



Commercial audio amplifiers measured data

COLLECTION

Rev. 2

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EQUIPMENT AND SPECIFICATIONS

All amplifiers listed were tested in the same conditions, with the same room temperature, with the same resistive load and same instrumentation.

Instrumentation list:

- Spectrum analyzer: QuantAsylum QA401 with sine generator
- Oscilloscope: Hantek DS05102P

Explanation of measurement:

[] Total Harmonic Distortion (THD)

Measures the accuracy of an amplifier in amplifying a given signal to a given power on a given load. The lower the distortion, the more accurate the amplifier, the higher the sound quality.

[] Damping factor


Indicates the control the amplifier has over speaker excursion. The greater the damping factor, the greater the control. More control means more precision and sonic quality.

[] Slew rate

It allows to understand how the amplifier behaves with fast transients. The higher the slew rate, the greater the amplifier's ability to reproduce higher frequencies. Too low slew rates reduce the bandwidth of an amplifier. The greater the slew, the greater the accuracy at high frequencies and the greater the correction current that the amplifier is able to deliver to the load.

[] Signal to Noise Ratio (SNR)

Indicates the floor noise relative to the output signal. The less noise, the higher the ratio. Higher the ratio means quieter amps.

Amplifier name	Photo
AudioSystem – F2 190	

Parameter name	Value
Type	Car amplifier
Amplifier class	AB
Test voltage	+ 12 Vdc
Standby current	0.41 A
Amplifier test gain	+ 32 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.037 %
THD+N @ 20 kHz 50W 8 Ohm	0.143 %
Intermodulation THD 11 signals 8 Ohm	0.056 %
SNR @ 1 kHz 50 W 8 Ohm	89 dB
Slew rate	51.73 V/uS
Output impedance @ 50 Hz 8 Ohm	0.022 Ohm
Damping factor @ 50 Hz 8 Ohm	360
Frequency response @ - 3 dB	15 Hz - 350 kHz
Power bandwidth @ 100W 8 Ohm	137 kHz

Amplifier name	Photo
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Audison – SRX 2



Parameter name	Value
Type	Car amplifier
Amplifier class	AB
Test voltage	+ 12 Vdc
Standby current	0.45 A
Amplifier test gain	+ 29 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.026 %
THD+N @ 20 kHz 50W 8 Ohm	0.070 %
Intermodulation THD 11 signals 8 Ohm	0.120 %
SNR @ 1 kHz 50 W 8 Ohm	75 dB
Slew rate	8.7 V/uS
Output impedance @ 50 Hz 8 Ohm	0.017 Ohm
Damping factor @ 50 Hz 8 Ohm	470
Frequency response @ - 3 dB	DC - 55 kHz
Power bandwidth @ 100W 8 Ohm	23 kHz

Amplifier name

Photo

BassFace – DB 4.2



Parameter name	Value
Type	Car amplifier
Amplifier class	D
Test voltage	+ 12 Vdc
Standby current	0.45 A
Amplifier test gain	+ 28 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.24 %
THD+N @ 20 kHz 50W 8 Ohm	1.71 %
Intermodulation THD 11 signals 8 Ohm	1.02 %
SNR @ 1 kHz 50 W 8 Ohm	73 dB
Slew rate	7.7 V/uS
Output impedance @ 50 Hz 8 Ohm	0.40 Ohm
Damping factor @ 50 Hz 8 Ohm	20
Frequency response @ - 3 dB	20 Hz - 50 kHz
Power bandwidth @ 100W 8 Ohm	20 kHz

Amplifier name	Photo
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Bose – FreeSpace AmPlus 100

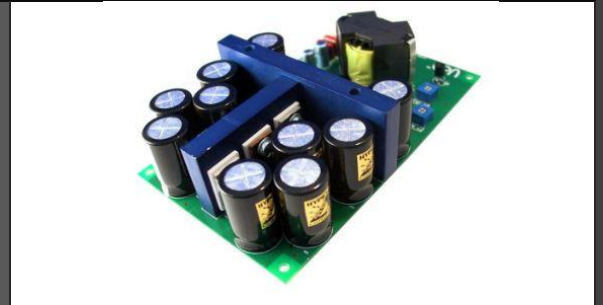


Parameter name	Value
Type	Pro amplifier
Amplifier class	AB
Test voltage	+ - 35 Vdc
Standby current	0.09 A
Amplifier test gain	+ 23 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.06 %
THD+N @ 20 kHz 50W 8 Ohm	0.22 %
Intermodulation THD 11 signals 8 Ohm	0.15 %
SNR @ 1 kHz 50 W 8 Ohm	86 dB
Slew rate	-- V/uS
Output impedance @ 50 Hz 8 Ohm	0.08 Ohm
Damping factor @ 50 Hz 8 Ohm	100
Frequency response @ - 3 dB	40 Hz - 35 kHz
Power bandwidth @ 100W 8 Ohm	-- kHz

