



Aigtek

Acoustic Power Amplifier

Ultrasonic Power Amplifier

RF Power Amplifier

Underwater Acoustic Power Amplifier

High Voltage Power Amplifier

Power Amplifier Module

Amplifier Selection Manual

2025



Xi'an Aigtek Electronic Technology Co., Ltd.

www.aigtek.cn

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*The content of this selection manual is subject to change without prior notice. Please request the latest product specifications from our company before ordering.

Amplifier Model Selection Guide

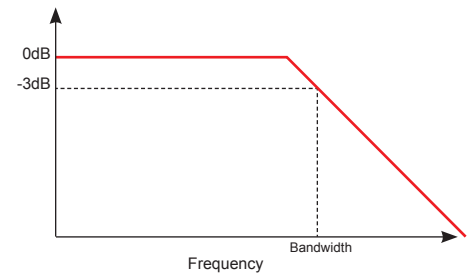


1. Bandwidth

It refers to the frequency at which the sine wave curve input signal attenuates to 70.7% of the true signal amplitude, that is -3dB point. The amplifier must have enough bandwidth to amplify and monitor the input signal.

2. Voltage

When choosing the amplifier, it is necessary to consider whether the output voltage is enough in combination with the -3dB bandwidth. If the test has higher requirements on the voltage, a certain voltage margin should be reserved.



3. Current

According to the impedance of the tested load, the amplifier which can meet the test current demand is selected.

4. Voltage gain

If the input signal is a specific voltage signal, the voltage gain should be considered when selecting the amplifier.

5. Load

According to the test conditions of the tested load, verify whether the selected amplifier meets the requirements.

6. Options

Digital Monitor: 14 bit vertical resolution, with voltage and current back reading function, voltage and current waveform display function.

Programmable interface.

7. Impedance transformer

When using RF power amplifiers, it is necessary to match the source impedance with the load impedance to ensure optimal transmission efficiency. However, in practical scenarios, the load impedance often varies. Aigtek can provide customized solutions based on the actual load impedance.

ATA-1000 Series Wide Band Amplifier



Main features

- Bipolar & four-quadrant operation
- Amplification of any signal
- Digital gain control
- High-speed signal response

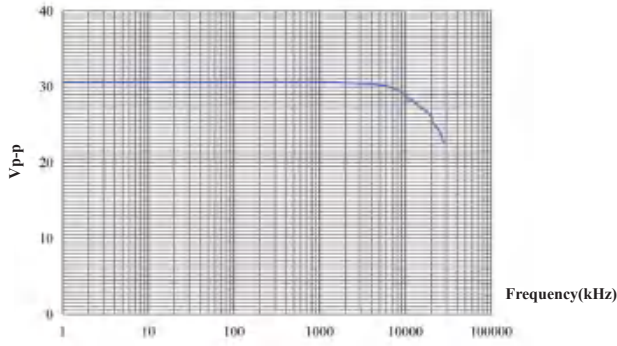
Applications

- Piezoelectric ceramic drive
- LED testing
- Ultrasonic atomization
- Electro-optic modulation
- Semiconductor device testing

Technical Parameters

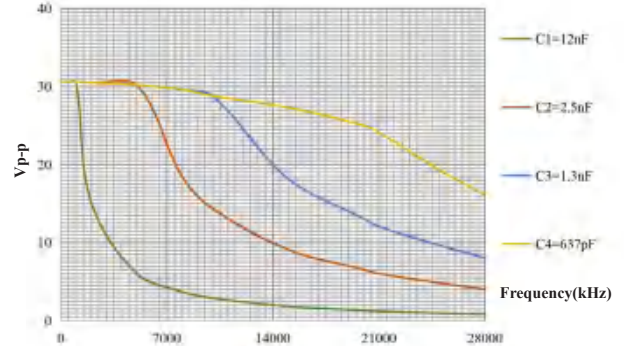
Model	ATA-1200C	ATA-1220E	ATA-1372A
Output Type	Single-ended Output	Differential Output	Single-ended Output
Bandwidth (-3 dB)	DC~25MHz	DC~21MHz	DC~3MHz
Maximum Output Voltage	30Vp-p(±15Vp)	60Vp-p(±30Vp)	70Vp-p(±35Vp)
Maximum Output Current	500mA _p (DC~50Hz)	500mA _p (DC~50Hz)	1A _p (DC~50Hz)
	1A _p (>50Hz)	1A _p (>50Hz)	2A _p (>50Hz)
Maximum Output Power	15W _p	30W _p	70W _p
Voltage Gain	0~20dB(0.5dB step)	0~26dB(0.5dB step)	x0~40(0.1step/1step)
Load R _L Upper Limit	≥ 27.5Ω(DC~50Hz)	≥ 55Ω(DC~50Hz)	≥ 33Ω(DC~50Hz)
	≥ 12.5Ω(>50Hz)	≥ 25Ω(>50Hz)	≥ 15.5Ω(>50Hz)
Slew Rate	≥ 1666V/μs	≥ 2798V/μs	≥ 467V/μs
Output Impedance	2.5Ω/50Ω	5Ω/100Ω	≤ (2Ω+0.4μH)
Protection	Overcurrent and short-circuit protection		Overcurrent and overtemperature protection
Input Impedance	50Ω/1MΩ		50Ω/10kΩ
Output Voltage Error	≤ ±3%FS@1kHz		≤ ±2%FS@1kHz
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,30Vp-p		≤ 1%@1kHz,70Vp-p
Output Voltage Drift	≤ ±0.1V		≤ ±10mV
Signal-to-Noise Ratio	≥ 80dB		≥ 70dB
Fuse	3A/250V		2A/250V
Voltage Monitoring	/		100mV/V(±5%@Output,FS)
Current Monitoring	/		1V/A(±5%@Output,FS)
Input Amplitude	0~10Vp-pMAX		
Output Interface	BNC		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110/220V,50/60Hz		AC110~240V,50/60Hz
Dimensions (W*H*D)	330*149*401mm		330*149*398mm

ATA-1200C



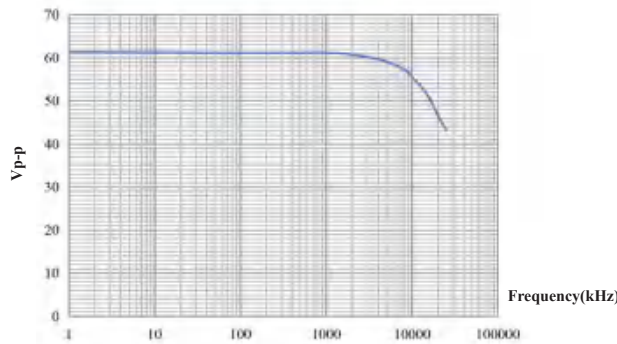
Amplitude-frequency characteristic

ATA-1200C



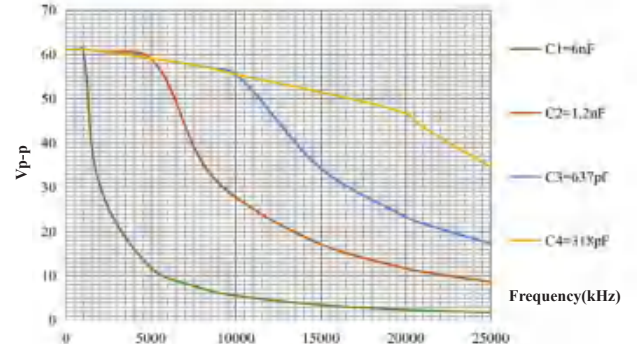
ATA-1200C Capacitive loads curve

ATA-1220E



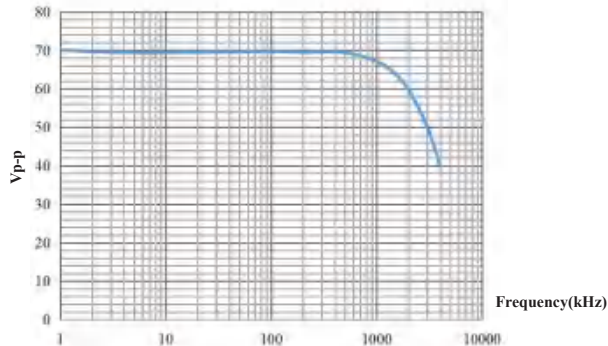
Amplitude-frequency characteristic

ATA-1220E



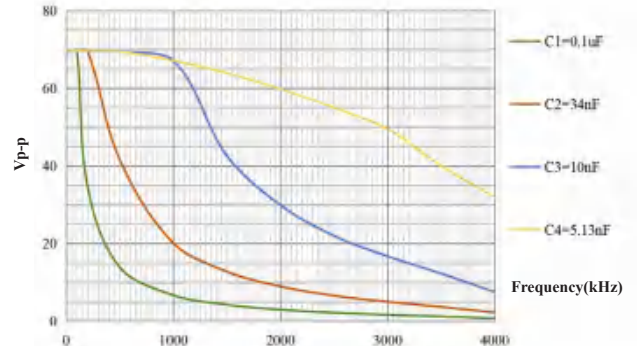
ATA-1220E Capacitive loads curve

ATA-1372A



Amplitude-frequency characteristic

ATA-1372A



ATA-1372A Capacitive loads curve

ATA-2000 Series High Voltage Amplifier



Main features

- Amplification of any signal
- Digital gain control
- Current monitoring / Voltage monitoring
- Variable voltage rail
- DC bias adjustment

Applications

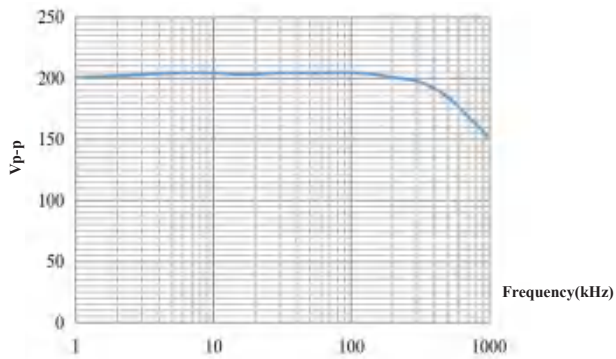
- Electroluminescent device testing
- Dielectrophoresis
- MEMS device testing
- Non-destructive testing
- Cell sorting

