KEYSIGHT TECHNOLOGIES (AGILENT HP)

11974A

The Keysight Agilent 11974A is a high-performance preselected millimeter-wave harmonic mixer covering the 26.5 to 40 GHz frequency range (Ka-band). Designed to eliminate the need for signal identification or preselection adjustments when used with compatible spectrum analyzers, it features an integrated YIG-preselector that suppresses images and multiple responses.

SPECIFICATIONS

General

Interfaces	LO Input (Type-N female), IF Output (Type-N female), Power/ Tuning Control Cable (permanently attached)

Physical

Power Supply	+15 VDC and -15 VDC (typically supplied via host instrument probe power)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	159 mm × 102 mm × 184 mm mm
Weight	2.1 kg
Shipping Weight	4.5 kg

Frequency & Band Specifications

RF Input Frequency Range	26.5 to 40 GHz
LO Input Frequency Range	3.0 to 6.1 GHz
IF Output Frequency	321 MHz
Harmonic Number (N)	8
Waveguide Band Designation	Ka-band / WR-28

Port & Interface Characteristics

RF Input Connector Type	WR-28 Waveguide (UG-599/U flange)
LO Input Connector Type	Type-N (female)
IF Output Connector Type	Type-N (female)
Impedance	50 Ω nominal (LO and IF ports)

RF Performance Parameters

Nominal LO Drive Level	+14 to +18 dBm (+16 dBm nominal)
Maximum RF Input Power (CW)	+20 dBm (100 mW)

Preselector Specifications

Image Rejection	>50 dB
Multiple Responses Suppression	>50 dB

Performance

Preselector 3 dB Bandwidth	> 100 MHz (typically 140 MHz)
1 dB Gain Compression	-1.5 dBm

Limits

Maximum LO Input Power	+20 dBm

Power

Power Source	Requires +/-15 VDC from host spectrum analyzer or external power supply

TECHNOLOGY

YIG-Tuned Preselected Harmonic Mixer

APPLICATIONS

Millimeter-wave spectrum analysis and signal conversion

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.