Aigtek

Xi'an Aigtek Electronic Technology Co., Ltd.

ATA-4000 High Voltage Power Amplifier

High voltage, high power

Input and output resistance adjustable

The voltage gain is roughly adjusted by

1 times of step and fine by 0.1 times of step

DC bias 0.1V step adjustable

Technical Index

Bandwidth (-3dB) up to DC~3MHz

Output voltage up to 310Vp-p (±155Vp)

Maximum output current 4Arms

Introduction

ATA-4000 series is an ideal high voltage power amplifier that can amplify AC and DC signals. The maximum output voltage of 310Vp-p(±155Vp) and 452Wp power can drive high-voltage power load. Voltage gain and DC bias are fine adjustable, providing customers with rich test options.

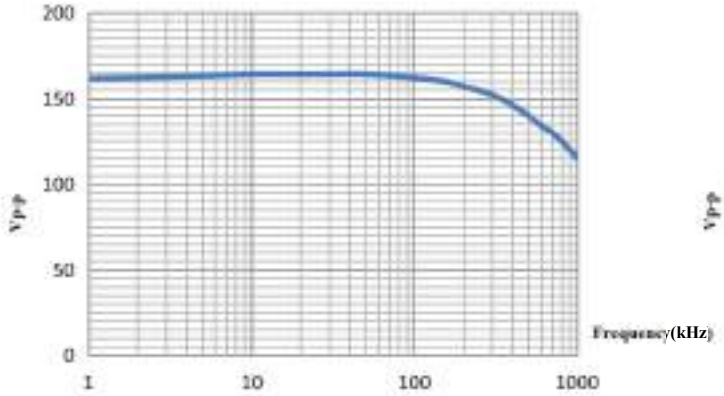
Model	ATA-4011B	ATA-4012B	ATA-4014
Output form	Single output	Single output	Single output
Bandwidth（-3dB）	DC~1.2MHz	DC~1.2MHz	DC~1MHz
Maximum output voltage	160Vp-p(±80Vp)	160Vp-p(±80Vp)	160Vp-p(±80Vp)
Maximum output current	0.5Ap(DC-50Hz)	1Ap(DC-50Hz)	2Ap(DC-50Hz)
	1.41Ap,1Arms（>50Hz）	2.82Ap,2Arms（>50Hz）	5.65Ap,4Arms（>50Hz）
Maximum output power	112.8Wp	225.6Wp	452Wp
Fuse	5A/250V	8A/250V	8A/250V
Voltage gain	x0~50(0.1step/1 step)	x0~50(0.1step/1 step)	x0~50(0.1step/1 step)
Upper limit of Load R_L	≥159Ω(DC-50Hz)	≥79Ω(DC-50Hz)	≥39.75Ω(DC-50Hz)
	≥55.7Ω（>50Hz）	≥27.4Ω（>50Hz）	≥13.91Ω（>50Hz）
Output impedance	1Ω＋2uH	1Ω＋2uH	0.25Ω＋0.6uH
Slew rate	≥426V/μs	≥356V/μs	≥356V/μs
DC bias	±75V（0.1V step/1V step）	±75V(0.1V step/1V step)	±75V(0.1V step/1V step)
Input impedance	50Ω / 10kΩ	50Ω / 10kΩ	50Ω / 5kΩ
Voltage monitor	20mV/V	20mV/V	100:1
Current monitor	1V/A	1V/A	/
Input amplitude	0~10Vp-pMAX		
Output voltage error	≤±3%FS@1kHz		

Voltage monitoring	100:1		
Total harmonic distortion（THD)	≤0.1%@1kHZ，100Vp-p		
Zero-point drift of output voltage	≤±0.1V		
Signal-noise ratio(SNR)	≥80dB		
Output connector	4mm Banana socket		
Protection	Overcurrent protection		
Signal ground	It is connected with the grounding of the shell and the power line		
Operating temperature	0℃~45℃		
Storage temperature	-20℃~50℃		
Humidity	≤80% RH，no condensation		
Supply voltage	AC110~240V，50/60Hz		
Dimension（W*H*D）：	440*163*470mm	440*163*470mm	440*163*470mm