Amplifier name

Photo

Hypex – UcD 700 HG



Parameter name	Value
Type	Home amplifier
Amplifier class	D
Test voltage	+ - 80 Vdc
Standby current	0.01 A
Amplifier test gain	+ 26 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.029 %
THD+N @ 20 kHz 50W 8 Ohm	0.031 %
Intermodulation THD 11 signals 8 Ohm	0.014 %
SNR @ 1 kHz 50 W 8 Ohm	89 dB
Slew rate	13 V/uS
Output impedance @ 50 Hz 8 Ohm	0.007 Ohm
Damping factor @ 50 Hz 8 Ohm	1200
Frequency response @ - 3 dB	DC - 55 kHz
Power bandwidth @ 100W 8 Ohm	34 kHz

Amplifier name	Photo
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Kenwood – KAC629S



Parameter name	Value
Type	Car amplifier
Amplifier class	AB
Test voltage	+ 12 Vdc
Standby current	0.33 A
Amplifier test gain	+ 40 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.013 %
THD+N @ 20 kHz 50W 8 Ohm	0.040 %
Intermodulation THD 11 signals 8 Ohm	0.022 %
SNR @ 1 kHz 50 W 8 Ohm	78 dB
Slew rate	7.3 V/uS
Output impedance @ 50 Hz 8 Ohm	0.075 Ohm
Damping factor @ 50 Hz 8 Ohm	110
Frequency response @ - 3 dB	DC - 70 kHz
Power bandwidth @ 100W 8 Ohm	19 kHz

Amplifier name

Photo

LJM – L20

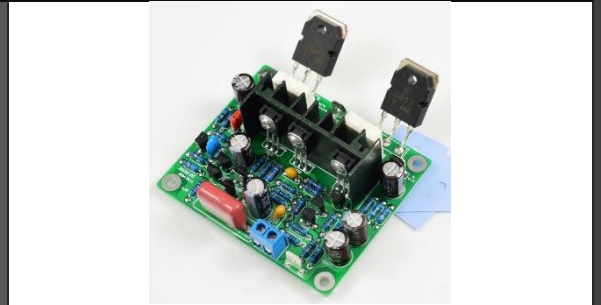


Parameter name	Value
Type	Home amplifier
Amplifier class	AB
Test voltage	+ - 30 Vdc
Standby current	0.01 A
Amplifier test gain	+ 34 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.039 %
THD+N @ 20 kHz 50W 8 Ohm	0.170 %
Intermodulation THD 11 signals 8 Ohm	0.070 %
SNR @ 1 kHz 50 W 8 Ohm	97 dB
Slew rate	29 V/uS
Output impedance @ 50 Hz 8 Ohm	0.008 Ohm
Damping factor @ 50 Hz 8 Ohm	1000
Frequency response @ - 3 dB	DC - 370 kHz
Power bandwidth @ 100W 8 Ohm	77 kHz

Amplifier name

Photo

LJM – MX 50 SE



Parameter name	Value
Type	Home amplifier
Amplifier class	AB
Test voltage	+ - 30 Vdc
Standby current	0.02 A
Amplifier test gain	+ 29 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.075 %
THD+N @ 20 kHz 50W 8 Ohm	0.056 %
Intermodulation THD 11 signals 8 Ohm	0.031 %
SNR @ 1 kHz 50 W 8 Ohm	93 dB
Slew rate	36 V/uS
Output impedance @ 50 Hz 8 Ohm	0.009 Ohm
Damping factor @ 50 Hz 8 Ohm	860
Frequency response @ - 3 dB	5 Hz - 330 kHz
Power bandwidth @ 100W 8 Ohm	95 kHz

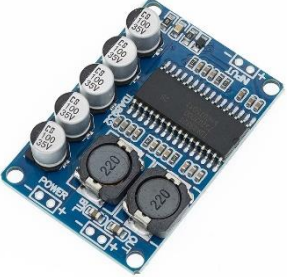
Amplifier name

Photo

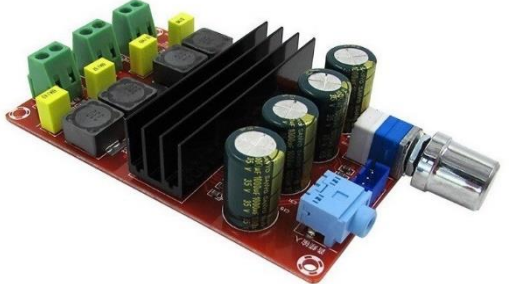
Sony – Xplod XM-N502




Parameter name	Value
Type	Car amplifier
Amplifier class	AB
Test voltage	+ 12 Vdc
Standby current	0.42 A
Amplifier test gain	+ 35 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.018 %
THD+N @ 20 kHz 50W 8 Ohm	0.310 %
Intermodulation THD 11 signals 8 Ohm	0.019 %
SNR @ 1 kHz 50 W Ohm	87 dB
Slew rate	5.8 V/uS
Output impedance @ 50 Hz 8 Ohm	0.12 Ohm
Damping factor @ 50 Hz 8 Ohm	70
Frequency response @ - 3 dB	DC - 80 kHz
Power bandwidth @ 100W 8 Ohm	15 kHz

