be quiet!

be quiet! Pure Rock 3

Lab ID BQCLR00112

Type Air

Testing Dates: Nov 17, 2025 to Nov 23, 2025

Scheme: THETA

AMD AM5





Intel LGA1851



Aristeidis Bitziopoulos, Certification Body General Manager

THETA Cooler Performance

THETA is a Cybenetics performance rating. It is not part of our ISO/IEC 17065 certification schemes and is outside our accreditation.

Overall Performance (OP) = W × F / T, where W is the average CPU power at the EPS connectors (W), F the average CPU frequency (MHz) and T the average CPU temperature (°C). A cooler is rated on its measured OP at 30 dB(A) normalized noise output; a cooler that cannot reach 30 dB(A) is rated on its own measured 25 dB(A) point. Air and AIO coolers have separate ladders on each test platform.

Evaluated before Revision 2.0 of the Cooling Solutions Test Protocol: the THETA level was assigned from the published results measured under Revision 1.8 (20 minutes per noise level, 10-minute cool-down). The cooler was not measured again, and the earlier procedure is not identical to the procedure of Revision 2.0.

Platform	THETA level	Test CPU	Mount	Rated at	Overall Performance (OP)
AMD AM5	**THETA Bronze · Air · AMD AM5**	AMD Ryzen 9 7900X (AM5)	Default	30 dB(A)	9,416
Intel LGA1851	**THETA Silver · Air · Intel LGA1851**	Intel Core Ultra 9 285K (LGA1851)	Default	30 dB(A)	12,756

General Information

Test Equipment

Noise Test Environment	Hemi Anechoic Chamber with 6dB(A) noise floor
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Climate Chamber	Giant Force GTH-800-20-CP-AR
Testing Methodology	Cybenetics Cooling Solutions Test Protocol

DUT Information

Brand	be quiet!
Model	Pure Rock 3
Lab ID	BQCLR00112
Testing Dates	Nov 17, 2025 to Nov 23, 2025
Engineer	Aris Bitziopoulos

Climate Chamber

Noise Test Environment	Hemi Anechoic Chamber with 6dB(A) noise floor
Manufacturer	Giant Force
Model Number	GTH-800-20-CP-AR
Temperature Range	-20℃ ~ +100℃

Humidity Range	20% ~ 98% RH
Temperature/Humidity Constancy	±0.2℃; ±2.5%RH
Temperature/Humidity Uniformity at center	±0.5℃; ±4%RH
Internal Dimensions (WHD)	100 x 100 x 80 cm
External Dimensions (WHD)	145 x 190 x 135 cm
Net Weight (approximately)	450 Kg
Heat-up Time (No load, no linear)	(from 20°C to +100°C) 30min
Pull-down Time (No load, no linear)	(from 20°C to -20°C) 50min
Cooling System	Airtight compressor + evaporator fins + air-cooling condenser
Power Source	3Φ AC 380V ±5%, 50Hz±1% 10KW
Based on Standards	ISO 5801-2007, AMCA 210-0, ASHRAE 51-2007, IEC 61591-2005, GB/T 1236-200

AMD Test System

Mainboard	Asus TUF GAMING X670E-PLUS
CPU	AMD Ryzen 9 7900x
GPU	Embedded
NVMe	XPG GAMMIX S50 Lite 1TB
RAM	XPG Lancer DDR5 (2 x 16GB) 6000MHz
Power Supply	Seasonic Vertex 1200W (Cybenetics Platinum)
CPU Cooler	Device Under Test
Case	Cooler Master Test Bench

Intel Test System

Mainboard	ASRock Z890 Taichi [BIOS: 2.09.AS01 - Nov 4, 2024]
CPU	Intel Core Ultra 9 285K
GPU	Embedded
NVMe	XPG GAMMIX S50 Lite 1TB
RAM	Gskill Ripjaws S5 DDR5 (2 x 16GB) 6000MHz
Power Supply	Seasonic Vertex 1200W (Cybenetics Platinum)
CPU Cooler	Device Under Test

Case	DimasTech Bench

Technical Specifications

Manufacturer (OEM)	be quiet!
Model	Pure Rock 3
Number of Fans	1
Fan #1	be quiet! Pure Wings 3 120mm High-Speed
Type	Air
Heatpipes	4
Heatpipe Diameter	6mm
Length	71mm
Width	124mm
Height	154mm
Block Material	Aluminium
Weight	590g
AMD Processors Support	AM5, AM4
Intel Processors Support	LGA1851,1700,1200,115x
Warranty	3 years

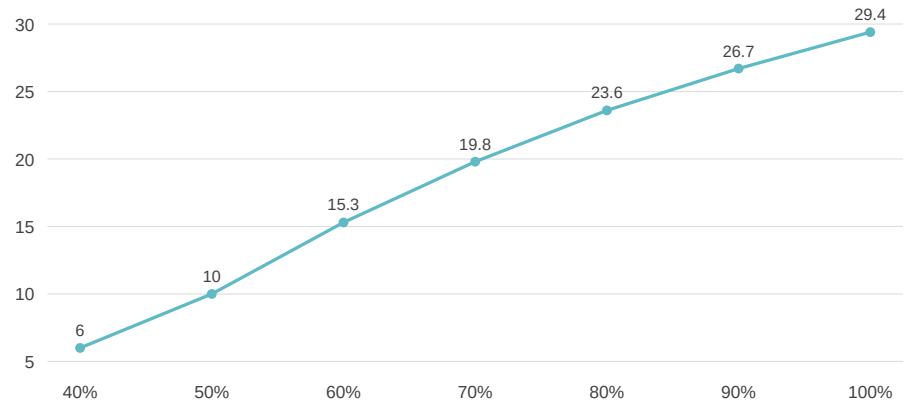
Noise Output and Fan Speed

Table

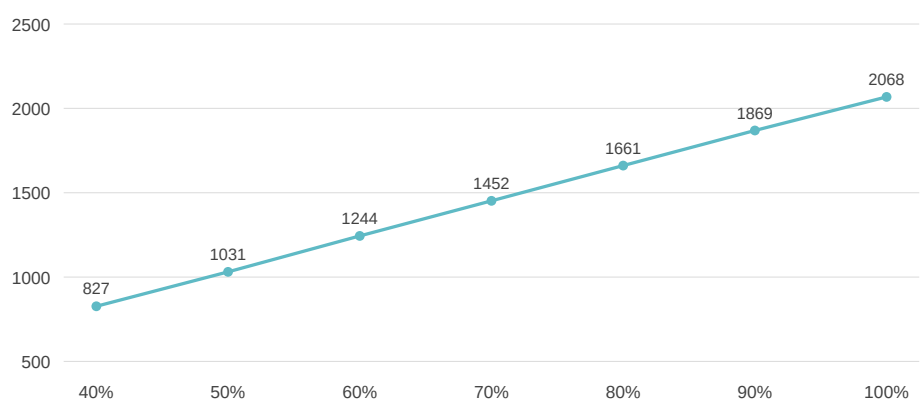
Fan Setting	Noise (dB(A))	Fan 1 (RPM)
40%	6.0	827
50%	10.0	1031
60%	15.3	1244
70%	19.8	1452
80%	23.6	1661
90%	26.7	1869
100%	29.4	2068