Technical Parameters

Model	ATA-2021B	ATA-2022B	ATA-2048
Number of Channel	1	2	1
Output Type	Single-ended Output		Single-ended Output
Bandwidth (-3 dB)	DC~1MHz		DC~1MHz
Maximum Output Voltage	200Vp-p(±100Vp)		400Vp-p(±200Vp)
Output voltage range	Range1:+40V~-160V		/
	Range2:+100V~-100V		/
	Range3:+160V~-40V		/
Maximum Output Current	250mA _p (DC~50Hz)		40mA _p (DC~50Hz)
	500mA _p (>50Hz)		80mA _p (>50Hz)
Maximum Output Power	50W _p		16W _p
Fuse	2A/250V	5A/250V	2A/250V
Voltage Gain	x0~60(0.1step/1step)		x0~60(0.1step/1step)
Load R _L Upper Limit	≥ 395Ω(DC~50Hz)		≥ 4.95kΩ(DC~50Hz)
	≥ 195Ω(>50Hz)		≥ 2.45kΩ(>50Hz)
DC Bias Adjustment	±160V(0.1Vstep/1Vstep)		/
DC Bias Adjustment Voltage Range	Range1:+40V~-160V		/
	Range2:+100V~-100V		/
	Range3:+160V~-40V		/
Output Impedance	5Ω/50Ω		50Ω/2.5kΩ
Slew Rate	≥ 445V/μs		≥ 888V/μs
Input Impedance	50Ω/10kΩ		50Ω/10kΩ
Voltage Monitoring	20mV/V(±5%@Output,FS)		10mV/V(±5%@Output,FS)
Current Monitoring	2V/A(±5%@Output,FS)		10V/A(±5%@Output,FS)
Output Voltage Drift	≤ ±0.1V		≤ ±0.3V
Power Supply Voltage	AC110~240V,50/60Hz		AC220V±10%,50Hz
Input Amplitude	0~10Vp-pMAX		
Output Voltage Error	≤ ±3%FS@1kHz		
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p		
Signal-to-Noise Ratio	≥ 80dB		
Output connector	4mm Banana socket		

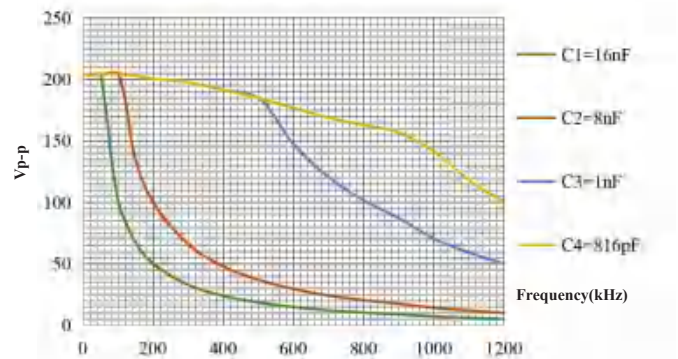
Protection	Overcurrent protection		
Signal ground	It is connected with the grounding of the shell and the power line		
Operating temperature	0°C ~45°C		
Storage temperature	-20°C ~50°C		
Humidity	≤ 80%RH, no condensation		
Size (w * h * d)	330*149*398mm	440*149*453mm	366*164*369mm

ATA-2021B/2022B



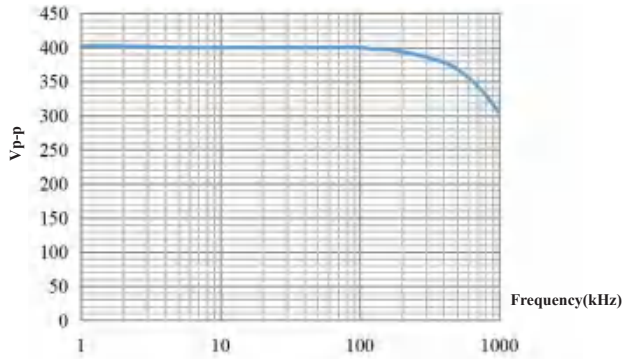
Amplitude-frequency characteristic

ATA-2021B/2022B



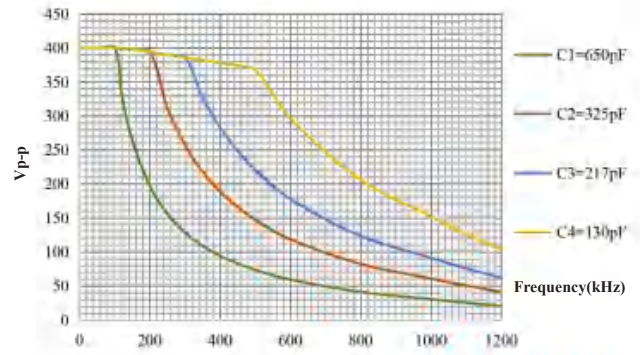
ATA-2021B/2022B Capacitive loads curve

ATA-2048



Amplitude-frequency characteristic

ATA-2048



ATA-2048 Capacitive loads curve

ATA-2000 Series High Voltage Amplifier



Main features

- Amplification of any signal
- Digital gain control
- Current monitoring / Voltage monitoring
- Variable voltage rail
- DC bias adjustment

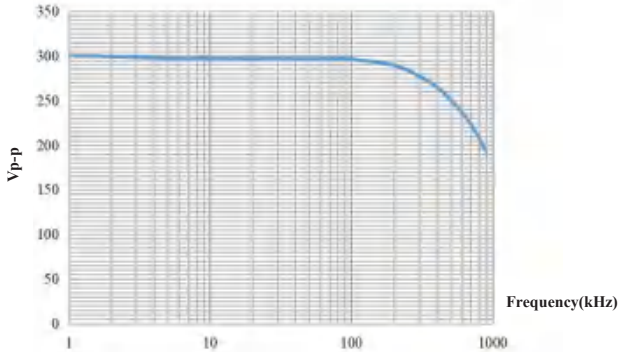
Applications

- Electroluminescent device testing
- Dielectrophoresis
- MEMS device testing
- Non-destructive testing
- Cell sorting

Technical Parameters

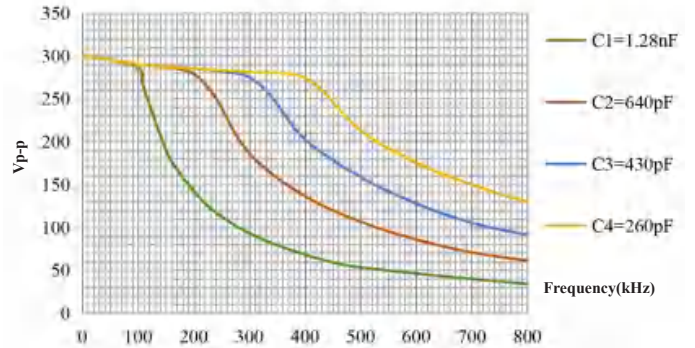
Model	ATA-2031	ATA-2032	ATA-2041	ATA-2042	ATA-214
Number of Channel	1	2	1	2	1
Output Type	Single-ended Output		Single-ended Output		Single-ended Output
Bandwidth (-3 dB)	DC~500kHz		DC~500kHz		DC~500kHz
Maximum Output Voltage	300Vp-p(±150Vp)		400Vp-p(±200Vp)		400Vp-p(±200Vp)
Maximum Output Current	60mA _p (DC~50Hz)		50mA _p (DC~50Hz)		150mA _p (DC~50Hz)
	120mA _p (>50Hz)		100mA _p (>50Hz)		300mA _p (>50Hz)
Maximum Output Power	18W _p		20W _p		60W _p
Voltage Gain	x0~50(0.1step/1step)		x0~60(0.1step/1step)		x0~100(0.1step/1step)
Load R _L Upper Limit	≥ 2.45kΩ(DC~50Hz)		≥ 3.95kΩ(DC~50Hz)		≥ 1323Ω(DC~50Hz)
	≥ 1.2kΩ(>50Hz)		≥ 1.95kΩ(>50Hz)		≥ 657Ω(>50Hz)
Output Impedance	50Ω/2.5kΩ		50Ω/2.5kΩ		10Ω/2.5kΩ
Slew Rate	≥ 334V/μs		≥ 445V/μs		≥ 444.3V/μs
Input Impedance	50Ω/5kΩ				
Voltage Monitoring	10mV/V(±5%@Output,FS)				
Current Monitoring	10V/A(±5%@Output,FS)				
Input Amplitude	0~10Vp-pMAX				
Output Voltage Error	≤ ±3%FS@1kHz				
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p				
Output Voltage Drift	≤ ±0.3V				
Signal-to-Noise Ratio	≥ 80dB				
Output Interface	4mm Banana Plug				
Protection	Overcurrent Protection				
Signal Ground	Connected to chassis and power line ground				
Power Supply Voltage	AC220V±10%,50Hz				
Fuse	2A/250V				
Operating Temperature	0°C ~45°C				
Storage Temperature	-20°C ~50°C				
Working Humidity	≤ 80%RH,non-condensing				
Dimensions (W*H*D)	366*164*369mm				

ATA-2031/2032



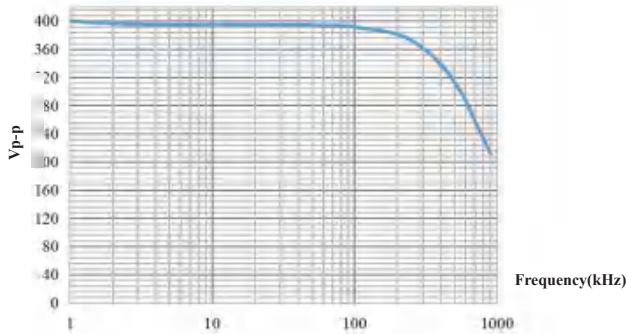
Amplitude-frequency characteristic

ATA-2031/2032



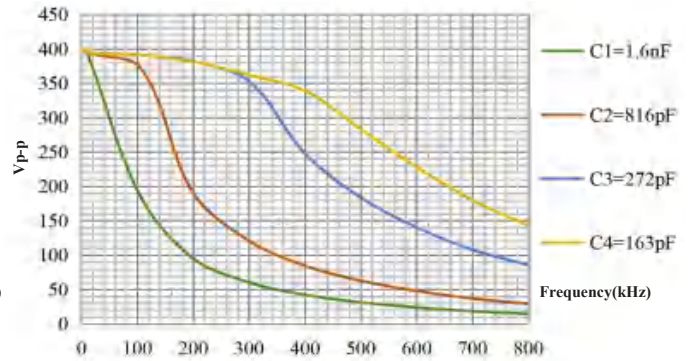
ATA-2031/2032 Capacitive loads curve

ATA-2041/2042



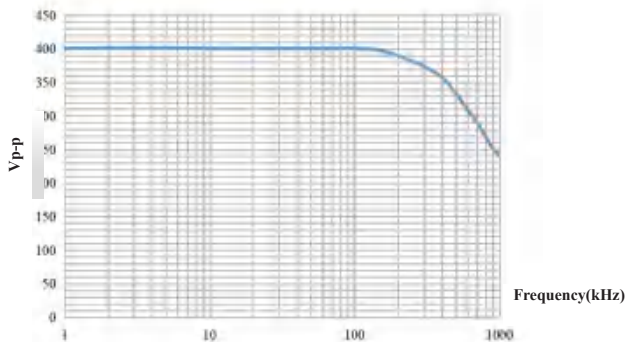
Amplitude-frequency characteristic

ATA-2041/2042



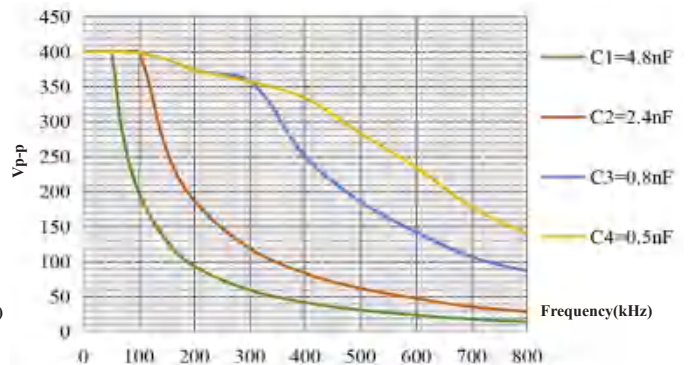
ATA-2041/2042 Capacitive loads curve

ATA-214



Amplitude-frequency characteristic

ATA-214



ATA-214 Capacitive loads curve

ATA-2000 Series High Voltage Amplifier



Main features

- Amplification of any signal
- Digital gain control
- Current monitoring / Voltage monitoring
- Variable voltage rail
- DC bias adjustment