Model	ATA-4051	ATA-4052	ATA-4315
Output form	Single output	Single output	Single output
Bandwidth（-3dB)	DC~500kHz	DC~500kHz	DC~3MHz
Maximum output voltage	310Vp-p(±155Vp)	310Vp-p(±155Vp)	150Vp-p(±75Vp)
Maximum output current	0.5Ap(DC-50Hz)	1Ap(DC-50Hz)	0.5Ap(DC-50Hz)
	1.41Ap,1Arms（>50Hz)	2.82Ap,2Arms（>50Hz)	1.41Ap,1Arms（>50Hz)
Maximum output power	218.55Wp	437.1Wp	105Wp
Fuse	8A/250V	10A/250V	5A/250V
Voltage gain	x0~100(0.1step/1 step)	x0~100(0.1step/1 step)	x0~50(0.1step/1 step)
Load R_L upper limit	≥309Ω(DC-50Hz)	≥154.5Ω(DC-50Hz)	≥149.5Ω(DC-50Hz)
	≥108.93Ω（>50Hz)	≥54.46Ω（>50Hz)	≥52.7Ω（>50Hz)
Output impedance	1Ω＋3.2uH	0.5Ω＋1.6uH	0.5Ω＋1.2uH
Slew Rate	≥345V/μs	≥345V/μs	≥1000V/μs
DC bias	±150V(0.1Vstep)	±150V(0.1Vstep)	±75V(0.1Vstep)
Input impedance	50Ω / 5kΩ		
Input amplitude	0~10Vp-pMAX		
Output voltage error	≤±3%FS@1kHz		
Voltage monitoring	100:1		
Total harmonic distortion (THD)	≤0.1%@1kHZ，100Vp-p		
Zero-point drift of output voltage	≤±0.1V		
Signal-noise ratio(SNR)	≥80dB		
Output Connector	4mm Banana socket		
Protection	Overcurrent protection		
Signal Ground	It is connected with the grounding of the shell and the power line		
Supply voltage	AC110~240V, 50/60Hz		
Operating temperature	0℃~45℃		

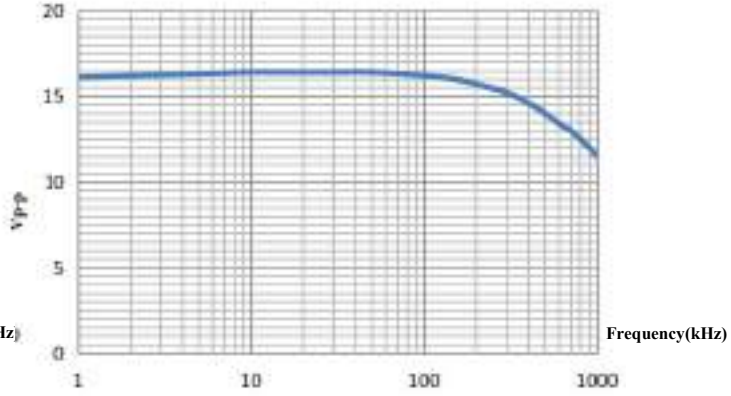
Storage temperature	-20℃~50℃		
Humidity	≤80% RH，no condensation		
Dimension（W*H*D）：	440*163*470mm	440*163*470mm	440*163*470mm

ATA-4011B



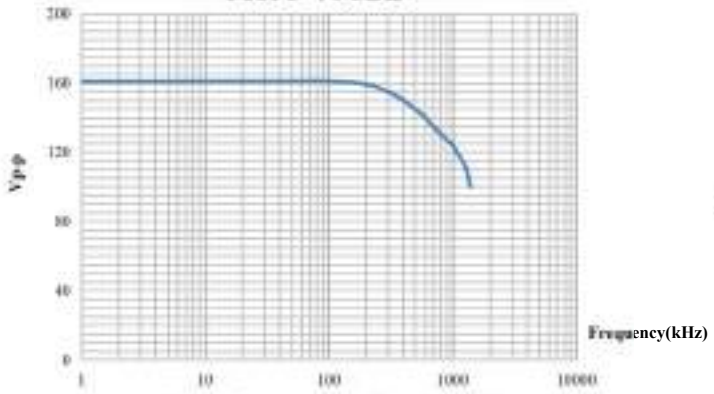
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4011B



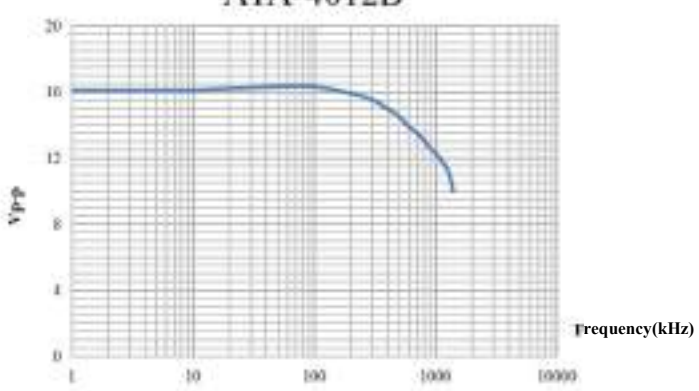
Small signal amplitude-frequency characteristic

