

F(ratio), is the relation between the drivers FS and QT. $F(\text{ratio}) = fs/Qts$. When F(ratio) is low it indicates that the drivers damping is low, or with other words Qt is relative high. And when F(ratio) is high it tells that the drivers damping is high, meaning a relative low QT. Looking at various data sheets, figures between 40-120 is very normal.

A : When F(ratio) is between 40-70 the optimal use of the driver is Closed boxes.

B : When F(ratio) is between 70-85 the use of the driver can be closed boxes or vented boxes.

C : When F(ratio) is between 85-110 the optimal use of the driver is vented boxes.

D : When F(ratio) gets higher than 120-130 it is a highly damped driver, and it must be vented to get response in the low end

I have made the following suggestions according to get a flat response, - as low as possible. Meaning in practise, - I do not recommend the drivers to be tuned lower than the drivers resonance frequency. For each driver I also suggest some cross-over points based on my own experiences and general knowledge about how the drivers are used by other costumers. The type of cross-over must be an individual choise for each driver, but I have mostly used 12 dB oct types.

850528 - 5"TV

F(ratio) for this driver is 149 and this indicates that the damping is high.

The best way to use this driver is in a vented box with the following suggested box sizes.

10 ltr box. 1 port. Diameter 40 mm. Lenght 65 mm. Tuning freq 62 Hz. Response, - 3 dB appr at 60 Hz.

10 ltr box. 1 port. Diameter 55 mm. Lenght 140mm. Tuning freq 62 Hz. Response, - 3 dB appr at 60 Hz.

5 ltr box. 1 port. Diameter 30 mm. Lenght 50 mm. Tuning freq 78 Hz. Response, - 3 dB appr at 80 Hz.

For small satellites it would be best to use the driver in a closed box. Box sizes from 3-6 ltr will be suitable.

Cross-over freq between 1500-4500 Hz is recommendable for this model.

850488 - 5" Cast

F(ratio) for this driver is 172 and this indicates that the damping is high.

The best way to use this driver is in a vented box with the following suggested box sizes.

10 ltr box. 1 port. Diameter 40 mm. Lenght 55 mm. Tuning freq 65 Hz. Response, - 3 dB appr at 62 Hz.

10 ltr box. 1 port. Diameter 55 mm. Lenght 120 mm. Tuning freq 65 Hz. Response, - 3 dB appr at 62 Hz.

5 ltr box. 1 port. Diameter 30 mm. Lenght 45 mm. Tuning freq 78 Hz. Response, - 3 dB appr at 85 Hz.

For small satellites it would be best to use the driver in a closed box. Box sizes from 3-6 ltr will be suitable.

Cross-over freq between 1500-4500 Hz is recommendable for this model.

831974 - 5" Polly'

F(ratio) for this driver is 156, and this indicates that the damping is high.

The best way to use this driver is in a vented box with the following suggested box sizes.

10 ltr box. 1 port. Diameter 40 mm. Lenght 40 mm. Tuning freq 72 Hz. Response, - 3 dB appr at 70 Hz.

10 ltr box. 1 port. Diameter 55 mm. Lenght 95 mm. Tuning freq 72 Hz. Response, - 3 dB appr at 70 Hz.

5 ltr box. 1 port. Diameter 40 mm. Lenght 80 mm. Tuning freq 82 Hz. Response, - 3 dB appr at 85 Hz.

For small satellites it would be best to use closed boxes. Box sizes from 3-6 ltr will be suitable.

Cross-over freq between 1500-4000 Hz is recommendable for this model.

831975 - 6.5" Polly' TV

F(ratio) for this driver is 107, and the driver is very suitable for vented boxes.

25 ltr box. 1 port. Diameter 70 mm. Lenght 140 mm. Tuning freq 48 Hz. Response, - 3 dB appr at 48 Hz.

25 ltr box. 1 port. Diameter 55 mm. Lenght 80 mm. Tuning freq 48 Hz. Response, - 3 dB appr at 48 Hz.

15 ltr box. 1 port. Diameter 40 mm. Lenght 50 mm. Tuning freq 55 Hz. Response, - 3 dB appr at 55 Hz.

15 ltr box. 1 port. Diameter 55 mm. Lenght 120mm. Tuning freq 55 Hz. Response, - 3 dB appr at 55 Hz.

The driver can also be used into parrallel configurations for larger boxes.

