



## 82401/82406 Series

# Millimeter-Wave Source Module

(50GHz~75GHz/60GHz~90GHz/75GHz~110GHz/  
90GHz~140GHz/110GHz~170GHz/170GHz~220GHz/  
170GHz~260GHz/220GHz~325GHz/325~500GHz)



**China Electronics Technology Instruments Co., Ltd.**

## Product Overview

The 82401/82406 series millimeter-wave source modules excel in terms of output power and application convenience. This series source module can work together with a microwave signal generator to build up a millimeter-wave signal generation system. The module is fed and controlled by the RF signal and software through corresponding special cables, respectively. The output frequency and power are controlled by the synthesized signal source. A special power adapter provides the DC drive for the modules.

## Main Characteristics

- Output Frequency range: 50GHz ~ 500GHz
- Power supply: 15V adapter
- Input frequency: < 20GHz
- Compact and portable, low consumption, low heating volume, standard waveguide output
- Direct display: when the signal source is working, it can directly show the state of the source module's output port
- Built-in high-gain microwave amplifier which lowers the requirement on signal generator

## Typical Applications

The 82401/82406 series source modules can realize the frequency extension of microwave signal source to cover 50GHz ~ 500GHz, which can satisfy the measurement requirements of high-frequency signal in the fields of millimeter-wave radar, communications, and RCS (Radar Cross-Section).



## Technical Specifications

Model	82406	82401N	82406A	82401QA	82406B	82406C	82401SA	82406D	82406E
Output Frequency range (GHz)	50~75	60~90	75~110	90~140	110~170	170~220	170~260	220~325	325~500
Output power (dBm)	≥+13	≥+11	≥+10	≥+5	≥+2	≥-2	≥-6	≥-8	≥-18
	16(typ.)	13(typ.)	15(typ.)	10(typ.)	10(typ.)	2(typ.)	0(typ.)	-3(typ.)	-10(typ.)
Multiplication counts	4	6	6	6	12	12	12	18	36
Amplitude-stabilized options	Y	Y	Y	Y	Y	N	N	N	N
Input frequency range(GHz)	12.5~18.75	10.0~15.0	12.50~18.33	15.0~23.3	9.17~14.17	14.17~18.33	14.17~21.67	12.2~18.06	9.02~13.89
Dimension (mm) (W×H×D)	120×85×240 (without protrusions)								
Power type	15V-16V adapter								
Power consumption	<20W								
RF input connector	3.5mm (f)								
Output connector	WR15	WR12	WR10	WR8.0	WR6.5	WR5.1	WR4.3	WR3.4	WR2.2

## Ordering Information

- **Main Unit**

Model	Designation	Frequency range
82406	Source module	50GHz~75GHz
82401N		60GHz~90GHz
82406A		75GHz~110GHz
82401QA		90GHz~140GHz
82406B		110GHz~170GHz
82406C		170GHz~220GHz
82401SA		170GHz~260GHz
82406D		220GHz~325GHz
82406E		325GHz~500GHz

- **Standard Package**

No.	Designation	Remarks
1	Power cord	Standard tri-prong power cord: 1 pc
2	User manual	2 copies
3	Control cable	Used for information interchange between the main unit and the source module: 1 pc
4	Certificate of conformity	1 copy
5	Power adapter	15V-16V DC output, 1 pc

● Options

No.	Designation	Function	Remarks
82406-001	Amplitude-stabilized options	Realize stable output power in 50GHz ~ 75GHz frequency band	With BNC cable, only suitable for Ceyear 1464/1465 series signal generator
		Output power adjustable range: 0dBm ~ 9dBm	
82401N-001	Amplitude-stabilized options	Realize stable output power in 60GHz~90GHz frequency band	With BNC cable, only suitable for Ceyear 1464/1465 series signal generator
		Output power adjustable range: 0dBm~9dBm	
82406A-001	Amplitude-stabilized options	Realize stable output power in 75GHz~110GHz frequency band	With BNC cable, only suitable for Ceyear 1464/1465 series signal generator
		Output power adjustable range: 0dBm~9dBm	
82401QA-001	Amplitude-stabilized options	Realize stable output power in 90GHz~140GHz frequency band	With BNC cable, only suitable for Ceyear 1464/1465 series signal generator
		Output power adjustable range: -5dBm~+5dBm	
82406B-001	Amplitude-stabilized options	Realize stable output power in 110GHz~170GHz frequency band	With BNC cable, only suitable for Ceyear 1464/1465 series signal generator
		Output power adjustable range: -5dBm~+5dBm	

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