Graphs

Noise



Fan Speed



Fan Speed at Fixed Noise Levels

Noise Level	Fan 1 (RPM)
15 dB(A)	1230
20 dB(A)	1450
25 dB(A)	1725

AMD System Test Results

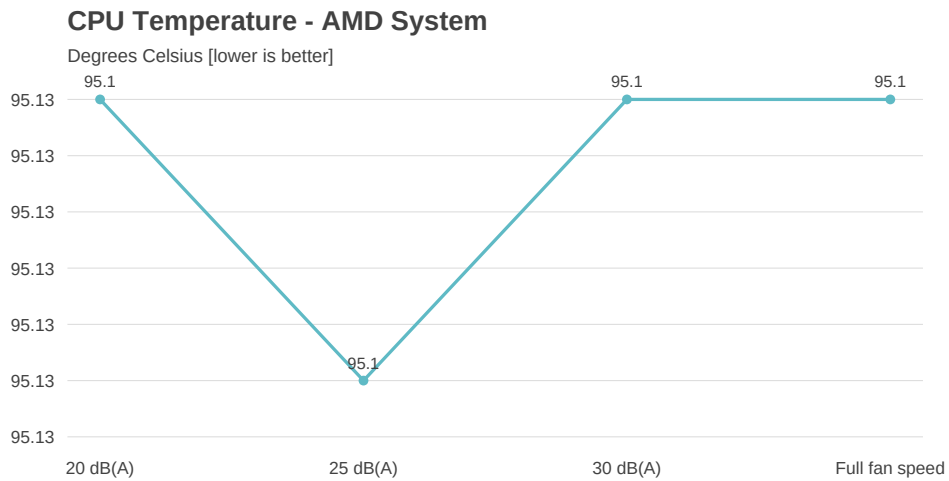
Table

Condition	CPU Temperature (°C)	CPU Frequency (MHz)	CPU Power (W)	Overall Performance
20 dB(A)	95.1	5056	170.6	9069
25 dB(A)	95.1	5084	174.8	9341

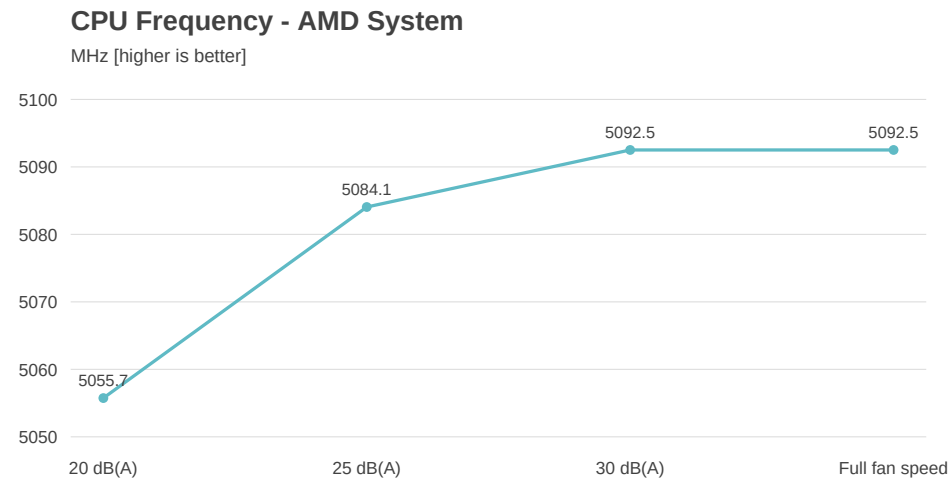
Condition	CPU Temperature (°C)	CPU Frequency (MHz)	CPU Power (W)	Overall Performance
30 dB(A)	95.1	5093	175.9	9416
Full fan speed	95.1	5093	175.9	9416

