

12/14/2007

TOOL TEST SUMMARY SHEET

NAME OF DEVICE UNDER TEST (DUT)	Hammer Drill
TEST ENGINEER	Edward Zechmann
TEST DATE	12/1/2004
TEST DESCRIPTION	SWL
TEST LOCATION	UC ANECHOIC LAB
MANUFACTURER	Makita
MODEL	HP1501
SERIAL NUMBER	1016836G
YEAR MADE	
DIMENSIONS (inches)	LENGTH 11, WIDTH 8, HEIGHT 3
TECHNICAL SPECIFICATIONS	Smooth operation 1/2 inch drill
MOUNTING CONDITIONS	FREE-FREE, BUNGY CORDS
LOADING CONDITIONS	FULL SPEED NO LOAD
K1 (dBA)	0
K2 (dBA)	1.16
TEMPERATURE (FARHENHEIT, CELSIUS)	80 F, 27 C
HUMIDITY %	23
BAROMETRIC PRESSURE ("Hg, Pa)	29.33 "Hg, 99,310 Pa
TEST ENVIRONMENT	SEMI ANECHOIC, SEMI HEMISPHERICAL
MICROPHONE SET-UP	10-MICROPHONES
SURFACE RADIUS	2.00 meters
RATED POWER (WATTS)	600
ACTUAL INPUT POWER (WATTS)	190
VOLTAGE (VOLTS)	118
CURRENT (AMPS)	1.63
RATED RPM	2800
ACTUAL RPM	2685
SOUND POWER LEVEL (dBA)	93.3
SOUND POWER (WATTS) A-weighted	0.00213
SWL - k2 (dBA)	92.1
SWL - k2 (WATTS) A-weighted	0.00163
SOUND PRESSURE LEVEL - k2 @ (2m) (dB)	78.3
AT THE NOMINAL HEARING ZONE OF OPERATOR	
SOUND PRESSURE LEVEL (dBA)	84.9

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Directivity Study

DUT	Hammer Drill
Manufacturer	Makita
Model Number	HP1501
Serial Number	1016836G

A-weighted Sound Pressure Level

Mic #	Position1	Position2
	dBA	dBA
0	80.1	
1	76.9	
2	78.7	
3	78.9	
4	79.3	
5	79.8	
6	78.2	
7	80.1	
8	80.6	
9	79.4	
10	84.9	

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TOOL TEST DATA SHEET

DUT Hammer Drill
Manufacturer Makita
Model Number HP1501
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TEST CONDITIONS

Actual Power (watt) 190
Voltage (Volts) 118
Current (Amps) 1.63
Actual RPM 2685
Temperature (Deg. F) 80 F, 27 C
Humidity (%) 23
Baro. Press. (inch of Hg) 29.33 "Hg, 99,310 Pa

Measurement Data

Linear

	Position 1	Position 2
Sound Power Level (Watt)	0.00340	
Sound Power Level (dB)	95.3	
Sound Pressure Level (dB)	81.5	

A-Weighted

	Test 1	Test 2	Test 3	Test 4
Sound Power Level (Watt)	0.00212	0.00213	0.00214	0.00211
Sound Power Level (dBA)	93.3	93.3	93.3	93.3
Sound Pressure Level (dBA)	79.4	79.4	79.5	79.4

Calculations

Average Sound Power Level (Watt)	0.00213
Average Sound Power Level (dBA)	93.3
Average Sound Pressure Level (dBA)	79.4

Std. Deviation S.W.L 0.0247

0.95 Confidence 0.0263

Mean-K2 78.27