k: -119 -112	1 k: -122 -115	1 k: -120 -114
10 k: -130 -124	10 k: -133 -128 1 M: -141 -136	10 k: -131 -126
100 k: -130 -124	10 M: -149 -144	100 k: -136 -131
1 M: -135 -130		1 M: -141 -136
10 M: -147 -142		10 M: -148 -143
6 to 7.8 GHz Typical Specification	7.8 to 10.2 GHz Typical Specification	10.2 - 12.6 GHz Typical Specification
Offset from carrier (Hz)	Offset from carrier (Hz)	Offset from carrier (Hz)
10: -72 -67	10: -70 -65	10: -68 -63
100: -92 -87	100: -90 -85	100: -88 -83
1 k: -119 -113	1 k: -118 -112	1 k: -116 -111
10 k: -130 -125	10 k: -129 -124	10 k: -128 -123
100 k: -136 -131	100 k: -135 -130	100 k: -134 -129
1 M: -140 -135	1 M: -139 -134	1 M: -138 -133
10 M: -147 -142	10 M: -145 -140	10 M: -143 -138



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12.6 to 18 GHz Typical Specification	18 to 26.5 GHz Typical Specification
Offset from carrier (Hz)	Offset from carrier (Hz)
10: -65 -60	10: -62
100: -85 -80	100: -82
1 k: -113 -108	1 k: -110
10 k: -125 -120	10 k: -122
100 k: -133 -128	100 k: -128
1 M: -137 -132	1 M: -133
10 M: -140 -135	10 M: -136

Supplemental Specifications

Tuning Sensitivity: 0.05 ppm/volt, 1 ppm/volt, 20 ppm/volt

Tuning Port Voltage Range: ± 5 volts

Tuning Port Input Impedance: 2 k ohm

Miscellaneous Specifications

Environmental Temperature: Operational, 0 °C to +55 °C; storage, -40 °C to + 75 °C

Humidity: operational 0 to 95% relative humidity at 45 °C

Calibration Interval: One year recommended

Size: 222 mm H x 425.4 mm W x 526 mm D
(8.74 in x 16.75 in x 20.7 in)