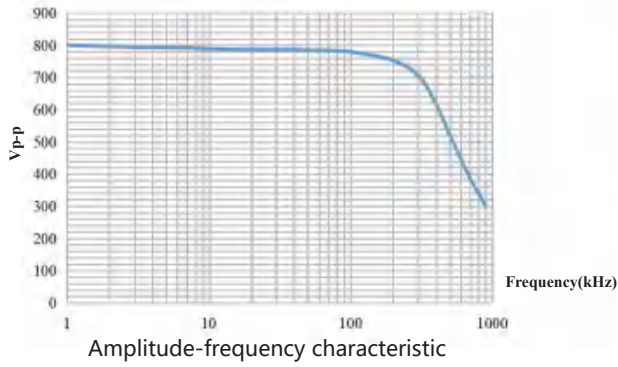
Applications

- Electroluminescent device testing
- Dielectrophoresis
- MEMS device testing
- Non-destructive testing
- Cell sorting

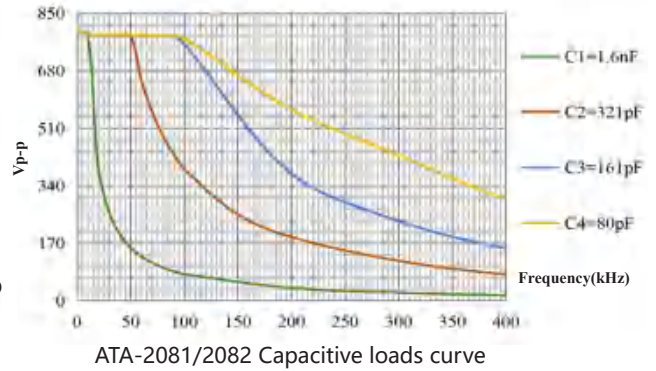
Technical Parameters

Model	ATA-2081	ATA-2082	ATA-2088	ATA-2161	ATA-2168
Number of Channel	1	2	1	1	1
Output Type	Single-ended Output	Single-ended Output	Differential Output	Differential Output	Differential Output
Bandwidth (-3 dB)	DC~200kHz	DC~500kHz	DC~150kHz	DC~400kHz	
Maximum Output Voltage	800Vp-p(±400Vp)	800Vp-p(±400Vp)	1600Vp-p(±800Vp)	1600Vp-p(±800Vp)	
Maximum Output Current	20mA _p (DC~50Hz) 40mA _p (>50Hz)	25mA _p (DC~50Hz) 50mA _p (>50Hz)	20mA _p (DC~50Hz) 40mA _p (>50Hz)	25mA _p (DC~50Hz) 50mA _p (>50Hz)	
Maximum Output Power	16W _p	20W _p	32W _p	40W _p	
Voltage Gain	x0~120 (0.1step/1step)	x0~120 (0.1step/1step)	x0~240 (0.1step/1step)	x0~240 (0.1step/1step)	
Load R _L Upper Limit	≥ 19.9kΩ(DC~50Hz) ≥ 9.9kΩ(>50Hz)	≥ 15.9kΩ(DC~50Hz) ≥ 7.9kΩ(>50Hz)	≥ 39.8kΩ(DC~50Hz) ≥ 19.8kΩ(>50Hz)	≥ 31.8kΩ(DC~50Hz) ≥ 15.8kΩ(>50Hz)	
Output Impedance	100Ω/5kΩ	100Ω/5kΩ	200Ω/10kΩ	200Ω/10kΩ	
Input Impedance	50Ω/5kΩ	50Ω/10kΩ	50Ω/5kΩ	50Ω/10kΩ	
Slew Rate	≥ 356V/μs	≥ 888.4V/μs	≥ 534V/μs	≥ 1420V/μs	
Current Monitoring	20V/A(±5%@Output,FS)		/		
Voltage Monitoring	10mV/V(±5%@Output,FS)				
Input Amplitude	0~10Vp-pMAX				
Output Voltage Error	≤ ±3%FS@1kHz				
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p				
Output Voltage Drift	≤ ±0.3V				
Signal-to-Noise Ratio	≥ 80dB				
Output Interface	4mm Banana Plug				
Protection	Overcurrent Protection				
Signal Ground	Connected to chassis and power line ground				
Power Supply Voltage	AC220V±10%,50Hz				
Fuse	2A/250V				
Operating Temperature	0°C ~45°C				
Storage Temperature	-20°C ~50°C				
Working Humidity	≤ 80%RH,non-condensing				
Dimensions (W*H*D)	366*164*369mm				

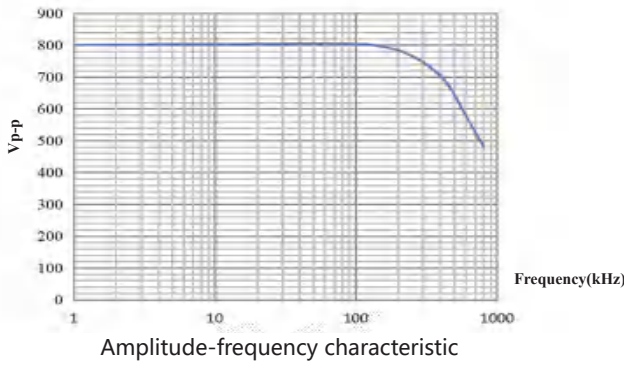
ATA-2081/2082



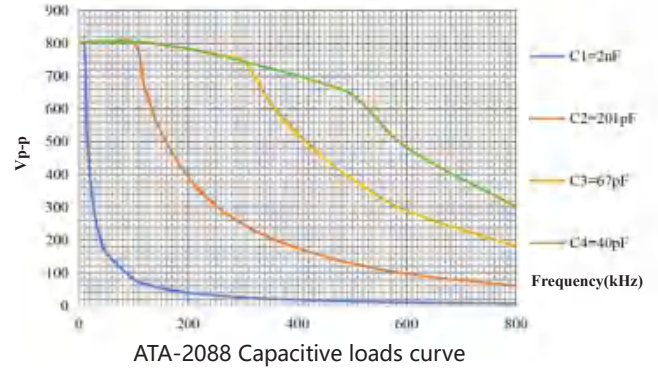
ATA-2081/2082



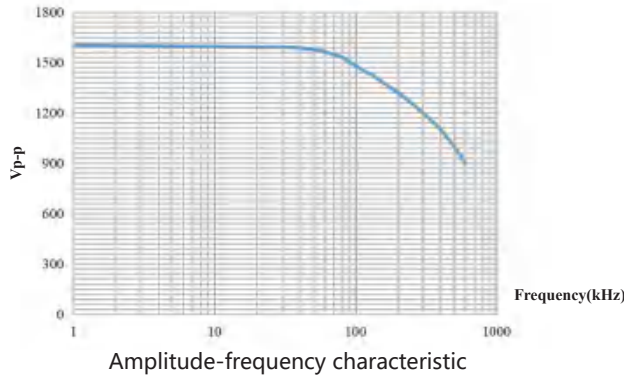
ATA-2088



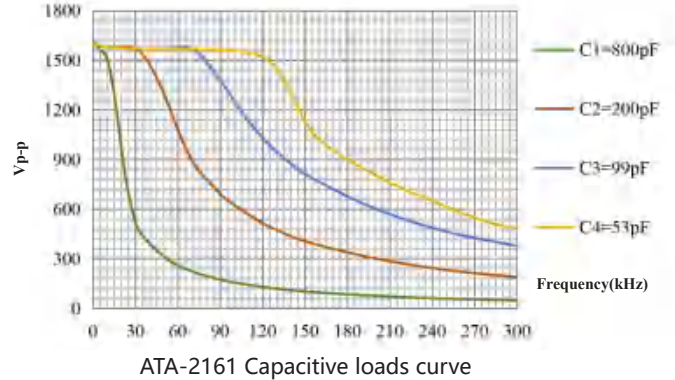
ATA-2088



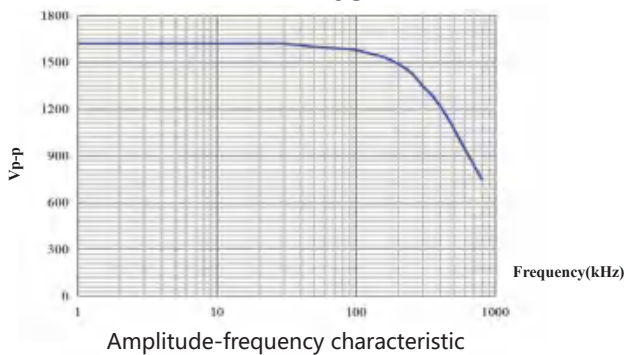
ATA-2161



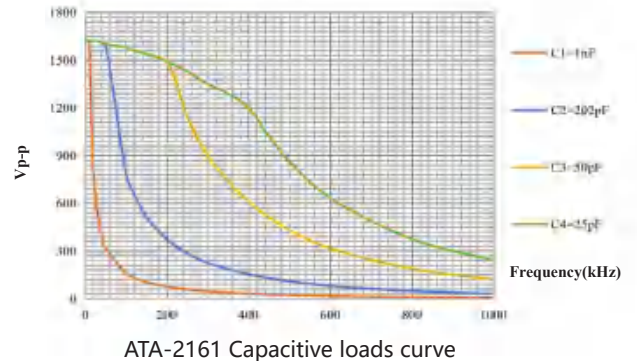
ATA-2161



ATA-2168



ATA-2168



ATA-3000 Series Power Amplifier



Main features

- Four-quadrant operation
- Amplification of any signal
- Low internal impedance output
- Current monitoring / Voltage monitoring
- Short-circuit protection

