



## Directed Studio Subwoofers

### Directed Electronics, Inc. Woofer Parameter Sheet

11/26/2001	23104	23108	23124	23128
MODEL	3104	3108	3124	3128
<b>F<sub>s</sub> (Hz)</b>	<b>32.88</b>	<b>30.19</b>	<b>24.25</b>	<b>22.44</b>
<b>V<sub>as</sub> (cu.ft.)</b>	<b>0.91</b>	<b>1.06</b>	<b>2.75</b>	<b>3.25</b>
<b>V<sub>as</sub> (L)</b>	<b>25.90</b>	<b>30.07</b>	<b>78.02</b>	<b>91.99</b>
Q <sub>ms</sub>	4.12	3.66	4.71	3.55
Q <sub>es</sub>	0.52	0.49	0.41	0.38
<b>Q<sub>ts</sub></b>	<b>0.46</b>	<b>0.43</b>	<b>0.38</b>	<b>0.35</b>
Re (ohms)	3.79	6.80	3.79	6.8
Nominal Z (ohms)	4.00	8.00	4.00	8.00
Le (mh)				
<b>SPL (dB 1w@1m)</b>	<b>84.41</b>	<b>84.22</b>	<b>86.20</b>	<b>86.23</b>
<b>SPL (dB 2.83V@1m)</b>	<b>87.66</b>	<b>84.93</b>	<b>89.45</b>	<b>86.95</b>
XMAX (inches)	0.60	0.55	0.50	0.55
XMAX (mm)	15.18	13.89	12.71	13.95
PE (watts) RMS	400	400	450	450
Peak power (watts)	500	500	600	600
Mmd (grams)	146.00	149.00	176.00	174.00
Mms (grams)	153.00	156.00	188.00	186.00
Cms (mm/N)	0.161	0.178	0.280	0.277
BI (Tesla-M)	15.23	20.30	14.46	21.30
EBP	64	62	59	59
Sd (sq. m.)	0.0346	0.0346	0.0491	0.0491
Sd (sq. ft.)	0.3724	0.3724	0.5285	0.5285
Speaker displacement (cu. Ft.)	0.08	0.08	0.11	0.11
Sealed box (cu. ft.) low freq.	0.7	0.64	1.15	1.08
Avg. sealed box (cu. ft.)	0.45	0.43	0.80	0.77
Avg. sealed box H x W x D (in.) *	15.75x9.75x6	15.5x9.6x6	19x11.75x7	18.75x11.6x7
Avg. box F <sub>3</sub> (Hz)	51	50	45	46.00
Avg. box F <sub>b</sub> (Hz)	57	56	51	51
Avg. box Q	0.8	1	0.8	0.08
Sealed box (cu. ft.)SPL	0.32	0.31	0.47	0.45
Vented box (cu.ft.)	1.00	1.00	1.00	1.00
Vented box H x W x D (in.) *	20.25x12.75x7.75	20.5x12.75x7.75	21.25x13.25x8.25	21.5x13.25x8
Port tuning freq. (Hz)	32	30	33	32
Port diameter round (inches)	3	3	4.0	4.0
Port opening square (inches)	7.07	7.07	12.57	12.57
Port length (inches)	16.3	17.7	26.9	28.4
<b>Other parameters</b>	<b>10"</b>	<b>10"</b>	<b>12"</b>	<b>12"</b>
Magnet size (oz.)	100	100	100	100
Magnet housing dia.	6.30	6.30	6.30	6.30
Voice coil dia. (in)	2.50	2.50	2.50	2.50
Back-plate vent dia. (in.)	0.75	0.75	0.75	0.75
Mounting depth (in.)	5.5	5.5	6.2	6.2

Total depth	6.2	6.2	6.9	6.9
Mounting hole dia. (in.)	9.1	9.1	11.0	11.0
Frame dia. (in.)	10.7	10.7	12.6	12.6
Frequency range (Hz)	25-2500	25-2500	20-2500	20-2500

Specifications are subject to change without notice

\* Box dementions include speaker and port displacement area and represent total internal volume and material is 3/4"

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