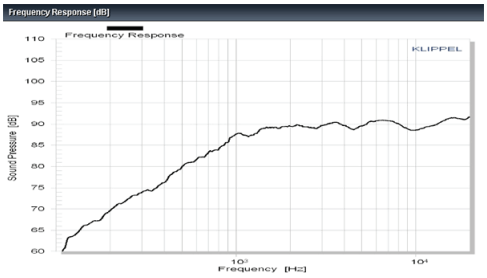
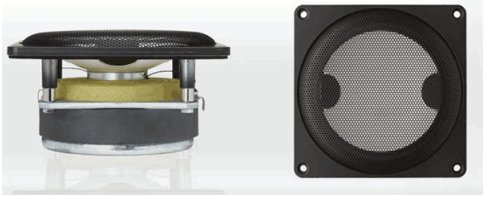
Tweeter (T)

Accuton C30-6-023 1.2" Ceramic Dome Tweeter

Frequency Range	1.8 kHz - 25 kHz
Impedance	6.3 Ω
Sensitivity	89.5 dB lp 2.83V/1m
Resonance Frequency	570 Hz

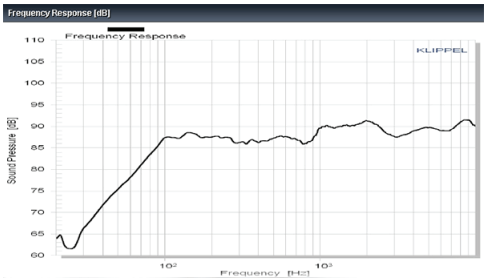


Midrange (M)



Accuton C90-6-078 5" Ceramic Dome Midrange

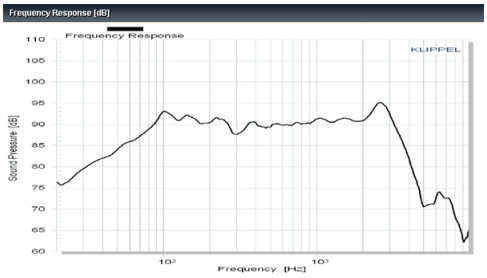
Frequency Range	200 Hz - 5 kHz
Impedance	6.4 Ω
Sensitivity	88.0 dB lp 2.83V/1m
Resonance Frequency	100 Hz



Woofer (W)

Accuton C220-6-221 8" Ceramic Cone Woofer

Frequency Range	32 Hz - 2 kHz
Impedance	5.8 Ω
Sensitivity	90.0 dB lp 2.83V/1m
Resonance Frequency	28 Hz



$$\beta_1 = f_{W(max)} - f_{M(min)} = 2\text{ kHz} - 200\text{ Hz} = 1.8\text{ kHz} \qquad f_{c1} = f_{M(min)} + 0.25\beta_1 = 650\text{ Hz}$$

$$\beta_2 = f_{M(max)} - f_{T(min)} = 5\text{ kHz} - 1.8\text{ kHz} = 3.2\text{ kHz} \qquad f_{c2} = f_{T(min)} + 0.75\beta_2 = 4.2\text{ kHz}$$

$f_{c2} \geq 4$ kHz PASS

$f_{c1} \geq 500$ Hz PASS

$\frac{f_{c2}}{f_{sT}} \geq 3$ PASS

$\frac{f_{c2}}{f_{c1}} \geq 6$ PASS

$\frac{f_{c1}}{f_{sW}} \geq 3$ PASS

$\frac{f_{c2}}{f_{sT}} = 7.368 \quad f_{sT} = 570\text{ Hz}$

$\frac{f_{c2}}{f_{c1}} = 6.462$

$\frac{f_{c1}}{f_{sW}} = 23.214 \quad f_{sW} = 28\text{ Hz}$

$C1 = \frac{1}{2\pi f_{c2} Z_T} \quad Z_T = 6.3\ \Omega$

$C1 = 6.015\ \mu\text{F}$

$L1 = \frac{Z_M}{2\pi f_{c2}} \quad Z_M = 6.3\ \Omega$

$L1 = 242.52\ \mu\text{H}$

$L2 = \frac{Z_W}{2\pi f_{c1}} \quad Z_W = 5.8\ \Omega$

$L2 = 1.420\text{ mH}$

$C2 = \frac{1}{2\pi f_{c1} Z_M} \quad Z_M = 6.4\ \Omega$

$C2 = 38.258\ \mu\text{F}$