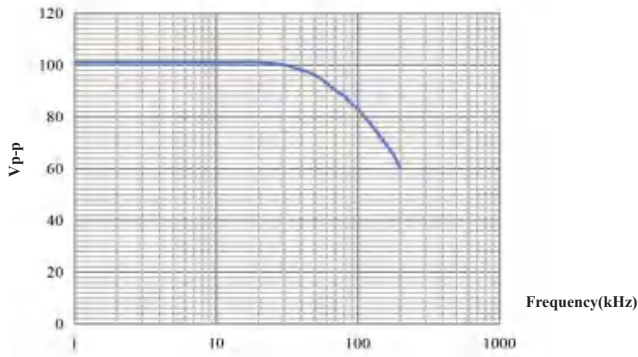
Applications

- Magnetic material testing
- Transformer testing
- Motor drive
- Exciter testing
- Helmholtz coil testing

Technical Parameters

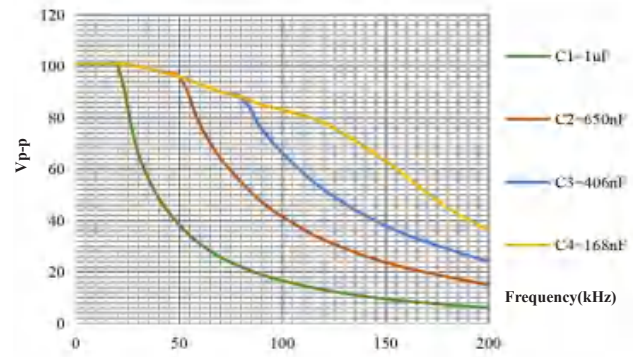
Model	ATA-3040C	ATA-3080C	ATA-3090C
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~120kHz	DC~120kHz	DC~120kHz
Maximum Output Voltage	100Vp-p(±50Vp)	160Vp-p(±80Vp)	100Vp-p(±50Vp)
Maximum Output Current	5Ap(DC~50Hz)	5Ap(DC~50Hz)	10Ap(DC~50Hz)
	10Ap(>50Hz)	10Ap(>50Hz)	20Ap(>50Hz)
Maximum Output Power	500Wp	800Wp	1000Wp
Fuse	10A/250V	10A/250V	10A/250V
Voltage Gain	x0~30(0.1step/1step)	x0~60(0.1step/1step)	x0~30(0.1step/1step)
Load R _L Upper Limit	≥ 9.9Ω(DC~50Hz)	≥ 15.9Ω(DC~50Hz)	≥ 4.9Ω(DC~50Hz)
	≥ 4.9Ω(>50Hz)	≥ 7.9Ω(>50Hz)	≥ 2.4Ω(>50Hz)
Slew Rate	≥ 26.6V/μs	≥ 42.6V/μs	≥ 26.6V/μs
DC Bias Adjustment	±50V(0.1Vstep/1Vstep)	±80V(0.1Vstep/1Vstep)	±50V(0.1Vstep/1Vstep)
Current Monitoring	0.1V/A(±5%@Output,FS)	0.1V/A(±5%@Output,FS)	0.05V/A(±5%@Output,FS)
Voltage Monitoring	20mV/V(±5%@Output,FS)		
Output Impedance	0.1Ω		
Input Impedance	50Ω/100kΩ		
Input Amplitude	0~10Vp-pMAX		
Output Voltage Error	≤ ±3%FS@1kHz		
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p		
Output Voltage Drift	≤ ±0.05V		
Voltage ripple	≤ 0.01Vrms		
Output Interface	4mm Banana Plug		
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V,50/60Hz		
Dimensions (W*H*D)	440*149*535mm		

ATA-3040C



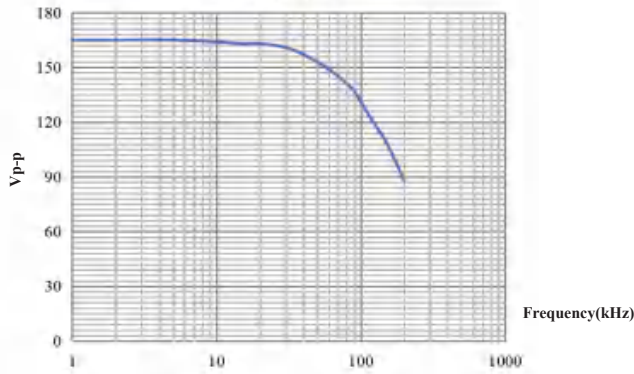
Amplitude-frequency characteristic

ATA-3040C



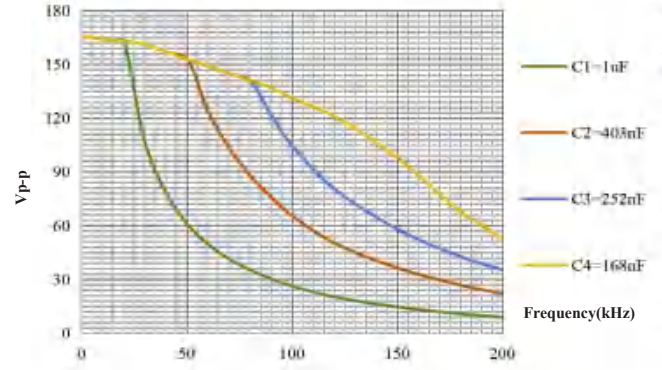
ATA-3040C Capacitive loads curve

ATA-3080C



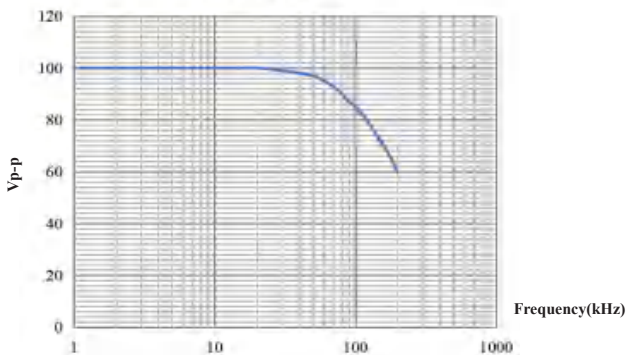
Amplitude-frequency characteristic

ATA-3080C



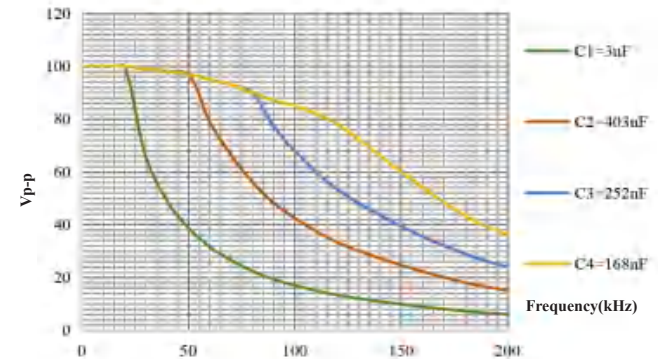
ATA-3080C Capacitive loads curve

ATA-3090C



Amplitude-frequency characteristic

ATA-3090C



ATA-3090C Capacitive loads curve

ATA-4000 Series High Voltage Power Amplifier



Main features

- Four-quadrant operation
- Low internal impedance output
- Digital gain control
- DC bias adjustment
- Short-circuit protection

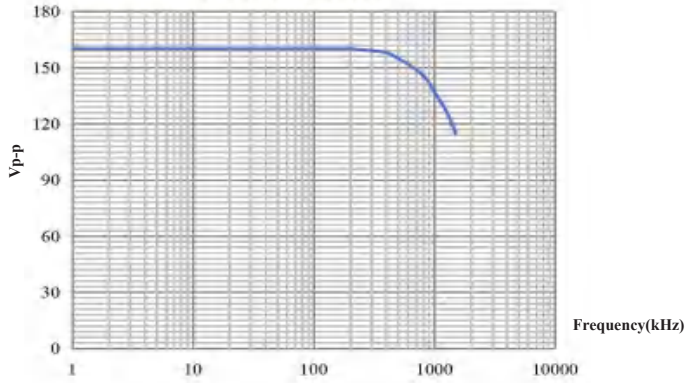
Applications

- Capacitor (MLCC) testing
- Ultrasonic motor
- Magnetic material testing
- Piezoelectric element drive
- Display interference noise testing

Technical Parameters

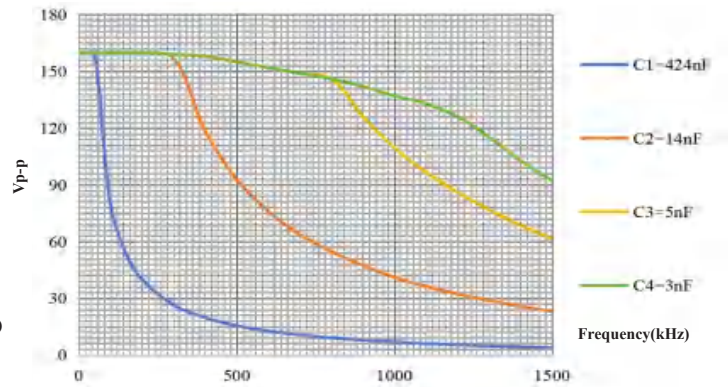
Model	ATA-4011C	ATA-4012C	ATA-4014C
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~1.2MHz	DC~1.2MHz	DC~1.2MHz
Maximum Output Voltage	160Vp-p(±80Vp)	160Vp-p(±80Vp)	160Vp-p(±80Vp)
Maximum Output Current	0.75Ap(DC~50Hz)	1.25Ap(DC~50Hz)	2Ap(DC~50Hz)
	2.12Ap,1.5Arms(>50Hz)	3.53Ap,2.5Arms(>50Hz)	5.65Ap,4Arms(>50Hz)
Maximum Output Power	169.6Wp	282.4Wp	452Wp
Fuse	6A/250V	8A/250V	8A/250V
Voltage Gain	x0~50(0.1step/1step)	x0~50(0.1step/1step)	x0~50(0.1step/1step)
Load R _L Upper Limit	≥ 106.5Ω(DC~50Hz)	≥ 63.75Ω(DC~50Hz)	≥ 39.75Ω(DC~50Hz)
	≥ 37.5Ω(>50Hz)	≥ 22.4Ω(>50Hz)	≥ 13.91Ω(>50Hz)
Output Impedance		0.25Ω+0.6μH	
Slew Rate		≥ 426V/μs	
Input Impedance		50Ω/100kΩ	
Voltage Monitoring		100:1(±5%@Output,FS)	
DC Bias Adjustment		±75V(0.1Vstep/1Vstep)	
Input Amplitude		0~10Vp-pMAX	
Output Voltage Error		≤ ±3%FS@1kHz	
Total Harmonic Distortion(THD)		≤ 0.1%@1kHz,100Vp-p	
Output Voltage Drift		≤ ±0.02V	
Voltage ripple		≤ 0.01Vrms	
Output Interface		BNC	
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V,50/60Hz		
Dimensions (W*H*D)	440*149*454mm		