ATA-4012B



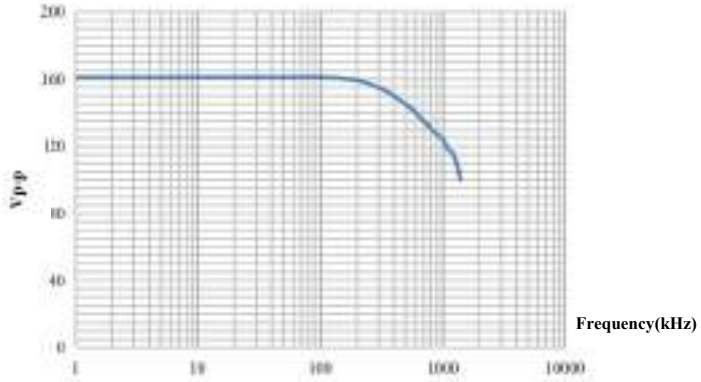
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4012B



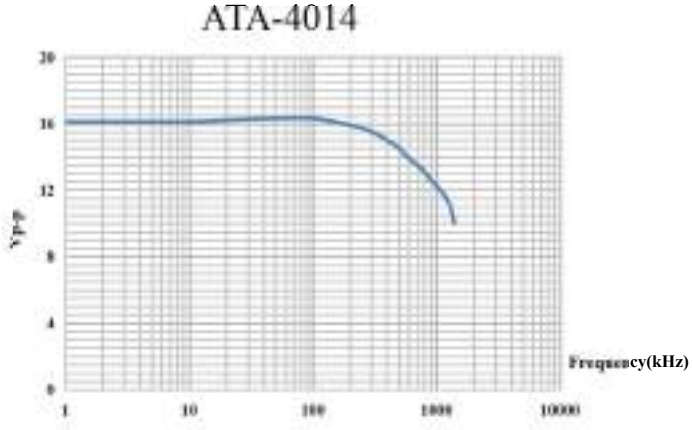
Small signal amplitude-frequency characteristic

ATA-4014



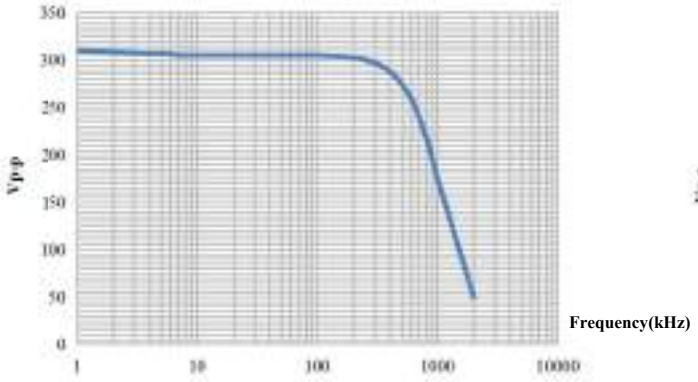
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4014



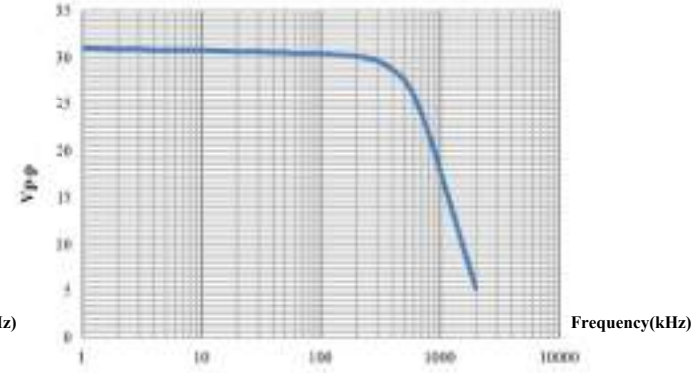
Small signal amplitude-frequency characteristic

ATA-4051



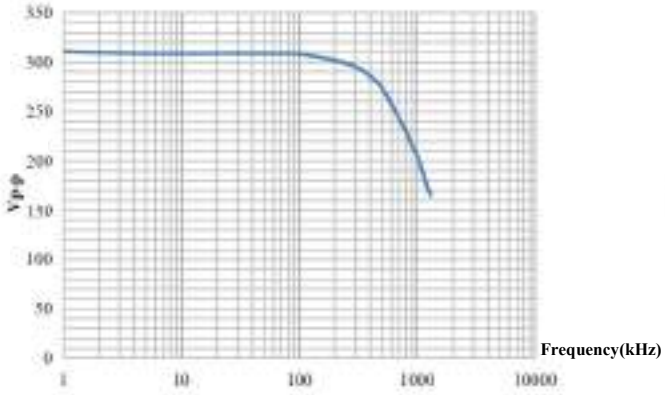
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4051