Cross-over freq between 1500-3000 Hz is recommendable for this model.

831916 - 6.5" Polly'

F(ratio) for this driver is 98, and the driver is very suitable for vented boxes.

25 ltr box. 1 port. Diameter 70 mm. Lenght 120 mm. Tuning freq 50 Hz. Response, - 3 dB appr at 48 Hz.

25 ltr box. 1 port. Diameter 55 mm. Lenght 70 mm. Tuning freq 50 Hz. Response, - 3 dB appr at 48 Hz.

15 ltr box. 1 port. Diameter 70 mm. Lenght 40 mm. Tuning freq 55 Hz. Response, - 3 dB appr at 55 Hz.

15 ltr box. 1 port. Diameter 55 mm. Lenght 110 mm. Tuning freq 55 Hz. Response, - 3 dB appr at 55 Hz.

The driver can also be used into parrallel configurations for larger boxes.

Cross-over freq from 1500 and up to 4000 Hz is recommendable for this model.

850122 - 6.5" Cast

F(ratio) for this driver is 83, and the the driver is can work in vented boxes as well closed boxes.

30 ltr box. 1 port. Diameter 70 mm. Lenght 160 mm. Tuning freq 42 Hz. Response, - 3 dB appr at 42 Hz.

30 ltr box. 1 port. Diameter 55 mm. Lenght 90 mm. Tuning freq 42 Hz. Response, - 3 dB appr at 42 Hz.

20 ltr box. 1 port. Diameter 55 mm. Lenght 110 mm. Tuning freq 48 Hz. Response, - 3 dB appr at 48 Hz.

15 ltr box. Closed. Qt in box = 0.75 Response, - 3 dB appr at 64 Hz.

10 ltr box. Closed. Qt in box = 0.85 Response, - 3 dB appr at 73 Hz.

The driver can also be used into parrallel configurations for larger boxes.

Cross-over freq from 1500-4000 Hz is recommendable for this model.

Driver: 182 WR 33 102 SD AL CU PH DBD LS 8 ohm. CAT. NR. 850467.

F(ratio) for this driver is 102, and the driver is very suitable for vented boxes.

25 ltr box. 1 port. Diameter 70 mm. Length 145 mm. Tuning freq 45 Hz. Response, - 3 dB appr at 48 Hz.
25 ltr box. 1 port. Diameter 55 mm. Length 80 mm. Tuning freq 45 Hz. Response, - 3 dB appr at 48 Hz.
15 ltr box. 1 port. Diameter 55 mm. Length 110 mm. Tuning freq 52 Hz. Response, - 3 dB appr at 55 Hz.
15 ltr box. 1 port. Diameter 40 mm. Length 50 mm. Tuning freq 52 Hz. Response, - 3 dB appr at 55 Hz.

The driver can also be used in parallel configurations for larger boxes.
Cross-over freq from 1500-4000 Hz is recommendable for this model.

Driver: 217 WR 33 102 SD AL 8 ohm. CAT. NR. 850136.

F(ratio) for this driver is 99, and the driver is very suitable for vented boxes.

25 ltr box. 1 port. Diameter 70 mm. Length 120 mm. Tuning freq 50 Hz. Response, - 3 dB appr at 52 Hz.
40 ltr box. 1 port. Diameter 70 mm. Length 85 mm. Tuning freq 45 Hz. Response, - 3 dB appr at 45 Hz.
60 ltr box. 1 port. Diameter 70 mm. Length 65 mm. Tuning freq 40 Hz. Response, - 3 dB appr at 40 Hz.

Cross-over freq from 1500-3000 Hz is recommendable for this model.

Driver: 205 WR 33 102 SD AL 8 ohm. CAT. NR. 850490.

F(ratio) for this driver is 102, and the driver is very suitable for vented boxes.

35 ltr box. 1 port. Diameter 70 mm. Length 75 mm. Tuning freq 50 Hz. Response, - 3 dB appr at 50 Hz.
55 ltr box. 1 port. Diameter 70 mm. Length 50 mm. Tuning freq 45 Hz. Response, - 3 dB appr at 45 Hz.
70 ltr box. 1 port. Diameter 70 mm. Length 50 mm. Tuning freq 40 Hz. Response, - 3 dB appr at 40 Hz.

Cross-over freq from 1500-3000 Hz is recommendable for this model.