ATA-4011C



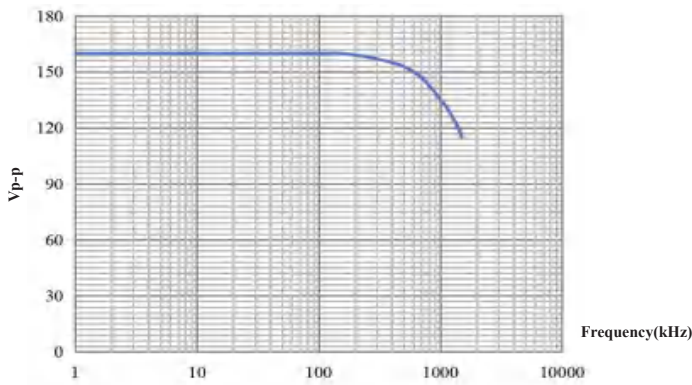
Amplitude-frequency characteristic

ATA-4011C



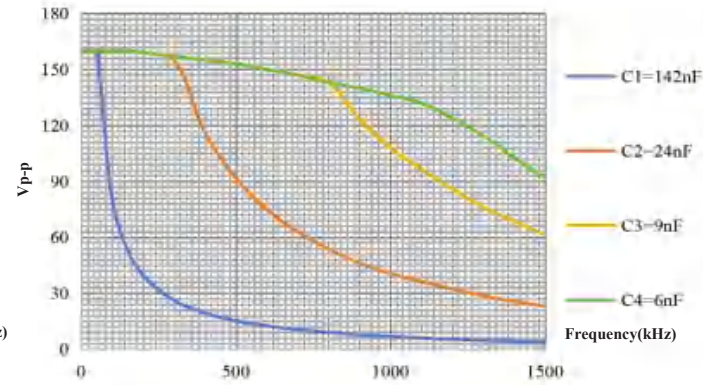
ATA-4011C Capacitive loads curve

ATA-4012C



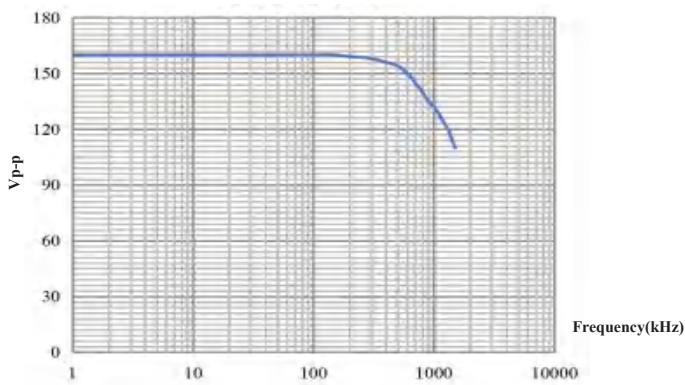
Amplitude-frequency characteristic

ATA-4012C



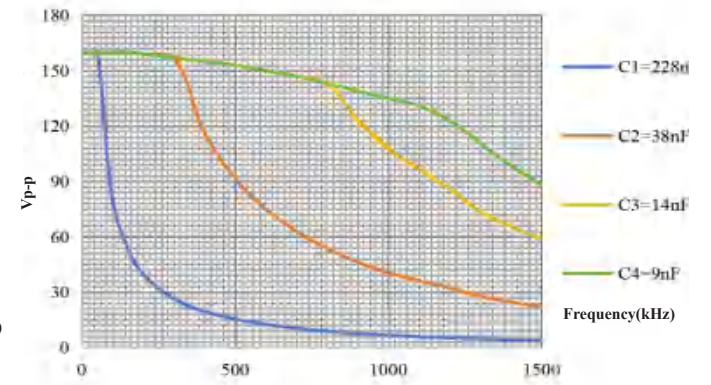
ATA-4012C Capacitive loads curve

ATA-4014C



Amplitude-frequency characteristic

ATA-4014C



ATA-4014C Capacitive loads curve

ATA-4000 Series High Voltage Power Amplifier



Main features

- Four-quadrant operation
- Low internal impedance output
- Digital gain control
- DC bias adjustment
- Short-circuit protection

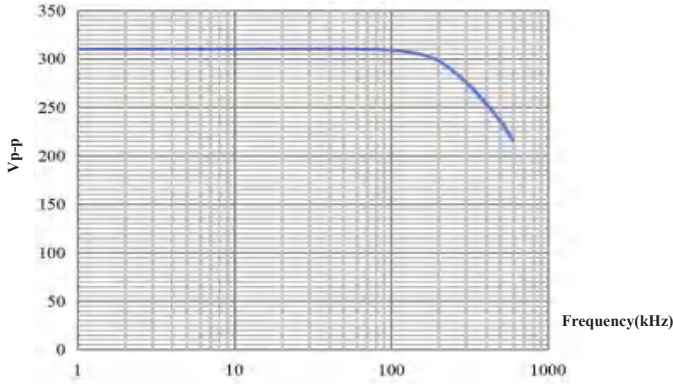
Applications

- Capacitor (MLCC) testing
- Ultrasonic motor
- Magnetic material testing
- Piezoelectric element drive
- Display interference noise testing

Technical Parameters

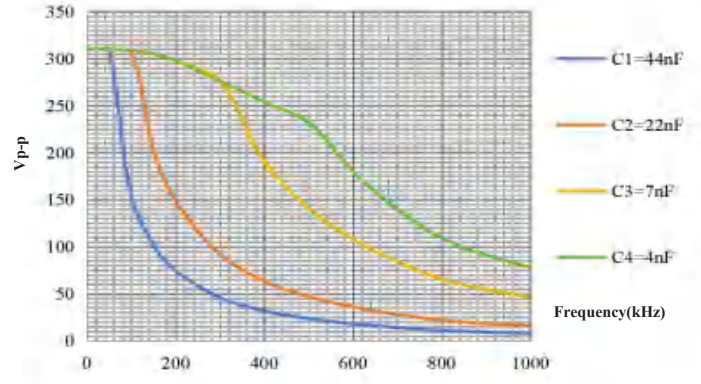
Model	ATA-4051C	ATA-4052C	ATA-4315
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~500kHz	DC~500kHz	DC~3MHz
Maximum Output Voltage	310Vp-p(±155Vp)	310Vp-p(±155Vp)	150Vp-p(±75Vp)
Maximum Output Current	0.75Ap(DC~50Hz)	1.25Ap(DC~50Hz)	0.5Ap(DC~50Hz)
	2.12Ap,1.5Arms(>50Hz)	3.53Ap,2.5Arms(>50Hz)	1.41Ap,1Arms(>50Hz)
Maximum Output Power	328.6Wp	547.1Wp	105.7Wp
Fuse	8A/250V	10A/250V	5A/250V
Voltage Gain	x0~100(0.1step/1step)	x0~100(0.1step/1step)	x0~50(0.1step/1step)
Load R _L Upper Limit	≥ 206Ω(DC~50Hz)	≥ 123.4Ω(DC~50Hz)	≥ 149.5Ω(DC~50Hz)
	≥ 72.5Ω(>50Hz)	≥ 43.3Ω(>50Hz)	≥ 52.7Ω(>50Hz)
Output Impedance	0.625Ω+1.2μH	0.625Ω+1.2μH	0.5Ω+1.2μH
Slew Rate	≥ 345V/μs	≥ 345V/μs	≥ 1000V/μs
DC Bias Adjustment	±150V(0.1Vstep/1Vstep)	±150V(0.1Vstep/1Vstep)	±75V(0.1Vstep/1Vstep)
Input Impedance	50Ω/100kΩ	50Ω/100kΩ	50Ω/1kΩ
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection		Overcurrent Protection
Output Voltage Drift	≤ ±0.02V		≤ ±0.1V
Output Interface	BNC		BNC
Power Supply Voltage	AC110~240V,50/60Hz		AC220V±10%,50Hz
Input Amplitude	0~10Vp-pMAX		
Output Voltage Error	≤ ±3%FS@1kHz		
Voltage Monitoring	100:1(±5%@Output,FS)		
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p		
Voltage ripple	≤ 0.01Vrms		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Dimensions (W*H*D)	440*149*454mm	440*149*454mm	442*164*474mm

ATA-4051C



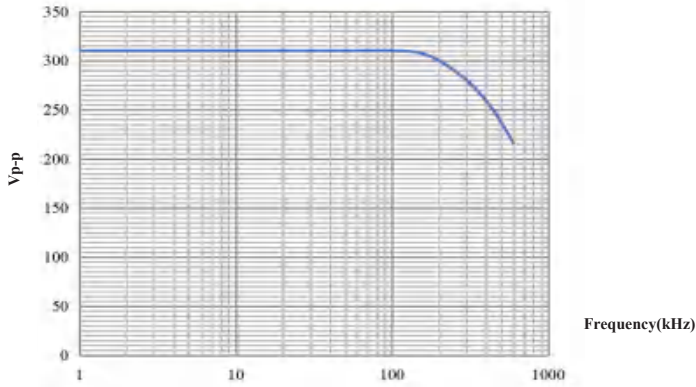
Amplitude-frequency characteristic

ATA-4051C



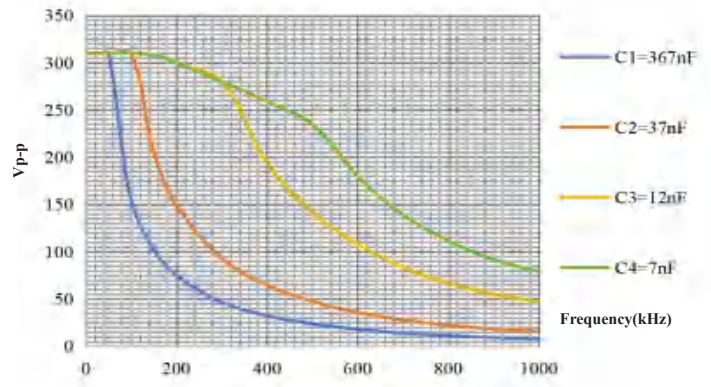
ATA-4051 Capacitive loads curve

ATA-4052C



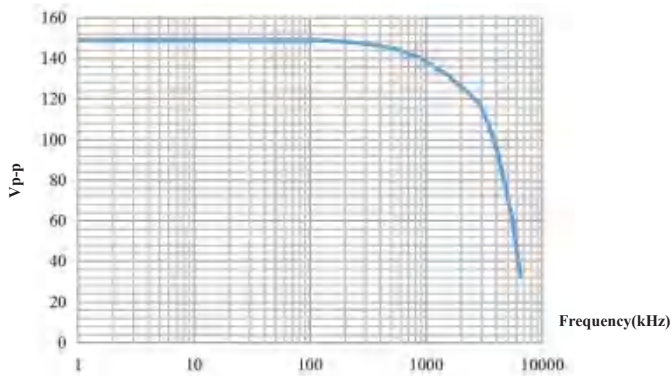
Amplitude-frequency characteristic

ATA-4052C



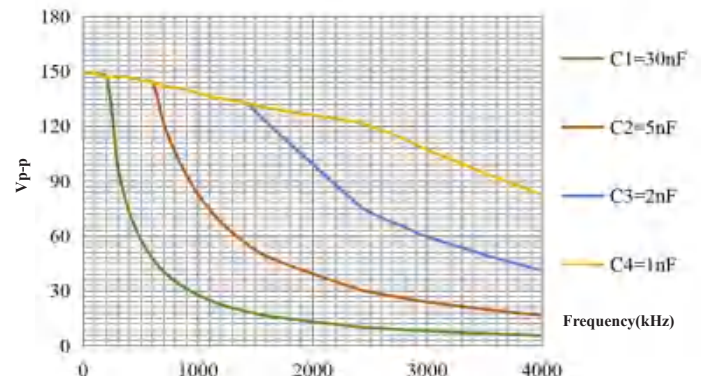
ATA-4052 Capacitive loads curve

ATA-4315



Amplitude-frequency characteristic

ATA-4315



ATA-4315 Capacitive loads curve

ATA-40000 Series High Voltage Power Amplifier



Main features

- Four-quadrant operation
- Low internal impedance output
- Digital gain control
- DC bias adjustment
- Short-circuit protection