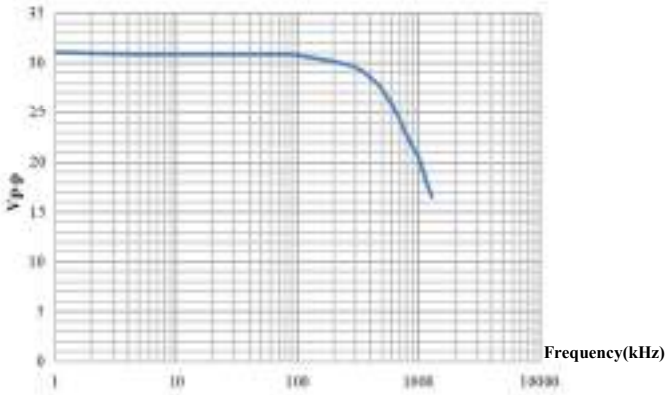
Small signal amplitude-frequency characteristic

ATA-4052



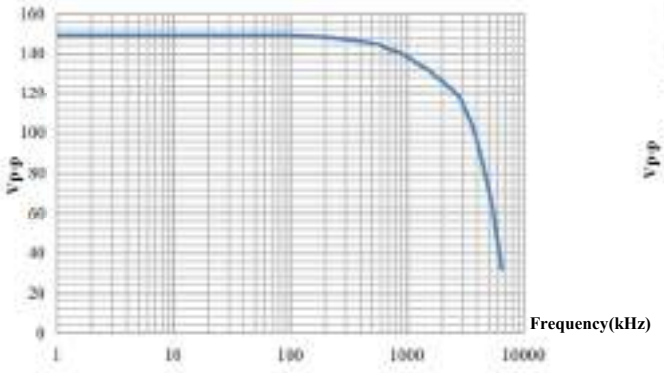
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4052



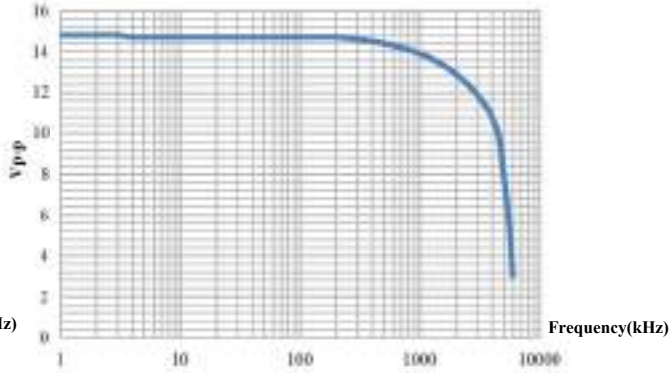
Small signal amplitude-frequency characteristic

ATA-4315



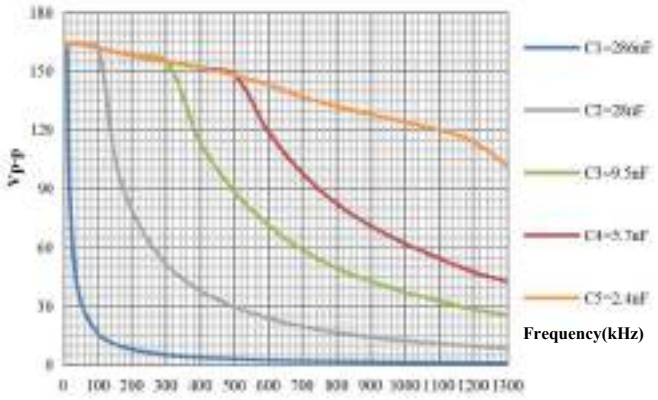
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-4315



