

# Микрофоны измерительные DELTA OHM MC22E

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# MC21h MICROPHONE (FREE FIELD)

U# - is a condenser type microphone, pre-polarized (0V) with standard ½" diameter. The frequency response, optimized for diffused field, is flat from 3.15 Hz to 12.5 kHz.



## Applications

- Sound pressure level measurements according to ANSI standards
- Building acoustics measurements
- Class 1 precision sound pressure level measurements
- Optimized diffuse field response
- Inside vehicle measurements

*Random incidence microphones are used to measure the sound field when acoustic waves come from many directions for example in a reverberating room or in presence of several reflecting surfaces.*

*ANSI standards specify the use of random incidence microphones for sound pressure level measurements.*

TAB 1

| U                            | U#                          |
|------------------------------|-----------------------------|
| Nominal diameter             | ½"                          |
| Precision class              | 1                           |
| Acoustic Response            | Random incidence            |
| Frequency range              | 3.15Hz ÷ 12.5KHz (±2dB)     |
| Polarization (V)             | 0                           |
| Sensitivity (dB re. 1V/Pa)   | -26                         |
| Nominal sensitivity (mV/Pa)  | 50                          |
| Temperature range            | -40 ÷ +120 °C               |
| Temperature coefficient      | 0.009 dB/°C                 |
| Pressure coefficient         | -1.1x10 <sup>-5</sup> dB/Pa |
| Capacity (pF)                | 11                          |
| Max level (dB)               | 144                         |
| Intrinsic noise (A weighted) | 15                          |
| Membrane material            | Nickel                      |
| Dimensions (mm)              | 13.2 (diam) x 16.2          |

U@k\h=V-)k@uo

| U                      | †            | U ) " " |
|------------------------|--------------|---------|
| Ct – temperature       | 0.009dB/°C   | ± 0.3   |
| Cp – static pressure   | -0.011dB/kPa | ± 0.2   |
| Cu – relative humidity | -            | ± 0.3   |

Drift coefficients of acoustic sensitivity, due to temperature and static pressure, generating the sensitivity of microphone-preamplifier-instrument chain to drift (within the limits specified for class 1 according to IEC

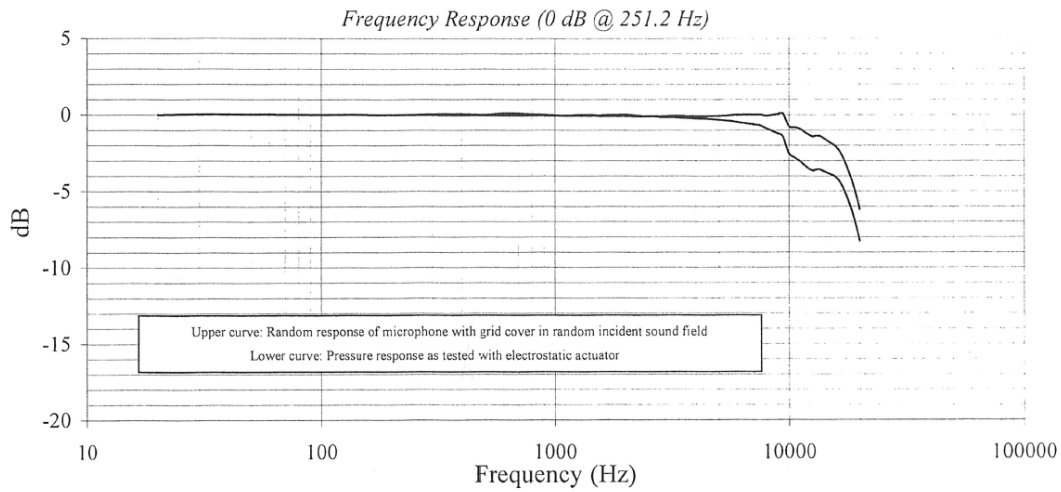
61672: 2002). Validity of coefficients: temperature range -10° C to + 50° C; static pressure range 65 kPa to 108 kPa; relative humidity range 25% to 90%

Typical (Random) frequency response of MC22E microphone

**Calibration Data**

Open Circuit Sensitivity @ 251.2 Hz: 55.80 mV/Pa      Polarization Voltage, External: 0 V  
 -25.07 dB re 1V/Pa      Capacitance: 11.8 pF

