Subject: Re: Interesting New Line Array Design
Posted by selahaudio on Tue, 29 Sep 2009 14:38:44 GMT
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darkmoebius2 wrote on Tue, 29 September 2009 02:13selahaudio wrote on Tue, 29 September 2009 00:19Very good driver! Yep, I think I found a good candidate to start with. At least, order a couple to do some of my own FR and listening tests with. (really low sensitivity, though - 80dB@1kHz/1W)

BTW, I found a post by Zaph on HT Guide forum where he mentions that it looks and tests exactly like the Aura NS3-193-8A(.pdf spec sheeet). And it sure looks like he is right.

Nominal Diameter . . . . . 3 inches (70 mm)
Nominal Impedance (Z) . . . . . 8 Ohms
Sensitivity, 1W/1m (E) . . . . . 80 dB @ 1 kHz
Power Capacity, RMS (Pe) . . . . . 20 W
Power Capacity, Peak . . . . . 80 W
Frequency Range (-10dB) . . . . . Fo - 15 kHz
Minimum Impedance . . . . . 8 ohms
Voice Coil Diameter . . . . . 19.3 mm
Voice Coil Winding Length (h) . . . . . 6.5 mm
Voice Coil Number of Layers (n) 4
Voice Coil Former Material . . . . . Kapton
Voice Coil Wire Composition . . . . . CCAW
Magnetic Material . . . . . Neodymium radial
Stray Flux Shielding . . . . . Inherent
Magnetic Gap Depth (He) . . . . . 12.7 mm
Cone Material . . . . . Aluminum
Surround Material . . . . . Rubber
Polarity, Outward Motion . . . . . Positive voltage on (+) tab
Net Weight . . . . . 216 g
Maximum Excursion . . . . . 19 mm peak to peak

Thiele / Small Parameters

Resonant Frequency (Fo) - Fs . . . . . 80 Hertz
Voice Coil DC Resistance - Re . . . . . 7.6 Ohms
Total Q - Qts 0.67
Mechanical Q - Qms 8.0
Electrical Q - Qes . . . . . 0..73
Equivalent Volume of Air - Vas . . . . . 1.25 L
Radiating Piston Area - Sd . . . . . 31 cm 2
Electrical / Mechanical Parameters
Flux Density x Length - BL . . . . . 4.7 Tesla-meters
Compliance - Cms . . . . . 920 µm/N
Total Mass - Mms . . . . . 4.3 grams
Xmax . . . . . 9.5 mm peak to peak

My question, though, is that with that extremely low sensitivity, will 24 of them in an array be able to move enough air for moderately loud listening before distorting badly? Check out the distortion plot on the spec sheet.

Also, how about finding tweeters/ribbons that won't need a lot of padding down?

The gain from 24 of them will give you good sensitivity so don't worry about the 80db spec. I've used the Aura version (they may make these too) and it's exceptionally good.