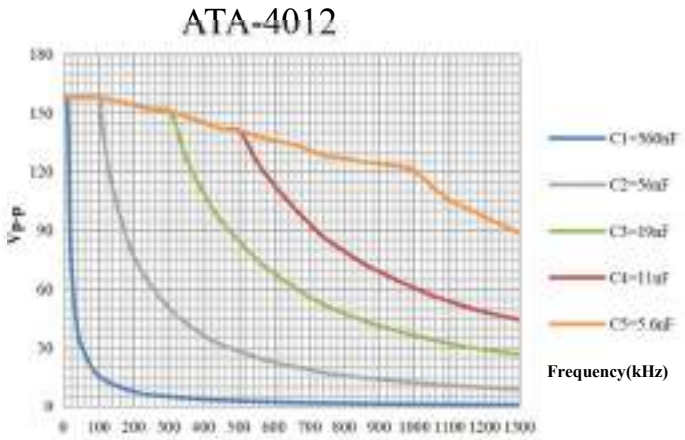
Small signal amplitude-frequency characteristic

ATA-4011B



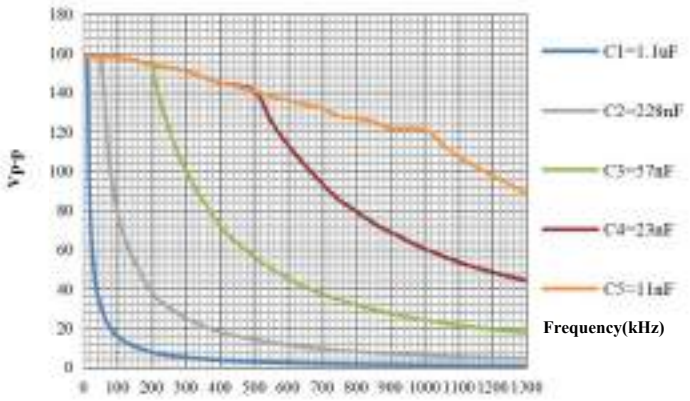
ATA-4011B Capacitive loads curve

ATA-4012



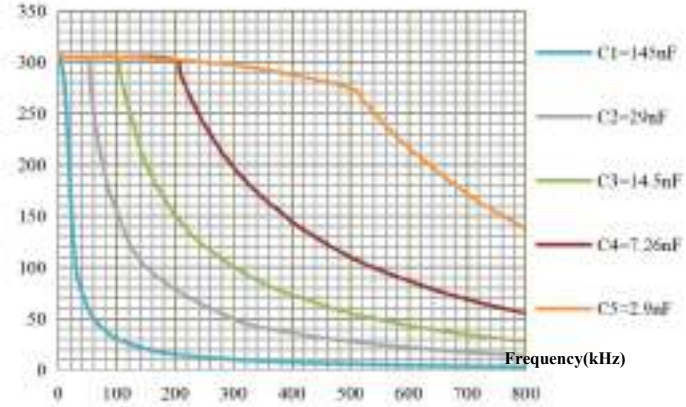
ATA-4012B Capacitive loads curve

ATA-4014



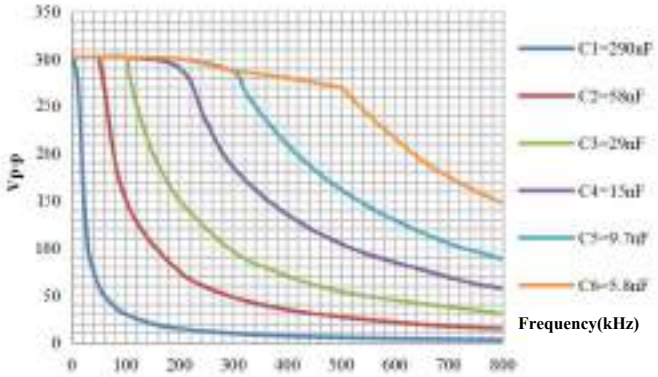
ATA-4014 Capacitive loads curve

ATA-4051



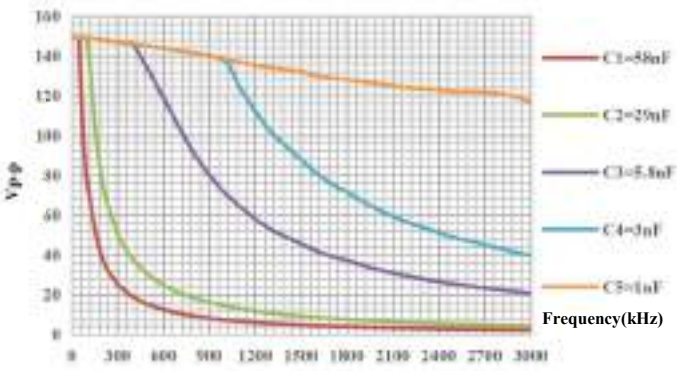
ATA-4051 Capacitive loads curve

ATA-4052



ATA-4052 Capacitive loads curve

ATA-4315



ATA-4315 Capacitive loads curve