Graphs

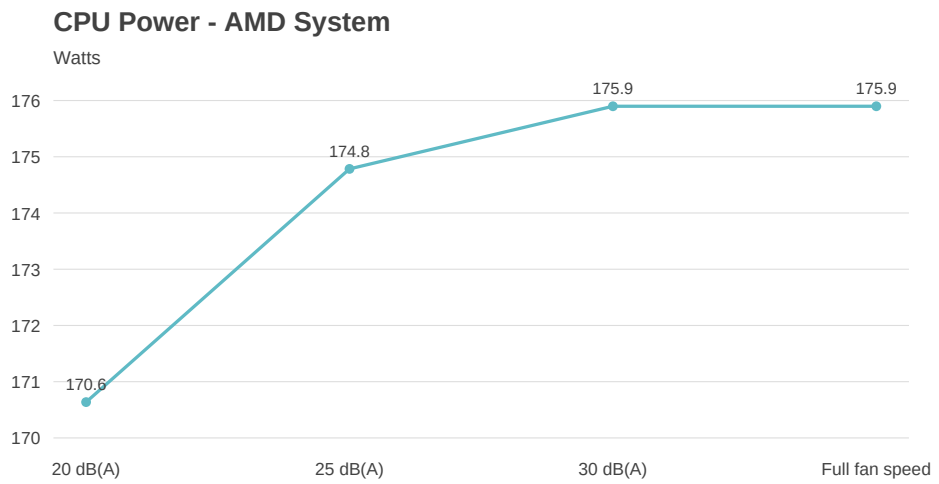
CPU Temperature



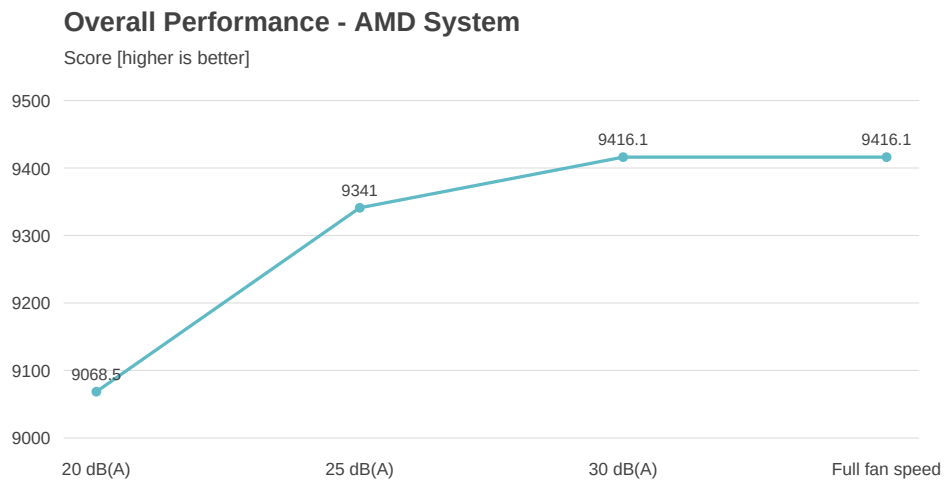
CPU Frequency



CPU Power



Overall Performance



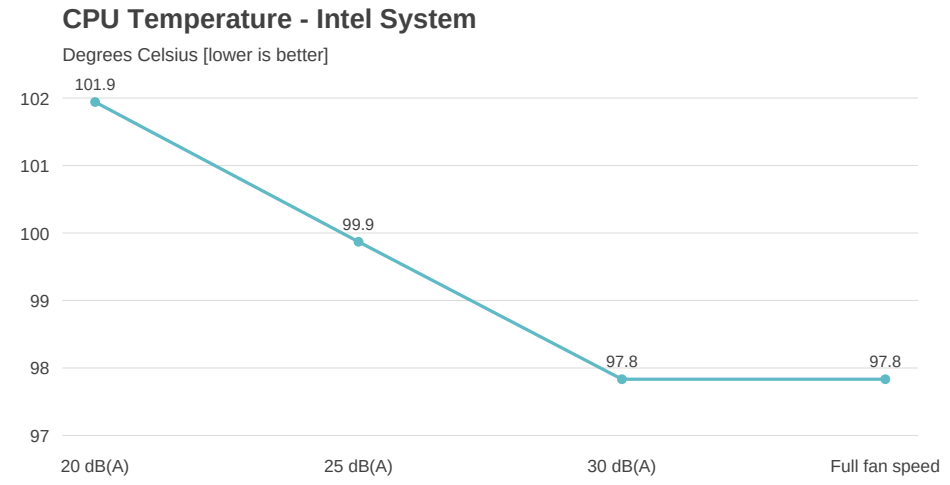
Intel System Test Results

Table

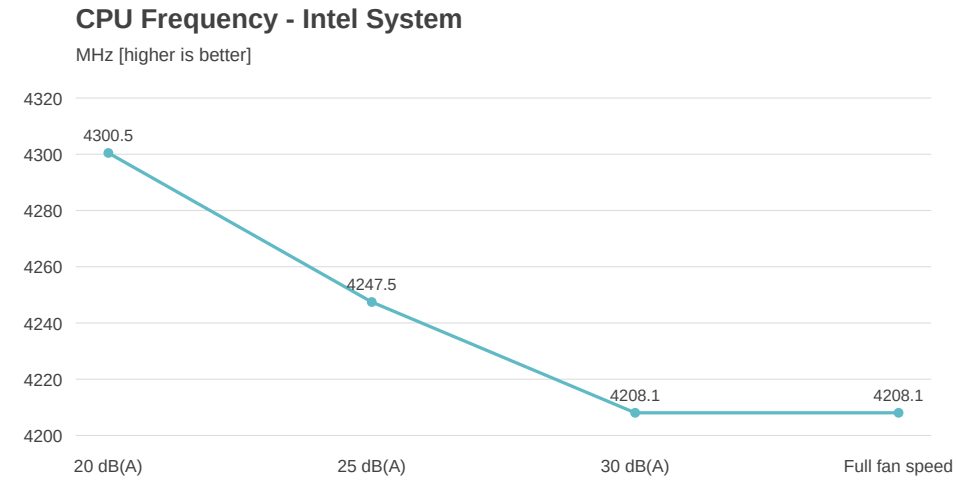
Condition	CPU Temperature (°C)	CPU Frequency (MHz)	CPU Power (W)	Overall Performance
20 dB(A)	101.9	4300	294.9	12441
25 dB(A)	99.9	4247	295.3	12558
30 dB(A)	97.8	4208	296.6	12756
Full fan speed	97.8	4208	296.6	12756

