

Product Datasheet - Technical Specifications



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82407 series frequency extending module products are designed for millimeter wave spread spectrum measurement of signal/spectrum analyzer. This series frequency extending module can also be used as the front end of millimeter wave signal receiver.

The standard rectangle waveguide of corresponding band is used for the input interface of 82407 series frequency extending module. 2.4mm and SMA female coaxial adapters (3.5mm coaxial adapters are used for 82407R LO input and IF output) are used for LO input and IF output respectively.

- The average noise level is lower than $-132\text{dBm/Hz}/-130\text{dBm/Hz}/-120\text{dBm/Hz}/-115\text{dBm/Hz}/-110\text{dBm/Hz}/-120\text{dBm/Hz}$.
- 82407/A/B/C/D: The maximum outline dimension is less than $72\text{mm}\times 26\text{mm}\times 112\text{mm}$, (82407R: $120\text{mm}\times 85\text{mm}\times 240\text{mm}$).
- The smart USB interface is used to interconnect with the host, so as to enable automatic identification of spread spectrum module and automatic configuration of frequency conversion loss and other functions.

Typical Applications

Connect with 4051 Signal/Spectrum Analyzer to enable millimeter wave signal spectrum measurement.



Technical Specifications

Technical specifications	82407	82407A	82407B	82407C	82407D	82407R
Output frequency range (GHz)	50 ... 75	75 ... 110	110 ... 170	170 ... 220	220 ... 325	325 ... 500
RF input interface (Waveguide outlet/flange)	WR15/ UG385U	WR10/ UG387U-M	WR6/ UG387U-M	WR5/ UG387U-M	WR3/ UG387U-M	WR2.2/ UG387U-M
Harmonic number	5	7	9	7	9	24
Frequency conversion loss (maximum, dB)	24	28	36	40	46	35
Average noise level (maximum, dBm/Hz)	-132	-130	-120	-115	-110	-120
LO power range (dBm)	8 ... 12					
RF max. input power (dBm)	20					

Main tactical specifications	82407	82407A	82407B	82407C	82407D	82407R
Power consumption	≤5W					≤30W
Environmental adaptability	Comply with specified requirements of Level 3 equipment in GJB3947A-2009					
Temperature range	Working temperature: 0°C - 50°C, storage temperature: -40°C ... +70°C					
Safety	Comply with safety requirements of Clause 3.10 in GJB3947A-2009					
Dimensions (max., W×H×D)	72 mm×26 mm×112mm					120 mm×85 mm×240mm
Interface type	RF interface: Standard rectangular waveguide outlet IF interface: SMA (female), 50Ω LO interface: 2.4mm coaxial (female), 50Ω (82407R being 3.5mm coaxial (female)) Communication interface: Mini USB (female, USB2.0)					
Weight	≤350g					≤5kg