



PM 0043 功率放大器  
产品规格书

PM 0043 Power Amplifier  
Product Specifications

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产品简介



PM 0043 是一款专门针对消费类产品的产线测试设计的调理器，有 4 通道23V恒压激励器，用于调理麦克风，人工耳，加速度计等IEPE 供电传感器，以及 3 通道功率放大器，用于驱动人工嘴，喇叭等大功率负载。配合 IMP 1000还可以实现喇叭阻抗分析。

该产品具有通道资源丰富，IEPE 增益可调、输入阻抗高、输出阻抗低、本底噪声低、频响范围宽、测试重复度高等特点。

基本特点

- 4 通道IEPE 恒压源激励器，最大支持负载阻值4.5k，当传感器内阻为4.5k时，激励电流为2mA
- IEPE 增益2 档可调，x1 ， x10
- 3 通道功率放大器， x4
- IEPE 恒流源带信号接入指示灯，方便安装以及故障排查
- 产品使用标准220V电源供电，方便工业现场使用

产品参数

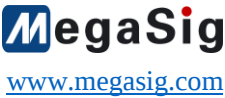
| 产品参数     |            |
|----------|------------|
| IEPE 通道数 | 4          |
| 功率放大通道数  | 3          |
| 工作电压     | 220V       |
| 产品尺寸(mm) | 240*240*80 |
| 接口类型     | BNC        |
| 适用温度     | -20°C~50°C |

音频特性参数

| IEPE 激励源带音频放大器参数                      |                                      |
|---------------------------------------|--------------------------------------|
| 频响范围                                  | 20-20kHz，平坦度优于 0.1dB 5Hz~80KHz（-3dB） |
| 本底噪声                                  | <-100dBV                             |
| 恒流源                                   | 2mA-3.5mA（根据传感器内阻大小改变）               |
| 音频放大器增益                               | 0dB(*1); +20dB（*10）                  |
| THD @1kHz, input 0.1VP @BW 20-20kHz   | 0dB增益: <0.0005% +20dB增益:<0.0005%     |
| THD+N @1kHz, input 0.1VP @BW 20-20kHz | 0dB增益: <0.01% +20dB增益:<0.01%         |
| 指示灯                                   | Mic 信号接入指示                           |

| 功率放大器参数                               |                                               |
|---------------------------------------|-----------------------------------------------|
| 输出功率                                  | 单通道 16W                                       |
| 放大倍数                                  | 12dB（*4）                                      |
| 频响范围                                  | 20 - 20kHz, 平坦度优于 0.25dB    6Hz - 80KHz(-3dB) |
| THD @1kHz, input 0.1VP @BW 20-20kHz   | <0.0005%                                      |
| THD+N @1kHz, input 0.1VP @BW 20-20kHz | <0.01%                                        |

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版本号：V1.5\_20250827\_CN



PM 0043 is a conditioner specifically designed for production line testing of consumer products. It features a 4-channel 23V constant-voltage exciter, which is used to condition IEPE-powered sensors such as microphones, artificial ears, and accelerometers. Additionally, it has a 3-channel power amplifier for driving high-power loads like artificial mouths and speakers. When used in conjunction with the IMP 1000, it can also perform speaker impedance analysis.

This product is characterized by its abundant channel resources, adjustable IEPE gain, high input impedance, low output impedance, low noise floor, wide frequency response, and high test repeatability.

## Basic feature

- 4-channel IEPE constant-voltage source exciter, with a maximum supported load impedance of 4.5 k. When the sensor's internal resistance is 4.5 k, the excitation current is 2 mA
- IEPE gain is adjustable in two steps: x1 and x10
- 3-channel power amplifier, x4
- IEPE constant current source is equipped with a signal presence indicator, which facilitates installation and fault diagnosis
- The product is powered by a standard 220V AC power supply, facilitating its use in industrial settings

## Specifications

| Specifications                     |            |
|------------------------------------|------------|
| Number of IEPE channels            | 4          |
| Number of power amplifier channels | 3          |
| Operating voltage                  | 220V       |
| Product dimensions(mm)             | 240*240*80 |
| Interface type                     | BNC        |
| Operating temperature              | -20°C~50°C |

## Audio characteristic parameters

| IEPE excitation source with audio amplifier parameters |                                                                       |
|--------------------------------------------------------|-----------------------------------------------------------------------|
| Frequency range                                        | 20-20kHz, flatness better than 0.1dB 5Hz~80KHz (-3dB)                 |
| Noise floor                                            | <-100dBV                                                              |
| Constant current source                                | 2mA-3.5mA (adjust according to the internal resistance of the sensor) |
| Audio amplifier gain                                   | 0dB(*1); +20dB (*10)                                                  |
| THD @1kHz, input 0.1VP @BW 20-20kHz                    | 0dB gain: <0.0005% +20dB gain:<0.0005%                                |
| THD+N @1kHz, input 0.1VP @BW 20-20kHz                  | 0dB gain: <0.01% +20dB gain:<0.01%                                    |

|                 |                              |
|-----------------|------------------------------|
| Indicator light | Mic signal access indication |
|-----------------|------------------------------|

| Parameters of power amplifier            |                                                              |
|------------------------------------------|--------------------------------------------------------------|
| Output Power                             | Single channel 16W                                           |
| Amplification                            | 12dB (*4)                                                    |
| Frequency response                       | 20 - 20kHz, flatness better than 0.25dB    6Hz - 80KHz(-3dB) |
| THD @1kHz, input 0.1VP @BW<br>20-20kHZ   | <0.0005%                                                     |
| THD+N @1kHz, input 0.1VP @BW<br>20-20kHZ | <0.01%                                                       |

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Version number: V1.5\_20250827\_EN