Graphs

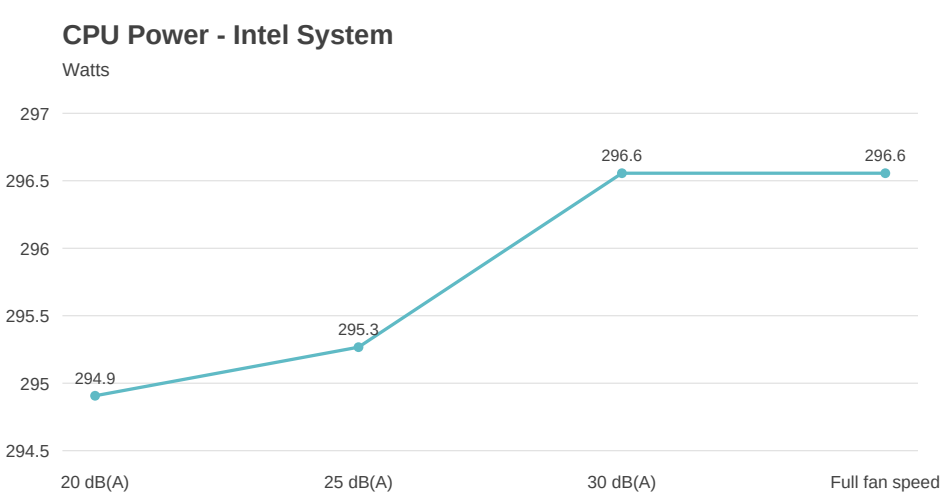
CPU Temperature



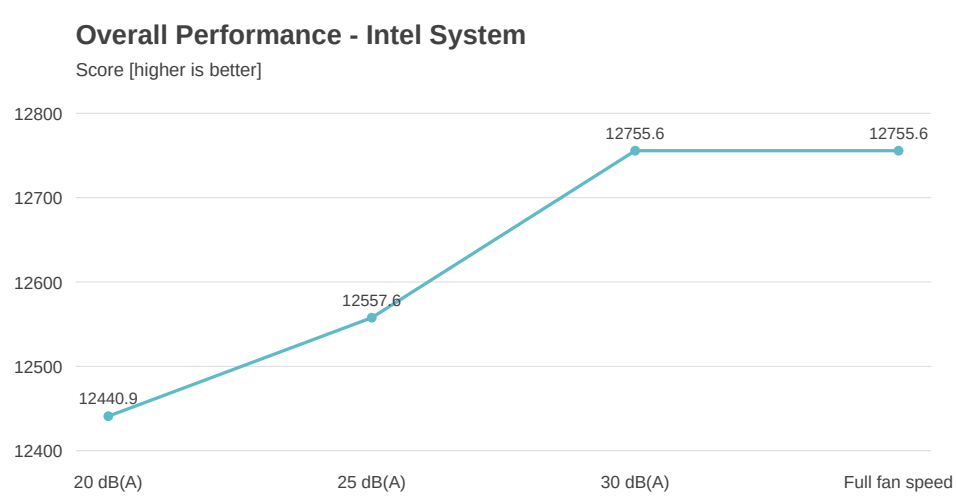
CPU Frequency



CPU Power

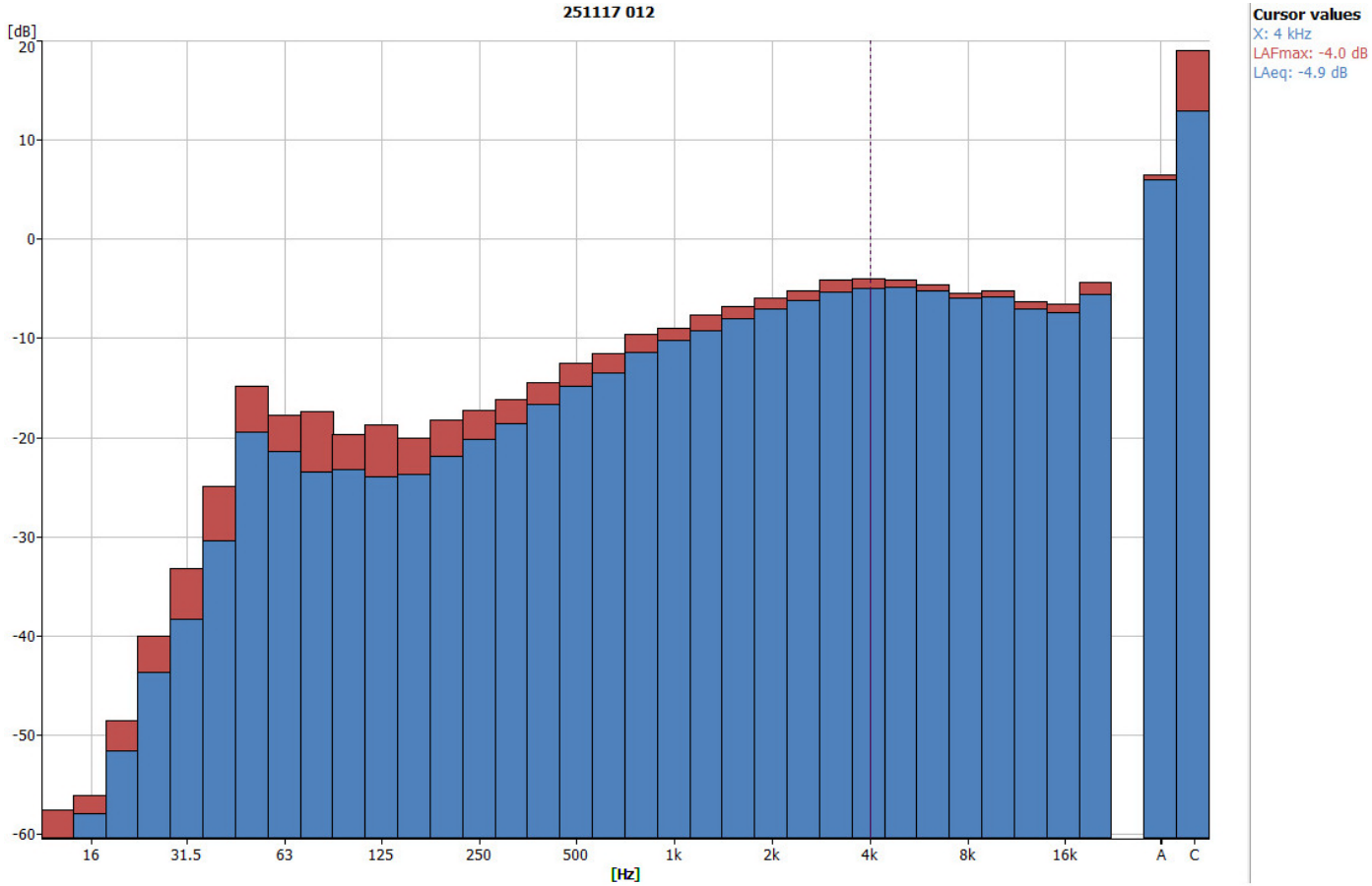


Overall Performance

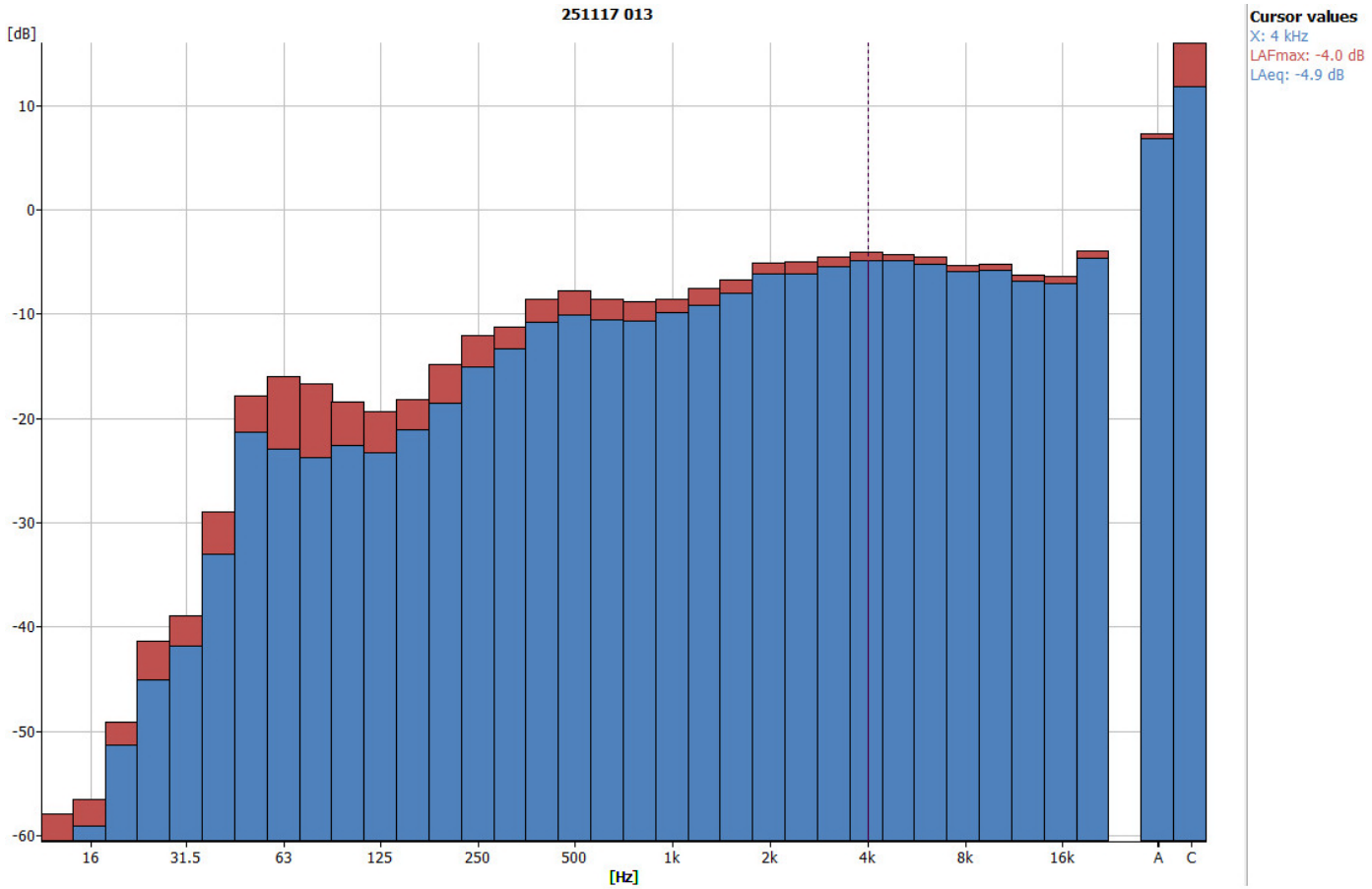


Frequency Plots