Temperature: 71 °F (22°C)      Ambient Pressure: 987 mbar      Relative Humidity: 28 %



| Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) |
|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|
| 20.0      | 0.00       | 0.00       | 1584.9    | -0.06      | -0.02      | 6683.4    | -0.57      | 0.02       | -         | -          | -          |
| 25.1      | 0.04       | 0.04       | 1678.8    | -0.06      | -0.01      | 7079.5    | -0.62      | 0.02       | -         | -          | -          |
| 31.6      | 0.05       | 0.05       | 1778.3    | -0.06      | 0.00       | 7498.9    | -0.68      | 0.03       | -         | -          | -          |
| 39.8      | 0.05       | 0.05       | 1883.7    | -0.07      | 0.01       | 7943.3    | -0.87      | -0.04      | -         | -          | -          |
| 50.1      | 0.04       | 0.04       | 1995.3    | -0.07      | 0.02       | 8414.0    | -1.02      | -0.01      | -         | -          | -          |
| 63.1      | 0.03       | 0.03       | 2113.5    | -0.08      | 0.00       | 8912.5    | -1.20      | 0.04       | -         | -          | -          |
| 79.4      | 0.03       | 0.03       | 2238.7    | -0.08      | -0.03      | 9440.6    | -1.43      | 0.08       | -         | -          | -          |
| 100.0     | 0.02       | 0.02       | 2371.4    | -0.09      | -0.07      | 10000.0   | -2.51      | -0.74      | -         | -          | -          |
| 125.9     | 0.02       | 0.02       | 2511.9    | -0.09      | -0.09      | 10592.5   | -2.81      | -0.83      | -         | -          | -          |
| 158.5     | 0.01       | 0.01       | 2660.7    | -0.09      | -0.08      | 11220.2   | -3.09      | -0.96      | -         | -          | -          |
| 199.5     | 0.00       | 0.00       | 2818.4    | -0.14      | -0.11      | 11885.0   | -3.44      | -1.23      | -         | -          | -          |
| 251.2     | 0.00       | 0.00       | 2985.4    | -0.14      | -0.07      | 12589.3   | -3.64      | -1.41      | -         | -          | -          |
| 316.2     | -0.01      | 0.05       | 3162.3    | -0.15      | -0.05      | 13335.2   | -3.56      | -1.35      | -         | -          | -          |
| 398.1     | -0.01      | 0.05       | 3349.7    | -0.17      | -0.04      | 14125.4   | -3.70      | -1.55      | -         | -          | -          |
| 501.2     | -0.02      | 0.00       | 3548.1    | -0.19      | -0.06      | 14962.4   | -3.87      | -1.80      | -         | -          | -          |
| 631.0     | -0.02      | 0.12       | 3758.4    | -0.20      | -0.07      | 15848.9   | -4.07      | -2.07      | -         | -          | -          |
| 794.3     | -0.03      | 0.04       | 3981.1    | -0.22      | -0.09      | 16788.0   | -4.59      | -2.62      | -         | -          | -          |
| 1000.0    | -0.04      | -0.02      | 4217.0    | -0.24      | -0.10      | 17782.8   | -5.49      | -3.52      | -         | -          | -          |
| 1059.3    | -0.04      | -0.04      | 4466.8    | -0.26      | -0.09      | 18836.5   | -6.71      | -4.71      | -         | -          | -          |
| 1122.0    | -0.04      | -0.03      | 4731.5    | -0.29      | -0.08      | 19952.6   | -8.22      | -6.17      | -         | -          | -          |
| 1188.5    | -0.04      | -0.02      | 5011.9    | -0.32      | -0.06      | -         | -          | -          | -         | -          | -          |
| 1258.9    | -0.04      | 0.00       | 5308.8    | -0.37      | -0.05      | -         | -          | -          | -         | -          | -          |
| 1333.5    | -0.05      | 0.00       | 5623.4    | -0.41      | -0.02      | -         | -          | -          | -         | -          | -          |
| 1412.5    | -0.05      | 0.00       | 5956.6    | -0.47      | 0.00       | -         | -          | -          | -         | -          | -          |
| 1496.2    | -0.06      | -0.02      | 6309.6    | -0.52      | 0.01       | -         | -          | -          | -         | -          | -          |

|                                    |                                   |  |                                       |                                 |
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