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Data Sheet

August 15, 2026

BRUEL & KJAER

Brüel & Kjær 4227 Mouth Simulator

Brüel and Kjær Type 4227 Mouth Simulator The Brüel and Kjær Type 4227 is an ITU-T Rec. P.51 / IEEE 269 / IEEE 661 artificial mouth. OEM Product Data BP 0505 rates continuous 110 dB SPL at 25 mm MRP from 200 Hz to 4 kHz, 10 W continuous / 50 W pulsed input, 4 ohm, 20 mm mouth opening, and 2.2 kg. Telephone transmitter, close talk microphone, and smart speaker electroacoustic tests needing a human voice field at the mouth reference point. Guaranteed 110 dB SPL continuous at 25 mm The Brüel and Kjær Type 4227 is an ITU-T Rec. P.51 / IEEE 269 / IEEE 661 artificial mouth. OEM Product Data BP 0505 rates continuous 110 dB SPL at 25 mm MRP from 200 Hz to 4 kHz, 10 W continuous / 50 W pulsed input, 4 ohm, 20 mm mouth opening, and 2.2 kg. Telephone transmitter, close talk microphone, and smart speaker electroacoustic tests needing a human voice field at the mouth reference point. Guaranteed 110 dB SPL continuous at 25 mm Optional 1/4 inch monitoring microphone in the mouth opening



MODEL

**Brüel & Kjær
4227**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

4227

LISTING

<https://aumictechlabs.com/products/4227-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Brüel & Kjær 4227 Mouth Simulator is an acoustic test instrument that replicates the sound field characteristics of the human mouth for precise calibration and measurement of audio equipment. It generates standardized acoustic output across telecommunications, hearing aid manufacturing, and acoustic research applications while meeting IEEE 269, IEEE 661, and ITU-T P.51 standards. Technical Specifications Acoustic Output Continuous SPL: minimum 110 dB SPL

(200 Hz to 2 kHz) and minimum 100 dB SPL (100 Hz to 8 kHz) at 25 mm from lip ring Pulsed operation: exceeds 120 dB SPL at 25 mm distance (up to 50 W for periods <2 seconds with 20-second intervals) Mouth opening diameter: 20 mm at lip ring Low distortion characteristics Frequency Response Achieves ± 1 dB deviation or better across 100 Hz to 10 kHz at 25 mm distance with equalization via $\frac{1}{4}$ " monitoring microphone in compressor loop Power Maximum continuous consumption: 10 W Short-duration operation: up to 50 W Type 4227-A includes built-in Class D amplifier Key Features Built-in overload protection circuit for loudspeaker safety Monitoring microphone provision: accepts Brüel & Kjær $\frac{1}{4}$ " microphone with $\frac{1}{4}$ " preamplifier for output level monitoring and frequency response optimization Removable plastic dummy $\frac{1}{4}$ " microphone maintains consistent acoustic characteristics with or without active monitoring microphone installed Supplied with UA-0901 calibration jig positioning $\frac{1}{2}$ " measuring microphone at 25 mm from lip ring Standards Compliance Conforms to IEEE 269, IEEE 661, and ITU-T Recommendation P.51 for human mouth sound field replication. Typical Applications Telecommunications equipment testing Hearing aid calibration and verification Acoustic measurement and research

4227 Characteristics / Specifications

PARAMETER	VALUE
Model	4227
Instrument Type	artificial mouth simulator
Standards	ITU-T Rec. P.51, IEEE 269, IEEE 661
Input Connector	banana female
Continuous Max Input	10 W at 20 C
Pulsed Max Input	50 W at 20 C, 2 s on 20 s off
Input Impedance	4 ohm
Protection Threshold	6.4 V
Protection Detection Time	1 s
Protection Recovery Time	2 s (loudspeaker disconnected)
Continuous Spl 200 Hz To 4 KHz	min 110 dB SPL at MRP
Continuous Spl 100 Hz To 10 KHz	min 100 dB SPL at MRP
Continuous Spl 100 Hz To 17 KHz	min 80 dB SPL at MRP
Pink Noise 50 Hz To 16 KHz	min 106 dB SPL at MRP
Pink Noise 20 Hz To 20 KHz	min 100 dB SPL at MRP
Sensitivity 94 Db	0.4 Vrms at 1 kHz MRP
Sensitivity 110 Db	2.4 Vrms at 1 kHz MRP
Sensitivity 118 Db	6 Vrms at 1 kHz MRP
Harmonic Distortion 100 To 125 Hz	less than 10 percent at 100 dB SPL
Harmonic Distortion 125 To 200 Hz	less than 3 percent at 100 dB SPL
Harmonic Distortion 200 To 315 Hz	less than 1 percent at 100 dB SPL
Harmonic Distortion Above 315 Hz	less than 0.8 percent at 100 dB SPL to 10 kHz
Mouth Opening Diameter	20 mm (0.8 inch)
Loudspeaker Diameter	88 mm (3.5 inch)
Equivalent Lip Plane	6 mm (0.24 inch)

PARAMETER	VALUE
Mouth Reference Point	25 mm (0.98 inch)
Mass	2.2 kg (4.85 lb)
Height	104 mm (4.1 inch)
Diameter	104 mm (4.1 inch)
Operating Temperature	minus 5 C to plus 40 C
Storage Temperature	minus 25 C to plus 70 C
Humidity	90 percent RH noncondensing at 40 C
Vibration	0.3 mm, 20 m/s ² , 10 to 500 Hz
Shock	1000 m/s ²
Bump	1000 bumps at 250 m/s ²

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 25 C to plus 70 C
Operating temperature	minus 5 C to plus 40 C
Operating Temperature	minus 5 C to plus 40 C
Humidity	90 percent RH noncondensing at 40 C
Vibration	0.3 mm, 20 m/s2, 10 to 500 Hz
Shock	1000 m/s2
Bump	1000 bumps at 250 m/s2 Notes Numeric rows from Bruel and Kjaer Product Data BP 0505 for Type 4227 (not 4227-A). 4227-A uses BNC input, classDamplifier, and different volt/gain rows; do not mix 4227-A 0.7 Vrms figures onto 4227.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.