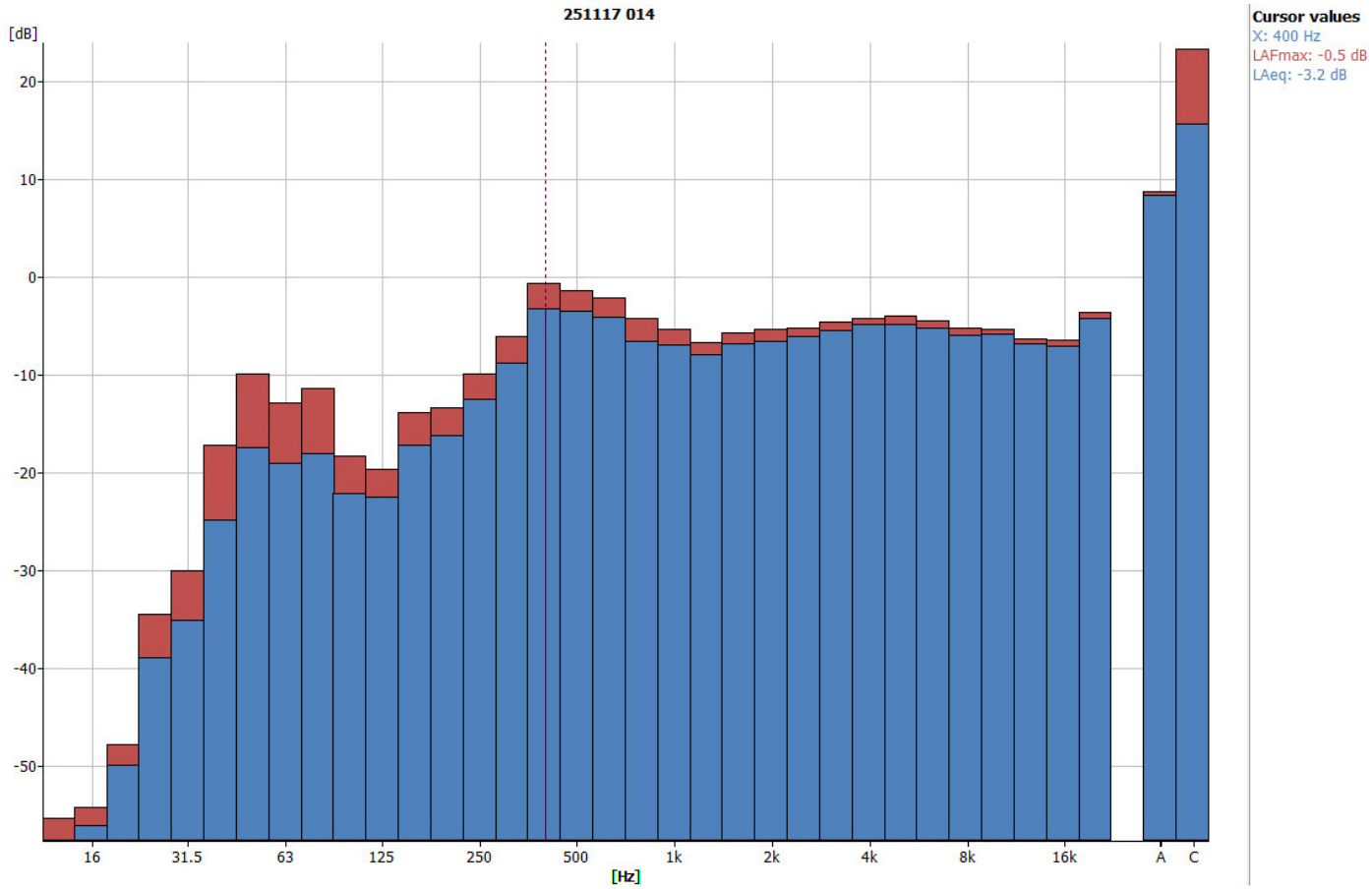
PWM 20%



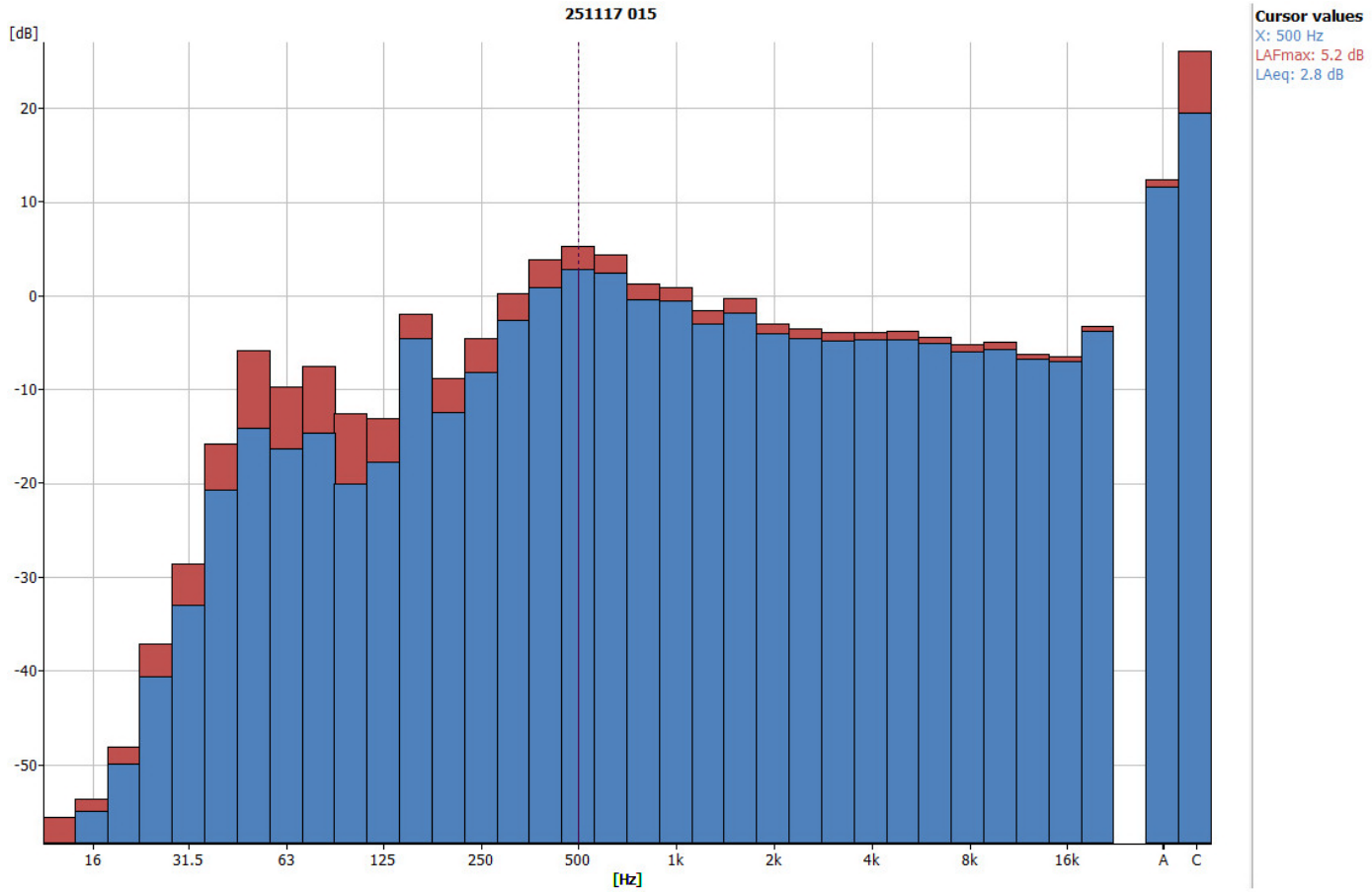
PWM 30%


251117 013
Cursor values
X: 4 kHz
LAFmax: -4.0 dB
LAeq: -4.9 dB
[dB]
10
0
-10
-20
-30
-40
-50
-60
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]

