~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 352C42

Serial Number: 69907

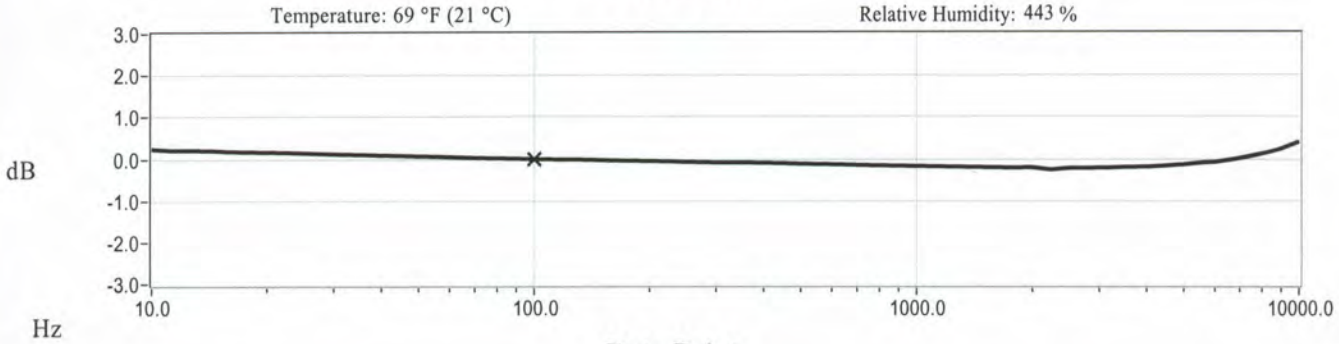
Description: ICP® Accelerometer Method: Back-to-Back Comparison Calibration

Manufacturer: PCB

Calibration Data

Sensitivity @ 100.0 Hz	**104.8**	**mV/g**	Output Bias	13.9	VDC
	(10.68	**mV/m/s²)**	Transverse Sensitivity	0.9	%
Discharge Time Constant	0.7	seconds	Resonant Frequency	31.2	kHz

Sensitivity Plot



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10.0	2.7	300.0	-1.0	7000.0	0.1
15.0	2.2	500.0	-1.4	10000.0	4.7
30.0	1.3	1000.0	-2.0		
50.0	0.7	3000.0	-2.5		
REF. FREQ.	0.0	5000.0	-1.5		

Mounting Surface: Stainless Steel Fastener: Cyanoacrylate Adhesive Fixture Orientation: Vertical
Acceleration Level (rms)[1]: 10.0 g (98.1 m/s²)[2]

[1]The acceleration level may be limited by shaker displacement at low frequencies. If the listed level cannot be obtained, the calibration system uses the following formula to set the vibration amplitude; Acceleration Level (g) = 0.010 x (freq)².

[2]The gravitational constant used for calculations by the calibration system is; 1 g = 9.80665 m/s².

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration is NIST Traceable thru Project 822/271196 and PTB Traceable thru Project 5399.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCSL Z540-1-1994 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Measurement uncertainty (95% confidence level with coverage factor of 2) for frequency ranges tested during calibration are as follows: 5-9 Hz; +/- 2.0%, 10-99 Hz; +/- 1.5%, 100-1999 Hz; +/- 1.0%, 2-10 kHz; +/- 2.5%.

Technician: Dwight Beverly Date: 06/07/06

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Cert No 1862.01

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~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 352C22

Serial Number: 73349

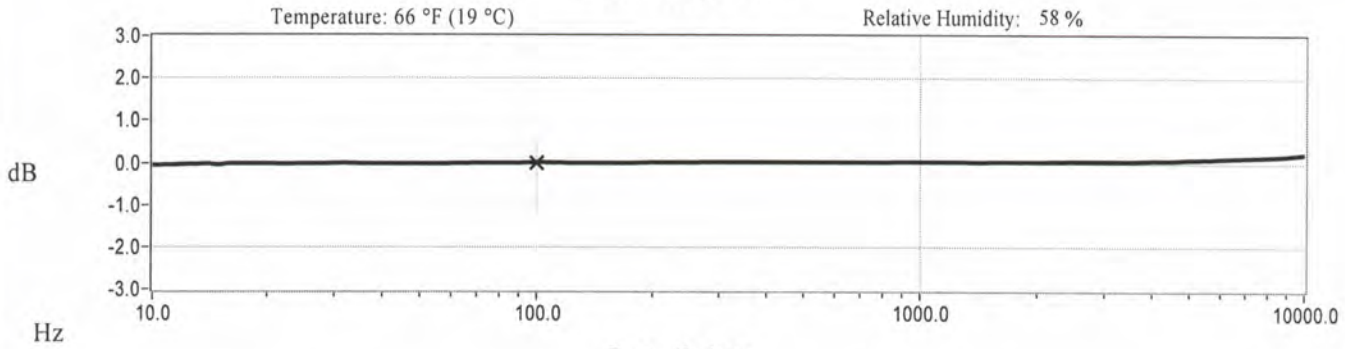
Description: ICP® Accelerometer Method: Back-to-Back Comparison Calibration