Applications

- Capacitor (MLCC) testing
- Ultrasonic motor
- Magnetic material testing
- Piezoelectric element drive
- Display interference noise testing

Technical Parameters

Model	ATA-41008	ATA-40506
Form of output	Single output	Single output
Bandwidth(-3dB)	DC~1.2MHz	DC~500kHz
Maximum output voltage	160Vp-p(±80Vp)	310Vp-p(±155Vp)
Maximum output current	4Ap(DC~50Hz)	3Ap(DC~50Hz)
	11.31Ap, 8Arms(>50Hz)	8.48Ap, 6Arms(>50Hz)
Maximum output power	905Wp	1314Wp
Fuse	10A/250V	10A/250V
Voltage gain	x0~50(0.1 step/1 step)	x0~100(0.1 step/1 step)
Load R _L Upper Limit	≥ 19.88Ω(DC~50Hz)	≥ 51Ω(DC~50Hz)
	≥ 6.95Ω(>50Hz)	≥ 18Ω(>50Hz)
Output impedance	0.125Ω+1μH	0.32Ω+1.6μH
Slew rate	≥ 426V/μs	≥ 345V/μs
DC offset	±75V(0.1V step/1V step)	±150V(0.1V step/1V step)
Input impedance	50Ω/100kΩ	50Ω/100kΩ
Output connector	N Type	
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection	
Input amplitude	0~10Vp-pMAX	
Output voltage error	≤ ±3%FS@1kHz	
Voltage monitor	100:1 (±5%@Output, FS)	
Total harmonic distortion(THD)	≤ 0.1%@1kHz,100Vp-p	
Zero-point drift of output voltage	≤ ±0.02V	
Ripple voltage	≤ 0.01Vrms	
Signal ground	It is connected with the grounding of the shell and the power line	
Power Supply Voltage	AC110~240V, 50/60Hz	
Operating temperature	0°C ~45°C	
Storage temperature	-20°C ~50°C	
Humidity	≤ 80%RH, no condensation	
Size (w * h * d)	459*149*604mm	

ATA-7000 Series High Voltage Amplifier



Main features

- Four-quadrant operation
- Amplification of any signal
- Digital gain control
- Voltage monitoring
- Overload protection

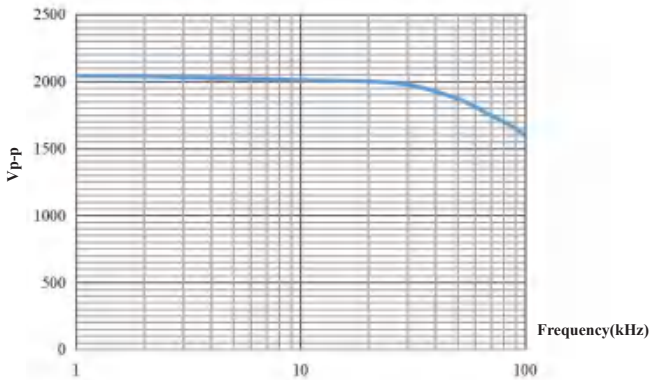
Applications

- Material polarization
- Dielectric elastomer testing
- Electrohydrodynamic printing
- Ferroelectric testing
- High-voltage electric field testing

Technical Parameters

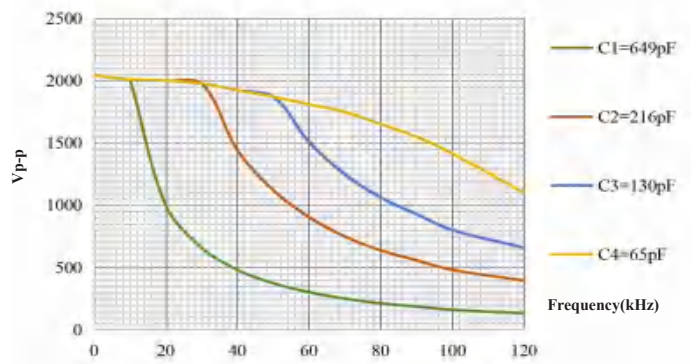
Model	ATA-7010	ATA-7015B	ATA-7020
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~100kHz	DC~40kHz	DC~30kHz
Maximum Output Voltage	2kVp-p(±1kVp)	3kVp-p(±1.5kVp)	4kVp-p(±2kVp)
Maximum Output Current	20mA _p (DC~50Hz)	20mA _p (DC~50Hz)	15mA _p (DC~50Hz)
	40mA _p (>50Hz)	40mA _p (>50Hz)	30mA _p (>50Hz)
Maximum Output Power	40W _p	60W _p	60W _p
Fuse	3A/250V	4A/250V	4A/250V
Voltage Gain	x0~1000(1step/10step)	x0~1000(1step/10step)	x0~1000(1step/10step)
Load R _L Upper Limit	≥ 49.5kΩ(DC~50Hz)	≥ 74.5kΩ(DC~50Hz)	≥ 132.33kΩ(DC~50Hz)
	≥ 24.5kΩ(>50Hz)	≥ 37kΩ(>50Hz)	≥ 65.67kΩ(>50Hz)
Output Impedance	500Ω	500Ω	1kΩ
Slew Rate	≥ 445V/μs	≥ 266V/μs	≥ 267V/μs
Output Voltage Error	≤ ±1%@(DC,1kV)	≤ ±1%@(DC,1.5kV)	≤ ±1%@(DC,2kV)
Total Harmonic Distortion(THD)	≤ 1%@1kHz,1.6kVp-p	≤ 1%@1kHz,2.4kVp-p	≤ 1%@1kHz,3.2kVp-p
Protection	Overcurrent Protection	Short-circuit protection, Overcurrent Protection	Overcurrent Protection
DC Bias Adjustment	/	±1500V(1Vstep/10Vstep)	/
Voltage Monitoring	1000:1(±5%@Output,FS)	1mV/V(±5%@Output,FS)	1000:1(±5%@Output,FS)
Current Monitoring	/	100V/A(±5%@Output,FS)	/
Input Impedance		10kΩ	
Input Amplitude		0~10Vp-pMAX	
Output Voltage Drift		≤ ±1V	
Output Interface		SHV RF connector	
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC220V±10%,50Hz	AC110~240V,50/60Hz	AC220V±10%,50Hz
Dimensions (W*H*D)	442*164*574mm	440*149*535mm	442*164*574mm

ATA-7010



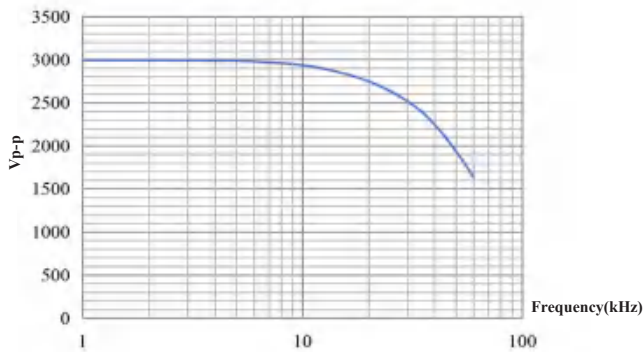
Amplitude-frequency characteristic

ATA-7010



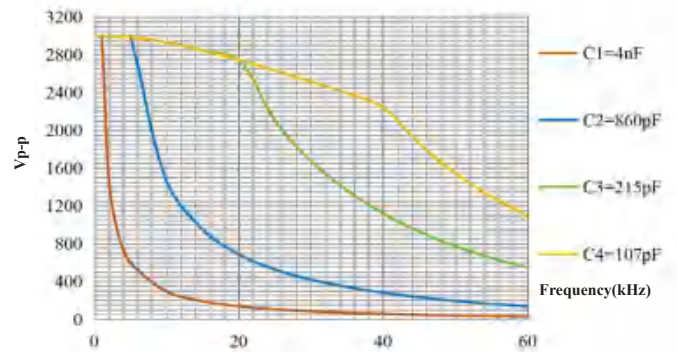
ATA-7010 Capacitive loads curve

ATA-7015B



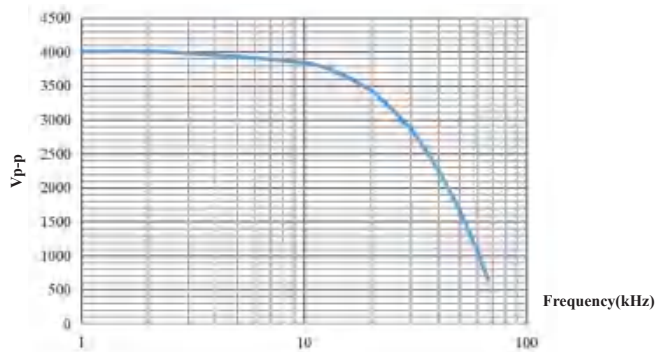
Amplitude-frequency characteristic

ATA-7015B



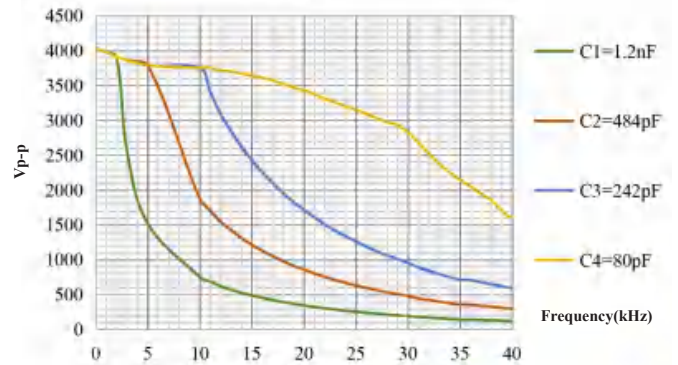
ATA-7015B Capacitive loads curve

ATA-7020



Amplitude-frequency characteristic

ATA-7020



ATA-7020 Capacitive loads curve

ATA-7000 Series High Voltage Amplifier



Main features

- Four-quadrant operation
- Amplification of any signal
- Digital gain control
- Voltage monitoring
- Overload protection