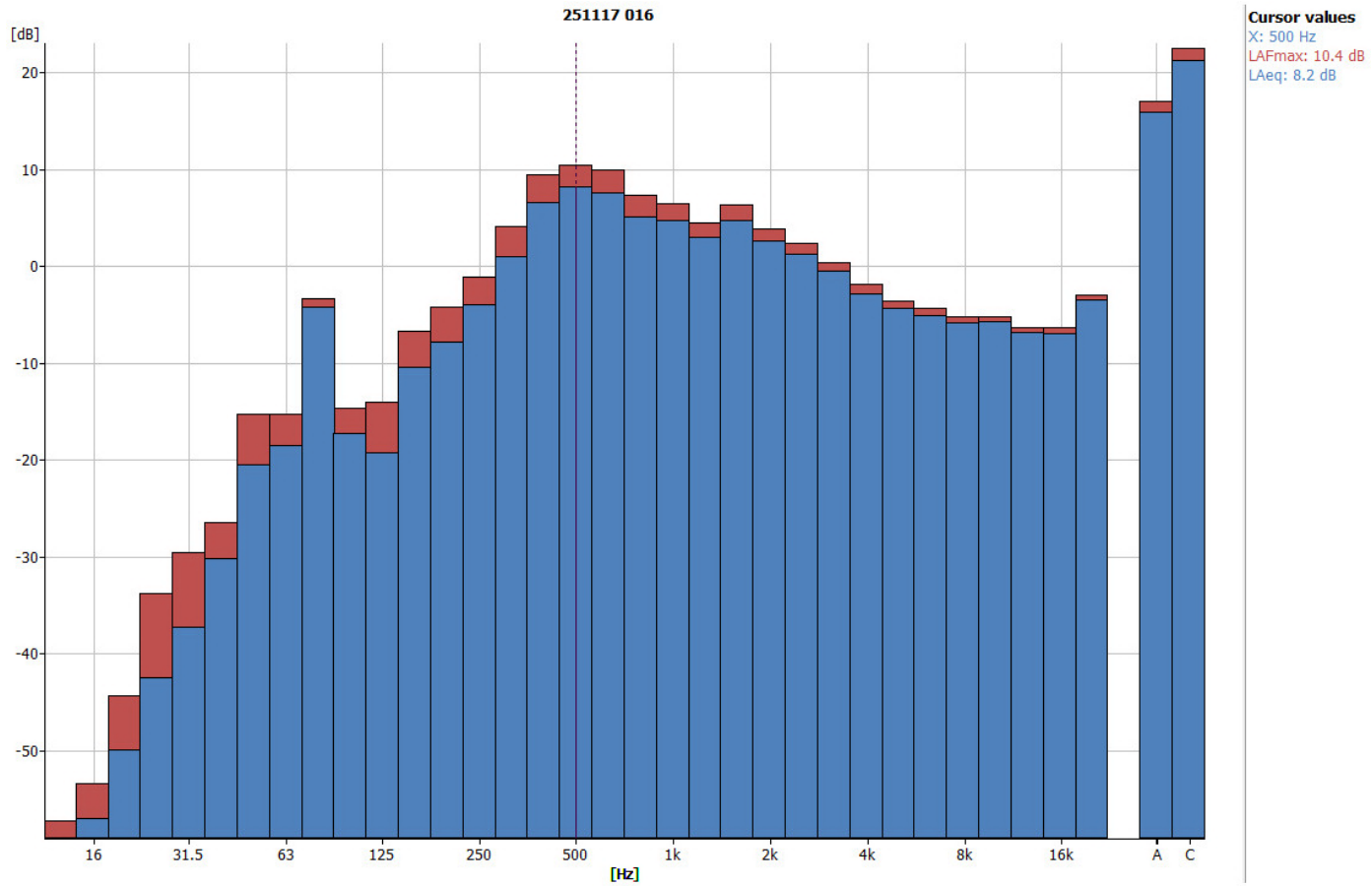
PWM 40%


251117 014
[dB]
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 400 Hz
LAFmax: -0.5 dB
LAeq: -3.2 dB

