

JBL

ENGINEERING STANDARD	DATE EFFECTIVE 9 MAR 1992	NUMBER 1594
	DATE REVISED	PAGE 1 of 4

MODEL: 2450H

Frequency Response: See attached curve, page 2
Tolerance: $\pm 3/4$ dB 500 - 3,000
 ± 1.5 dB 3001 - 5,000
 ± 2.0 dB 5001 - 10,000
 ± 2.0 dB on env* > 10,000

Total Impedance Curve: See attached Curve, page 2

Motional Impedance Curve: See attached curve, page 2

High Frequency Curve: See attached curve, page 3

Applicable Thiele-Small Par.: See page 4

Voice Coil

DC Resistance: $4.1\Omega \pm 8\%$
Wire: Aluminum Ribbon
Size: $0.0056" \times 0.014"$
Configuration: 21.5 turns edge wound
Coil size: 3.904" ID 0.125" high
Wire length: 266" (6.75 meters)

Flux Density: 1.875 Tesla

Coupling Factor (BL): 12.7 N/Amp

Minimum Impedance: 6 Ω

Polarity: Positive to ^{black} ~~Black~~ gives Positive pressure output

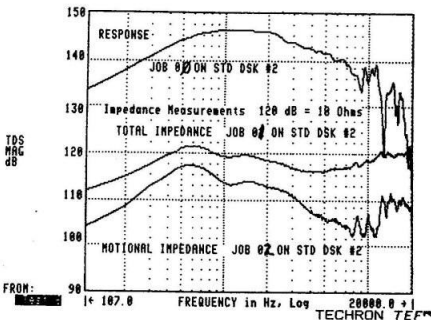
Power Test: 50 Watts (17.3 volts) pink noise 500-5000 Hz - 2 hours

Design Engr *J. S. ...*

* Envelope over and under peak excursions

MAGNITUDE vs FREQUENCY
 2450H ON 2" TUBE, 2 WATTS (4.00 VOLTS)

DATE: 9 MARCH 1992
 OPERATOR(s): FANCHER M. MURRAY
 LOCATION: JBL TEST LABORATORY NORTHRIDGE CA
 DATA SOURCE: From Current Test



***** TEST PARAMETERS *****

Receive Delay = 0.4020 mSecs or 0.4522 Feet

SWEEP:

Start Freq. = 107.0 Hz
 Stop Freq. = 20000.0 Hz
 Sweep Time = 3.97 Secs
 Bandwidth = 10.0 Hz
 Sweeprate = 5009.6 Hz/Sec

RESOLUTION:

Time = 2.00 mSecs
 Distance = 2.25 Feet
 Frequency = 500.0 Hz
 Best Freq. Resolution = Off

INPUT CONFIGURATION:

Non-Inv. Input = On
 Inv. Input = Off
 Integration = None

GAIN & GENERATOR:

Input Gain = 12 dB
 IF Gain = 12 dB
 Gen. Out. = 0.60 Volts RMS

CALIBRATION:

Input Sensitivity = 1.2500E-03 Volts RMS per Pascal
 0 dB Ref. Value = 2.0000E-05 Pascal
 Propagation Speed = 1125.00 Feet per Sec

REMARKS:

2450 EVALUATION FOR ENGINEERING DESIGN STD

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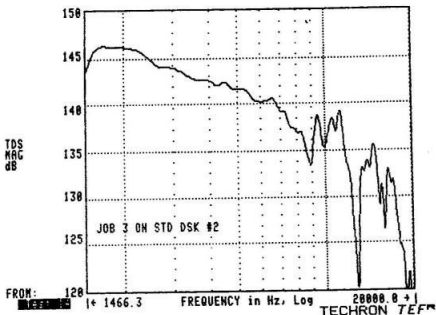
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MAGNITUDE vs FREQUENCY
2450H ON 2" TUBE, 2 WATTS (4.00 VOLTS)

DATE: 9 MARCH 1992
OPERATOR(s): FANCHER M. MURRAY
LOCATION: JBL TEST LABORATORY NORTHRIDGE CA
DATA SOURCE: From Current Test



***** TEST PARAMETERS *****
Receive Delay = 0.4020 mSecs or 0.4522 Feet

SWEEP:
Start Freq. = 1466.3 Hz
Stop Freq. = 20000.0 Hz
Sweep Time = 3.95 Secs
Bandwidth = 9.4 Hz
Sweep rate = 4696.5 Hz/Sec

RESOLUTION:
Time = 2.00 mSecs
Distance = 2.25 Feet
Frequency = 500.0 Hz
Best Freq. Resolution = Off

INPUT CONFIGURATION:
Non-Inv. Input = On
Inv. Input = Off
Integration = None

GAIN & GENERATOR:
Input Gain = 12 dB
IF Gain = 12 dB
Gen. Out. = 0.60 Volts RMS

CALIBRATION:
Input Sensitivity = 1.2500E-03 Volts RMS per Pascal
0 dB Ref. Value = 2.0000E-05 Pascal
Propagation Speed = 1125.00 Feet per Sec

REMARKS:
2450 EVALUATION FOR ENGINEERING DESIGN STD

APPLICABLE THIELE-SMALL PARAMETERS

F_s	568	hertz
R_e	4.1	ohms
R_{et}	7.1	ohms
S_d	78.54	square centimeters
X_{max}	0.5	millimeters
BL	12.7	newton+amp (tesla-meter) (volt-sec+meter)
M_a	3.2	gram
$\frac{(BL)^2}{2\pi R_e M_a}$	1956	hertz
L_e	0.120	millihenry
η_0	35	percent
Z_{in}	6	ohm
P_e	50	watts into Z_{in}