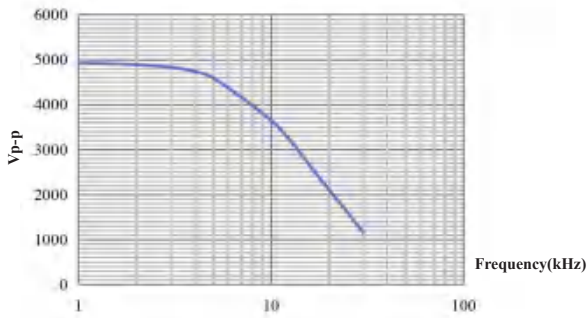
Applications

- Material polarization
- Dielectric elastomer testing
- Electrohydrodynamic printing
- Ferroelectric testing
- High-voltage electric field testing

Technical Parameters

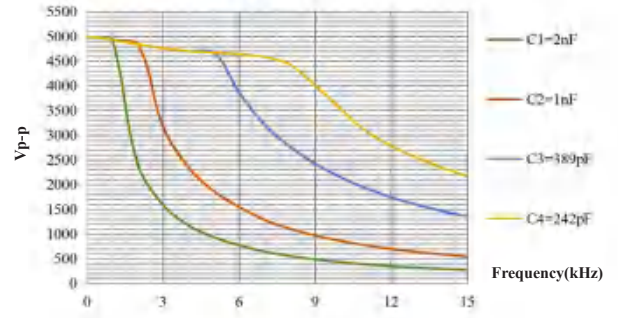
Model	ATA-7025	ATA-7030	ATA-7050	ATA-7100
Output Type	Single-ended Output	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~10kHz	DC~5kHz	DC~5kHz	DC~1.2kHz
Maximum Output Voltage	5kVp-p(±2.5kVp)	6kVp-p(±3kVp)	10kVp-p(±5kVp)	20kVp-p(±10kVp)
Maximum Output Current	15mA _p (DC~50Hz)	15mA _p (DC~50Hz)	10mA _p (DC~50Hz)	1mA _p (DC~50Hz)
	30mA _p (>50Hz)	30mA _p (>50Hz)	20mA _p (>50Hz)	2mA _p (>50Hz)
Maximum Output Power	75W _p	90W _p	100W _p	20W _p
Fuse	4A/250V	4A/250V	4A/250V	4A/250V
Voltage Gain	x0~1000 (1step/10step)	x0~1000 (1step/10step)	x0~2000 (1step/10step)	x0~2000 (1step/10step)
Load R _L Upper Limit	≥ 165.17kΩ(DC~50Hz)	≥ 198.5kΩ(DC~50Hz)	≥ 495kΩ(DC~50Hz)	≥ 10MΩ(DC~50Hz)
	≥ 81.8kΩ(>50Hz)	≥ 98.5kΩ(>50Hz)	≥ 245kΩ(>50Hz)	≥ 5MΩ(>50Hz)
Output Impedance	1.5kΩ	1.5kΩ	5kΩ/200kΩ	10kΩ
Slew Rate	≥ 112V/μs	≥ 67V/μs	≥ 111V/μs	≥ 53V/μs
Output Voltage Error	≤ ±1%@(DC,2.5kV)	≤ ±1%@(DC,3kV)	≤ ±3%@(DC,5kV)	≤ ±3%@(DC,10kV)
Total Harmonic Distortion(THD)	≤ 1%@1kHz,4kVp-p	≤ 1%@1kHz,4.8kVp-p	≤ 1%@1kHz,8kVp-p	≤ 1%@1kHz,16kVp-p
Protection	Overcurrent Protection			Short-circuit protection, Overcurrent Protection
Output Interface	SHV RF connector		high voltage connector	
Voltage Monitoring	1000V/V(±5%@Output,FS)			0.5mV/V (±5%@Output,FS)
Current Monitoring	/			1000V/A (±5%@Output,FS)
DC Bias Adjustment	/			±10000V (1step/10step)
Power Supply Voltage	AC220V±10%,50Hz			AC110~240V,50/60Hz
Output Voltage Drift	≤ ±1V			
Input Impedance	10kΩ			
Input Amplitude	0~10Vp-pMAX			
Signal Ground	Connected to chassis and power line ground			
Operating Temperature	0°C ~45°C			
Storage Temperature	-20°C ~50°C			
Working Humidity	≤ 80%RH,non-condensing			
Dimensions (W*H*D)	442*164*574mm		442*297*574mm	440*194*634mm

ATA-7025



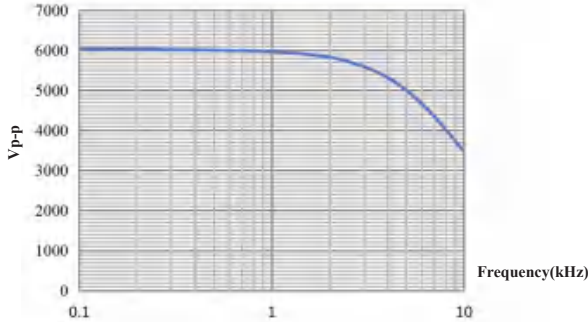
Amplitude-frequency characteristic

ATA-7025



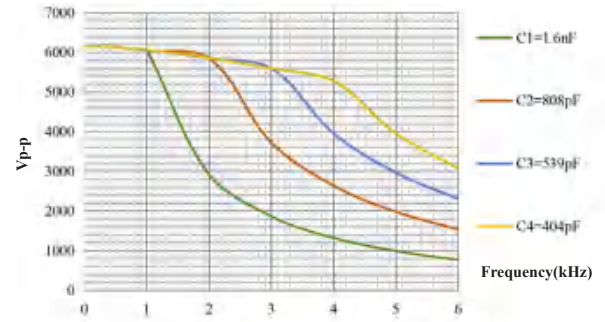
ATA-7025 Capacitive loads curve

ATA-7030



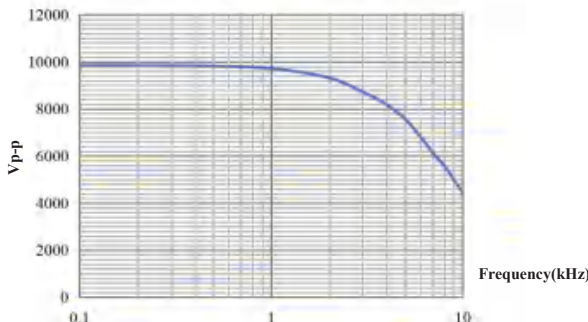
Amplitude-frequency characteristic

ATA-7030



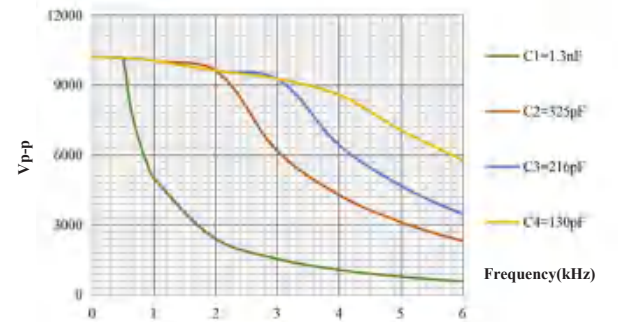
ATA-7030 Capacitive loads curve

ATA-7050



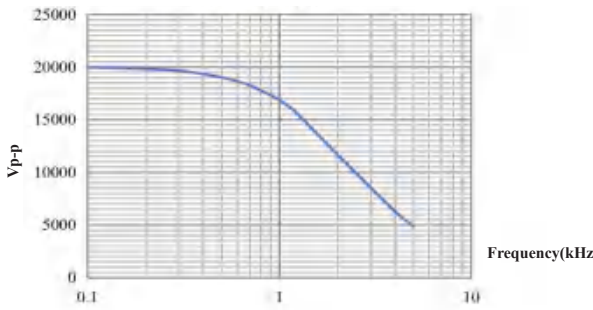
Amplitude-frequency characteristic

ATA-7050



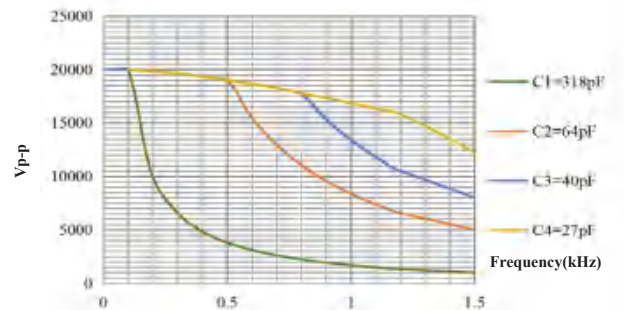
ATA-7050 Capacitive loads curve

ATA-7100



Amplitude-frequency characteristic

ATA-7100



ATA-7100 Capacitive loads curve

ATA-8000 Series RF Power Amplifier



Main features

- Digital gain control
- Reflection power protection
- Output power, reflection power monitoring
- Low harmonic distortion

Applications

- Therapeutic and diagnostic ultrasound
- Non-destructive testing and acoustics
- VHF & UHF RF amplifiers
- Wireless power transfer

Technical Parameters

Model	ATA-8222	ATA-8255	ATA-8152
Operation mode	Class AB	Class A	Class AB
Bandwidth(-3dB)	100kHz~22MHz	100kHz~25MHz	100kHz~15MHz
P1dB output power	20W	50W	100W
Saturation output power	40W	100W	200W
Power gain	40dB(20dB~40dB /0.5dB step)	44dB(24dB~44dB /0.5dBstep)	47dB(27dB~47dB /0.5dB step)
Input signal of the rated output power	316mVrms/ 2mW/3dBm (40dB gain1MHz)	316mVrms/ 2mW/3dBm (44dB gain1MHz)	316mVrms/ 2mW/3dBm (47dB gain1MHz)
Lossless maximum input signal	< -25dBc@ 20W, 1MHz	< -25dBc@ 50W, 1MHz	< -25dBc@ 100W, 1MHz
Output connector	BNC	BNC	N Type
Cooling mode		air cooling	
Operating temperature		0°C ~45°C	
Input resistance		50Ω	
Output resistance		50Ω	
Third harmonic level		1Vrms/20mW/13dBm	
Storage temperature		-20° C ~ 50° C	
Humidity		≤ 80%RH, no condensation	
Power Supply Voltage		AC110~240V, 50/60Hz	
Dimensions (W*H*D)	262*164*369mm	330*149*399mm	442*164*474mm

ATA-8000 Series RF Power Amplifier



Main features

- Digital gain control
- Reflection power protection
- Output power, reflection power monitoring
- Low harmonic distortion

