



82407 Series Spectrum Analyzer Frequency Extension Modules



China Electronics Technology Instruments Co., Ltd.

PRODUCT OVERVIEW

82407 Spectrum Analyzer Frequency Extension Module series are designed mainly for millimeter-wave frequency extension of spectrum analysis. The series can be used as the front-end of millimeter-wave signal receiver.

82407 series adopt standard waveguide interface which corresponding to its frequency range as its input interface. LO input adopts 2.4mmfemale coaxial connector and IF output adopts 3.5mm female coaxial connector.

FUNCTIONS & FEATURES

- Displayed Average noise level is as low as -150dBm/Hz
- 82407/NB/A/B/C/D max. size: 72 mm×26 mm×112mm
- 82407NC/QA/TA/R max. size: 120 mm×85 mm×240mm
- Intelligent USB interface is used to interconnect with the main instrument to realize automatic recognition of frequency extension module and automatic allocation of frequency conversion loss.

TYPICAL APPLICATIONS

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



**4051 Series Spectrum Analyzer
+ 82407/NB/A/B/C/D
(50 GHz ~ 325 GHz)**



**4051 Series Spectrum Analyzer
+82407NC/QA/SA/TA/R/U
(170 GHz ~ 750 GHz)**

TECHNICAL SPECIFICATIONS

Specifications	82407	82407NB	82407A	82407B	82407C	82407D
Frequency Range (GHz)	50~75	60~90	75~110	110~170	170~220	220~325
Harmonics	5	6	7	9	7	9
Conversion Loss (max, dB)	24	24	28	36	40	48
Noise Level (dBm/Hz)	-132	-132	-130	-120	-115	-110
LO Power Range (dBm)	8~12	8~12	8~12	8~12	8~12	8~12
RF Max Input Level (dBm)	20	20	20	20	20	20
Dimensions (W x H x D)	≤110×70×25.2					
Specifications	82407NC	82407QA	82407SA	82407TA	82407R	82407U
Frequency Range (GHz)	60~90	90~140	170~260	260~400	325~500	500~750
Harmonics	6	6	2	18	24	48
Conversion Loss (max, dB)	12	16	16	18	30	25
Noise Level (dBm/Hz)	-150	-150	-140	-150	-140	-140
LO Power Range (dBm)	8~12	8~12	8~12	8~12	8~12	8~12
RF Max Input Level (dBm)	15	15	15	15	15	15
Dimensions (W x H x D)	≤120×85×240					

MAIN TECHNICAL SPECIFICATIONS

	82407/NB/A/B/C/D	82407NC/QA/TA/R
Power Consumption	≤ 5W	≤ 30W
Temperature Range	Working temperature: 0°C~50°C; Storage temperature: -40°C~+70°C	
Size (W×H×D)	72 mm×26 mm×112mm	120 mm×85 mm×240mm
Interface Types	RF Interface: Standard Rectangular Waveguide Interface IF Interface: SMA (F) , 50Ω LO Interface: 2.4mm Coaxial (F) , 50Ω Communication Interface : Mini USB (F, USB2.0)	RF Interface: Standard Rectangular Waveguide Interface IF Interface: SMA (F) , 50Ω LO Interface: 3.5mm Coaxial (F) , 50Ω Communication Interface : Mini USB (F, USB2.0)
Weight	Less than 400g	Less than 5Kg

Ordering information

Host:

82407 frequency extending module	50GHz - 75GHz
82407NB frequency extending module	60GHz-90GHz
82407NC frequency extending module	60GHz-90GHz
82407A frequency extending module	75GHz - 110GHz
82407QA frequency extending module	90GHz - 140GHz
82407B frequency extending module	110GHz - 170GHz
82407C frequency extending module	170GHz - 220GHz
82407D frequency extending module	220GHz - 325GHz
82407TA frequency extending module	260GHz - 400GHz
82407R frequency extending module	325GHz - 500GHz

Standard Package

No.	Name
1	USB 2.0 Cable Accessory
2	User Manual
3	Certification of Conformity

Options

No.	Name	Description
82407-H01	2.4mm RF Cable	Connect the Spectrum Analyzer LO Output Port to Frequency Extension Module LO Input Port
82407-H02	SMA RF Cable	Connect the Spectrum Analyzer IF Input Port to Frequency Extension Module IF Output Port
82407-H03	Adaptor	2.4mm(f)-3.5mm(m) used in 82407NC/QA/TA/R

Note: 82407 series frequency extending module products can only be used together with 4051 Series Signal/Spectrum Analyzer with a frequency extending option.



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