Amplifier name	Photo
Texas Instruments – TDA8932BTW	

Parameter name	Value
Type	Mobile amplifier
Amplifier class	D
Test voltage	+ 24 Vdc
Standby current	0.04 A
Amplifier test gain	41.5 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.04 %
THD+N @ 20 kHz 50W 8 Ohm	0.19 %
Intermodulation THD 11 signals 8 Ohm	0.08 %
SNR @ 1 kHz 50 W 0hm	92 dB
Slew rate	2.5 V/uS
Output impedance @ 50 Hz 8 Ohm	0.28 Ohm
Damping factor @ 50 Hz 8 Ohm	28
Frequency response @ - 3 dB	5 Hz – 55 kHz
Power bandwidth @ 100W 8 Ohm	6.6 kHz

Amplifier name	Photo
Texas Instruments – TPA3116D2	


Parameter name	Value
Type	Home amplifier
Amplifier class	D
Test voltage	+ 24 Vdc
Standby current	0.06 A
Amplifier test gain	+ 35 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.31 %
THD+N @ 20 kHz 50W 8 Ohm	2.5 %
Intermodulation THD 11 signals 8 Ohm	0.38 %
SNR @ 1 kHz 50 W 0hm	79 dB
Slew rate	2.8 V/uS
Output impedance @ 50 Hz 8 Ohm	0.33 Ohm
Damping factor @ 50 Hz 8 Ohm	25
Frequency response @ - 3 dB	20 Hz - 30 kHz
Power bandwidth @ 100W 8 Ohm	7.5 kHz

Amplifier name	Photo
Texas Instruments – TPA3118	


Parameter name	Value
Type	Mobile amplifier
Amplifier class	D
Test voltage	+ 24 Vdc
Standby current	0.04 A
Amplifier test gain	+ 32 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.09 %
THD+N @ 20 kHz 50W 8 Ohm	1.12 %
Intermodulation THD 11 signals 8 Ohm	0.12 %
SNR @ 1 kHz 50 W 0hm	90 dB
Slew rate	4.8 V/uS
Output impedance @ 50 Hz 8 Ohm	0.098 Ohm
Damping factor @ 50 Hz 8 Ohm	81
Frequency response @ - 3 dB	20 Hz - 60 kHz
Power bandwidth @ 100W 8 Ohm	12.7 kHz

Amplifier name	Photo
Texas Instruments – TPA3251	

Parameter name	Value
Type	Home amplifier
Amplifier class	D
Test voltage	+ 24 Vdc
Standby current	0.08 A
Amplifier test gain	+ 30 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.38 %
THD+N @ 20 kHz 50W 8 Ohm	3.16 %
Intermodulation THD 11 signals 8 Ohm	0.56 %
SNR @ 1 kHz 50 W 0hm	74 dB
Slew rate	3.6 V/uS
Output impedance @ 50 Hz 8 Ohm	0.07 Ohm
Damping factor @ 50 Hz 8 Ohm	100
Frequency response @ - 3 dB	10 Hz - 43 kHz
Power bandwidth @ 100W 8 Ohm	9.5 kHz

Amplifier name	Photo
VIBE – PowerBox 150.4	

Parameter name	Value
Type	Car amplifier
Amplifier class	D
Test voltage	+ 12 Vdc
Standby current	1.20 A
Amplifier test gain	+ 27 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.11 %
THD+N @ 20 kHz 50W 8 Ohm	0.25 %
Intermodulation THD 11 signals 8 Ohm	0.32 %
SNR @ 1 kHz 50 W 0hm	82 dB
Slew rate	3.5 V/uS
Output impedance @ 50 Hz 8 Ohm	0.18 Ohm
Damping factor @ 50 Hz 8 Ohm	45
Frequency response @ - 3 dB	DC - 55 kHz
Power bandwidth @ 100W 8 Ohm	9.2 kHz

Amplifier name	Photo
VIBE – PowerBox 250.2	

Parameter name	Value
Type	Car amplifier
Amplifier class	AB
Test voltage	+ 12 Vdc
Standby current	0.65 A
Amplifier test gain	+ 26 dB
THD+N @ 1 kHz 50 W 8 Ohm	0.47 %
THD+N @ 20 kHz 50W 8 Ohm	0.50 %
Intermodulation THD 11 signals 8 Ohm	0.45 %
SNR @ 1 kHz 50 W 0hm	92 dB
Slew rate	11 V/uS
Output impedance @ 50 Hz 8 Ohm	0.16 Ohm
Damping factor @ 50 Hz 8 Ohm	50
Frequency response @ - 3 dB	DC - 70 kHz
Power bandwidth @ 100W 8 Ohm	29 kHz