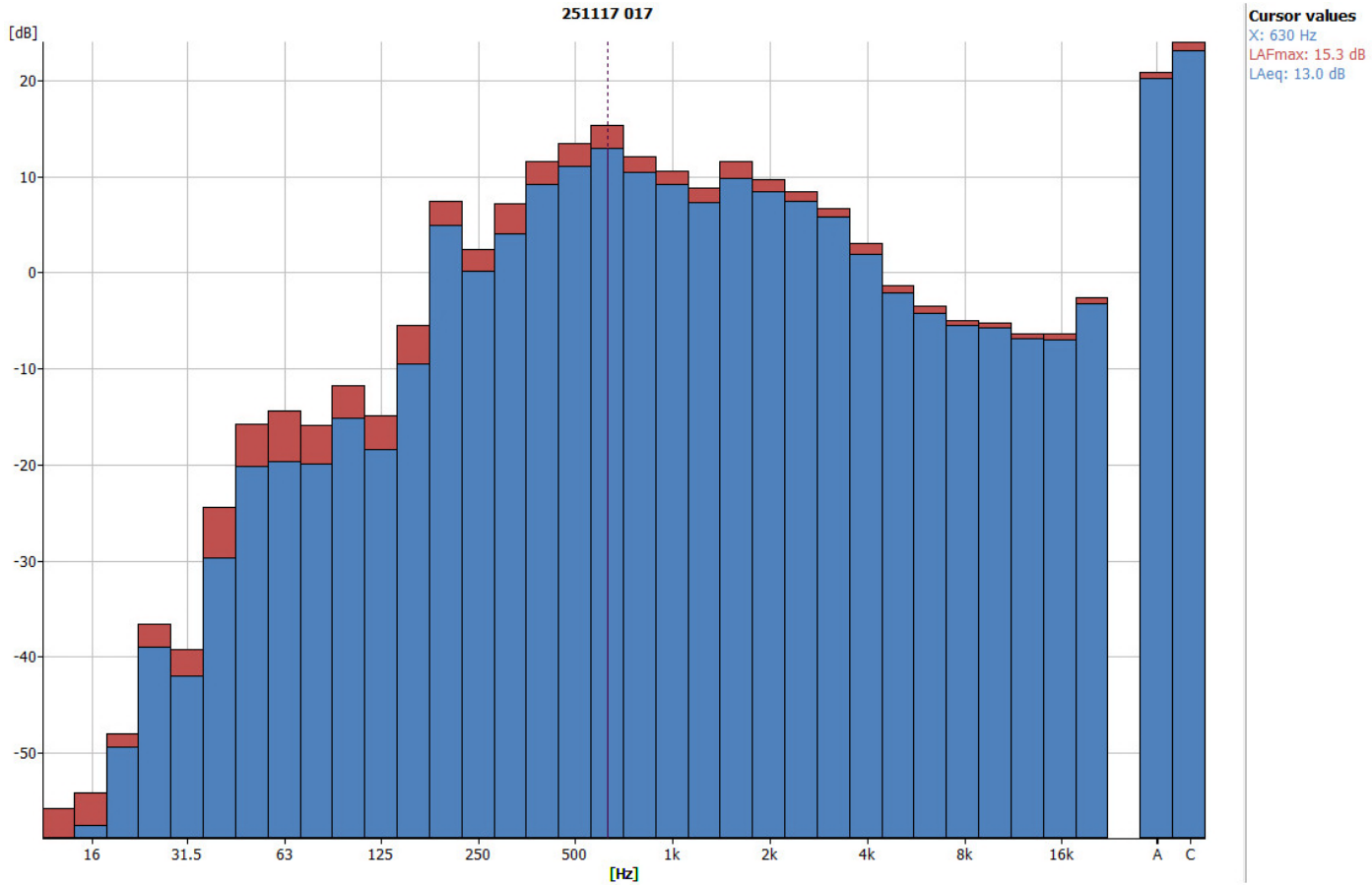
PWM 50%


251117 015
[dB]
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 500 Hz
LAFmax: 5.2 dB
LAeq: 2.8 dB

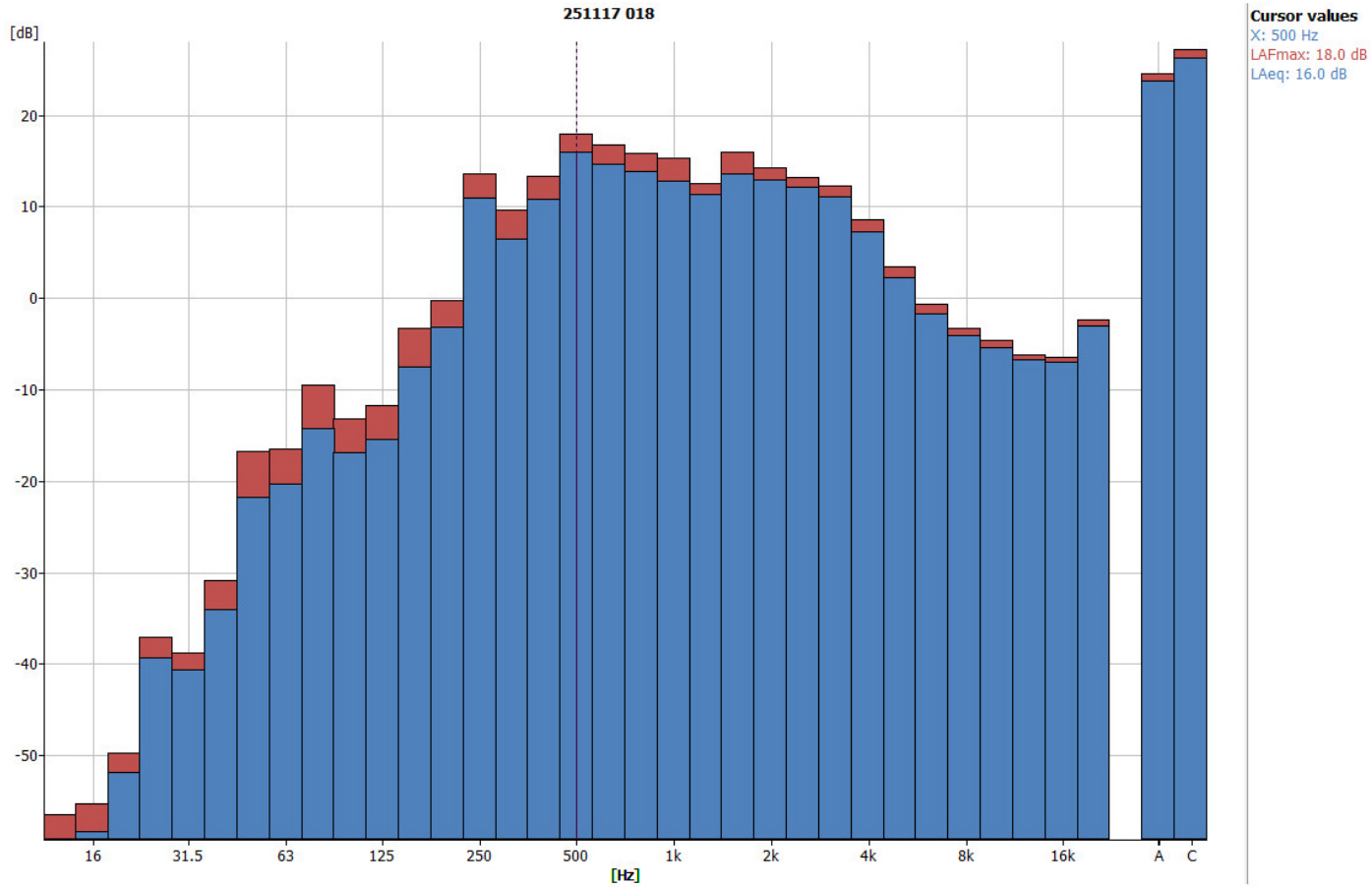
PWM 60%


251117 016
[dB]
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 500 Hz
LAFmax: 10.4 dB
LAeq: 8.2 dB