Manufacturer: PCB

Calibration Data

Sensitivity @ 100.0 Hz	**10.12**	**mV/g**	Output Bias	10.2	VDC
	(1.032	**mV/m/s²)**	Transverse Sensitivity	1.9	%
Discharge Time Constant	2.6	seconds	Resonant Frequency	86.5	kHz

Sensitivity Plot



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10.0	-0.6	300.0	0.2	7000.0	1.4
15.0	-0.6	500.0	0.2	10000.0	2.5
30.0	-0.2	1000.0	0.3		
50.0	-0.2	3000.0	0.4		
REF. FREQ.	0.0	5000.0	0.8		

Mounting Surface: Tungsten Adapter Fastener: Cyanoacrylate Adhesive Fixture Orientation: Vertical
Acceleration Level (rms)[1]: 10.0 g (98.1 m/s²)[2]

[1]The acceleration level may be limited by shaker displacement at low frequencies. If the listed level cannot be obtained, the calibration system uses the following formula to set the vibration amplitude; Acceleration Level (g) = 0.010 x (freq)².

[2]The gravitational constant used for calculations by the calibration system is; 1 g = 9.80665 m/s².

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration is NIST Traceable thru Project 822/271196 and PTB Traceable thru Project 5399.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI/NCSL Z540-1-1994 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Measurement uncertainty (95% confidence level with coverage factor of 2) for frequency ranges tested during calibration are as follows: 5-9 Hz; +/- 2.0%, 10-99 Hz; +/- 1.5%, 100-1999 Hz; +/- 1.0%, 2-10 kHz; +/- 2.5%.

Technician: Kevin Moseley KM Date: 05/16/06

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~ Calibration Certificate ~

Per ISO 16063-21

Model Number: 352A73

Serial Number: 160588

Description: ICP® Accelerometer

Manufacturer: PCB

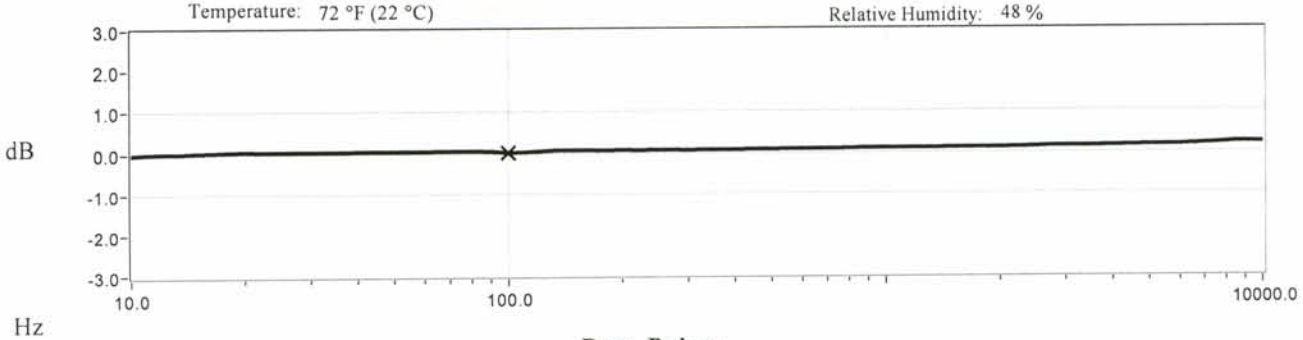
Method: Back-to-Back Comparison AT401-3

Calibration Data

Sensitivity @ 100 Hz	**4.44 mV/g**	Output Bias	9.9 VDC
	(0.453 mV/m/s²)	Transverse Sensitivity	2.7 %
Discharge Time Constant	0.5 seconds	Resonant Frequency	107.8 kHz

Sensitivity Plot

Temperature: 72 °F (22 °C) Relative Humidity: 48 %



Data Points

Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)	Frequency (Hz)	Dev. (%)
10	-0.5	300	0.6	7000	2.0
15	0.0	500	0.7	10000	2.4
30	0.3	1000	1.0		
50	0.4	3000	1.5		
REF. FREQ.	0.0	5000	1.8		

Mounting Surface: Tungsten Adapter Fastener: Adhesive Fixture Orientation: Vertical
Acceleration Level (pk)[1]: 10.0 g (98.1 m/s²)
[1]The acceleration level may be limited by shaker displacement at low frequencies. If the listed level cannot be obtained, the calibration system uses the following formula to set the vibration amplitude; Acceleration Level (g) = 0.008 x (freq)². [2]The gravitational constant used for calculations by the calibration system is; 1 g = 9.80665 m/s²

Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

Notes

1. Calibration is NIST Traceable thru Project 683/283498 and PTB Traceable thru Project 10065.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 9001, ISO 10012-1, ANSI Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. Measurement uncertainty (95% confidence level with coverage factor of 2) for frequency ranges tested during calibration are as follows: 5-9 Hz; +/- 2.0%, 10-99 Hz; +/- 1.5%, 100-1999 Hz; +/- 1.0%, 2-10 kHz; +/- 2.5%.

Technician: Donald Whalen Date: 6/6/2013

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