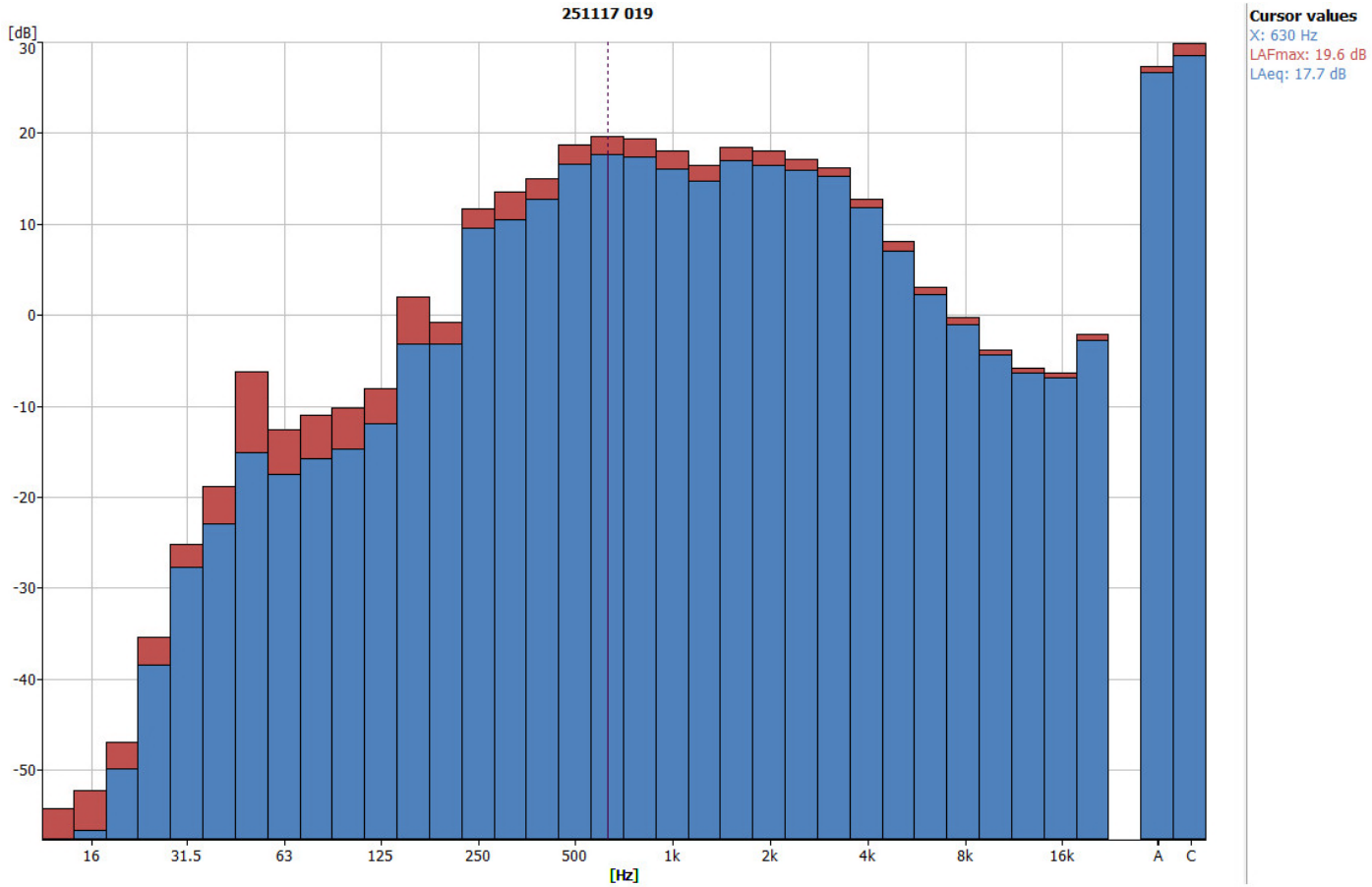
PWM 70%


251117 017
[dB]
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 630 Hz
LAFmax: 15.3 dB
LAeq: 13.0 dB

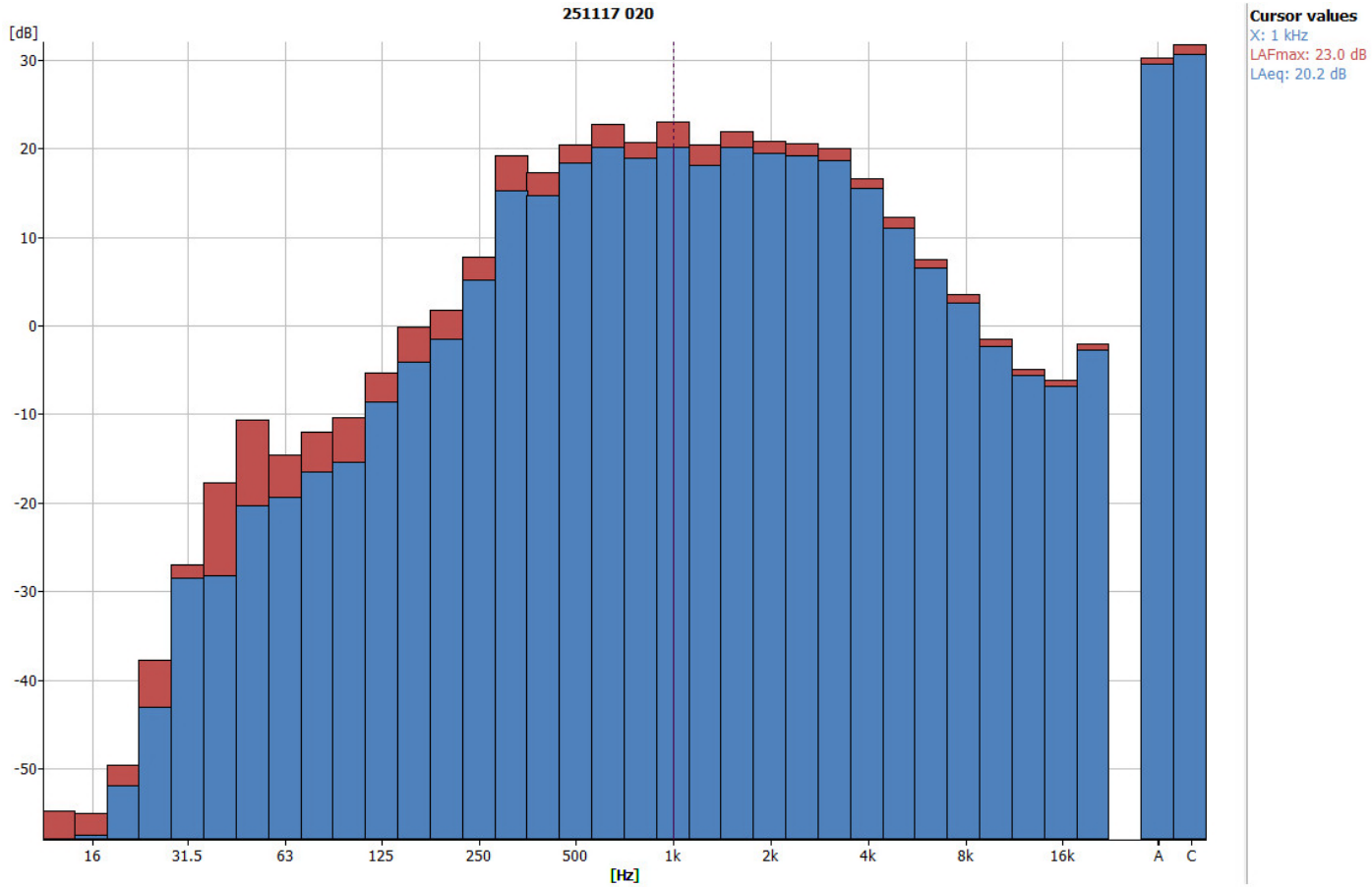
PWM 80%


251117 018
[dB]
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 500 Hz
LAFmax: 18.0 dB
LAeq: 16.0 dB

PWM 90%


251117 019
[dB]
30
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 630 Hz
LAFmax: 19.6 dB
LAeq: 17.7 dB

PWM 100%


251117 020
[dB]
30
20
10
0
-10
-20
-30
-40
-50
16
31.5
63
125
250
500
1k
2k
4k
8k
16k
A
C
[Hz]
Cursor values
X: 1 kHz
LAFmax: 23.0 dB
LAeq: 20.2 dB

be quiet! Pure Rock 3