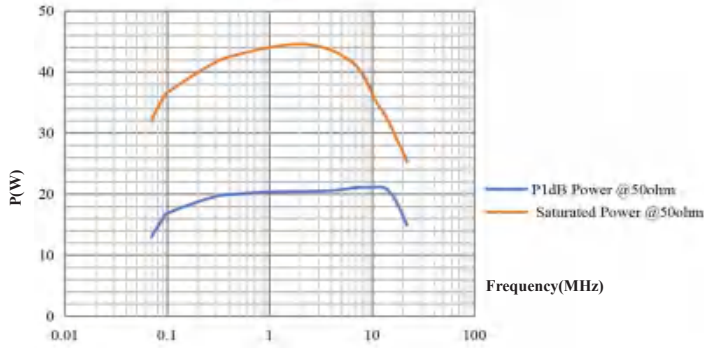
Applications

- Therapeutic and diagnostic ultrasound
- Non-destructive testing and acoustics
- VHF & UHF RF amplifiers
- Wireless power transfer

Technical Parameters

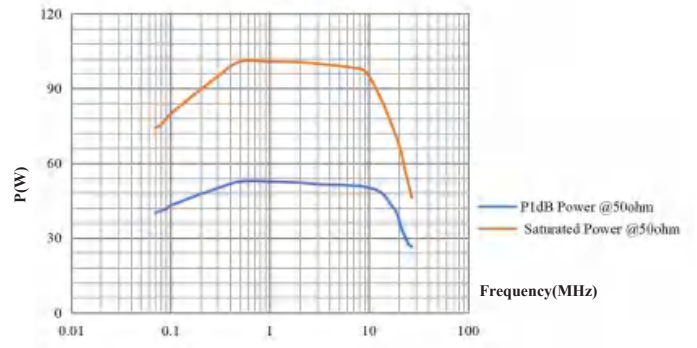
Model	ATA-8202	ATA-8055	ATA-8126
Operation mode	Class A	Class A	Class A
Bandwidth(-3dB)	100kHz~20MHz	100kHz~5MHz	100kHz~12MHz
P1dB output power	100W	250W	300W
Saturation output power	200W	500W	600W
Power gain	47dB(27dB~47dB /0.5dB step)	51dB(31dB~51dB /0.5dB step)	52dB(32dB~52dB /0.5dB step)
Input signal of the rated output power	316mVrms/ 2mW/3dBm (47dB gain1MHz)	316mVrms/ 2mW/3dBm (51dB gain- 500kHz)	316mVrms/ 2mW/3dBm (52dB gain1MHz)
Lossless maximum input signal	<-25dBc@ 100W, 1MHz	<-25dBc@ 250W, 500kHz	<-25dBc@ 300W, 1MHz
Output connector	BNC	N Type	N Type
Cooling mode	air cooling	water cooling	
Power Supply Voltage	AC110~240V,50/60Hz	AC220V±10%,50Hz	
Operating temperature	0°C ~40°C		
Input resistance	50Ω		
Output resistance	50Ω		
Third harmonic level	1Vrms/20mW/13dBm		
Storage temperature	-20° C ~ 50° C		
Humidity	≤ 80%RH, no condensation		
Dimensions (W*H*D)	330*149*399mm	440*198*650mm	440*198*650mm

ATA-8222



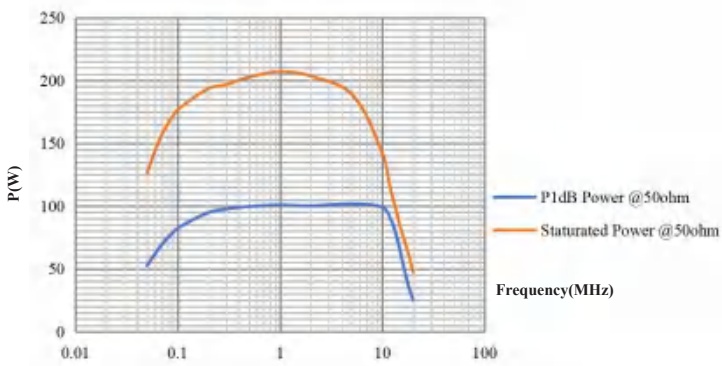
frequency response curve

ATA-8255



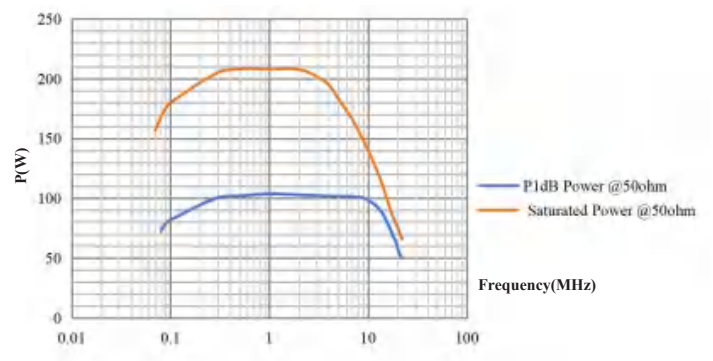
frequency response curve

ATA-8152



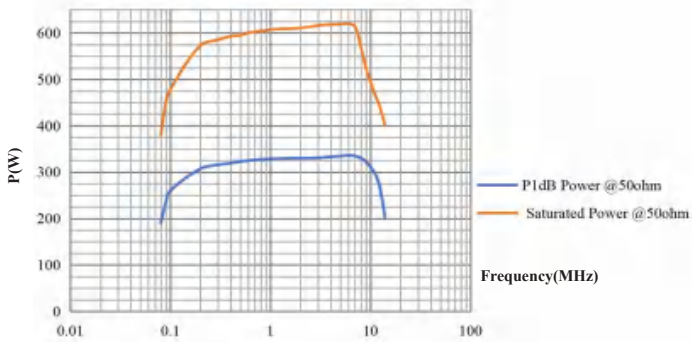
frequency response curve

ATA-8202



frequency response curve

ATA-8126



frequency response curve

ATA-L Series Power Amplifier



Main features

- Short-circuit protection
- Digital gain control
- Current monitoring / Voltage monitoring
- Multi-range adjustable output impedance
- Low harmonic distortion

Applications

- Sonar detection
- Underwater communication
- Underwater imaging
- Underwater positioning
- Underwater ranging

Technical Parameters

Model	ATA-L2B	ATA-L6B	ATA-L8B
Bandwidth (-3 dB)	40Hz~150kHz	40Hz~150kHz	40Hz~150kHz
Operating Frequency Range	Range1:40Hz~20kHz Range2:10kHz~150kHz	Range1:40Hz~20kHz Range2:10kHz~150kHz	Range1:40Hz~20kHz Range2:10kHz~150kHz
Maximum Output Voltage	300Vrms	1200Vrms	1200Vrms
Input voltage at full amplitude output	1Vrms	1Vrms	1Vrms
Maximum Continuous Output Power	260VA	800VA	1000VA
Maximum Pulsed Output Power	650VA,10%@1S	2000VA,10%@1S	2500VA,10%@1S
Total Harmonic Distortion(THD)	≤ 1%@1kHz,53Vrms (106Vrms tap)	≤ 1%@1kHz,53Vrms (106Vrms tap)	≤ 1%@1kHz,53Vrms (106Vrms tap)
Voltage Monitoring	10mV/V (±5%@Output,FS)	5mV/V (±5%@Output,FS)	5mV/V (±5%@Output,FS)
Current Monitoring	100mV/A(±5%@Output,FS)		
Input Impedance	10kΩ		
Output Interface	Aviation Connector		
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection, no-Load Protection		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V, 50/60Hz		

Tap selection according to the output impedance

Model	Output power	Output impedance	Maximum output voltage	Maximum output current	
L2B	Maximum continuous output power	43Ω	106Vrms	2.47Arms	
		87Ω	150Vrms	1.72Arms	
		173Ω	212Vrms	1.23Arms	
		346Ω	300Vrms	0.87Arms	
	Maximum pulse output power	17.3Ω	106Vrms	6.13Arms	
		34.6Ω	150Vrms	4.34Arms	
		69Ω	212Vrms	3.07Arms	
		139Ω	300Vrms	2.16Arms	
		14Ω	106Vrms	7.75Arms	
		28Ω	150Vrms	5.36Arms	
L6B	Maximum continuous output power	56Ω	212Vrms	3.79Arms	
		113Ω	300Vrms	2.65Arms	
		225Ω	424Vrms	1.88Arms	
		450Ω	600Vrms	1.33Arms	
		899Ω	848Vrms	0.94Arms	
		1800Ω	1200Vrms	0.67Arms	
		Maximum pulse output power	5.6Ω	106Vrms	18.93Arms
			11.25Ω	150Vrms	13.33Arms
	22.5Ω		212Vrms	9.42Arms	
	45Ω		300Vrms	6.67Arms	
	90Ω		424Vrms	4.71Arms	
	180Ω		600Vrms	3.33Arms	
			360Ω	848Vrms	2.36Arms
			720Ω	1200Vrms	1.67Arms

Tap selection according to the output impedance

Model	Output power	Output impedance	Maximum output voltage	Maximum output current
L8B	Maximum continuous output power	11.2Ω	106Vrms	9.43Arms
		22.5Ω	150Vrms	6.67Arms
		45Ω	212Vrms	4.72Arms
		90Ω	300Vrms	3.33Arms
		180Ω	424Vrms	2.36Arms
		360Ω	600Vrms	1.67Arms
		719Ω	848Vrms	1.18Arms
		1440Ω	1200Vrms	0.83Arms
	Maximum pulse output power	4.49Ω	106Vrms	23.58Arms
		9Ω	150Vrms	16.67Arms
		18Ω	212Vrms	11.79Arms
		36Ω	300Vrms	8.33Arms
		72Ω	424Vrms	5.90Arms
		144Ω	600Vrms	4.17Arms
		288Ω	848Vrms	2.95Arms
		576Ω	1200Vrms	2.08Arms

Note:

- 1、 The effective value of the input signal is strictly prohibited from exceeding 1V, and appropriate adjustments can be made within 1V according to the actual use.
- 2、 In actual use, it is necessary to strictly abide by the bandwidth, maximum output voltage and load capacity limit, and it is strictly prohibited to use beyond the range.

ATA-L Series Power Amplifier



Main features

- Short-circuit protection
- Digital gain control
- Current monitoring / Voltage monitoring
- Multi-range adjustable output impedance
- Low harmonic distortion

Applications

- Sonar detection
- Underwater communication
- Underwater imaging
- Underwater positioning
- Underwater ranging

Technical Parameters

Model	ATA-L10	ATA-L20	ATA-L30	ATA-L50
Bandwidth (-3 dB)	200Hz~120kHz	200Hz~120kHz	200Hz~120kHz	200Hz~120kHz
Maximum Output Voltage	1200Vrms	1200Vrms	1200Vrms	1200Vrms
Operating Frequency Range	1Vrms	1Vrms	1Vrms	1Vrms
Maximum Continuous Output Power	1300VA	2600VA	4000VA	6500VA
Maximum Pulsed Output Power	3300VA,10%@1S	6500VA,10%@1S	10000VA,10%@1S	16500VA,10%@1S
Total Harmonic Distortion(THD)	≤ 1%@1kHz, 53Vrms (106Vrms tap)	≤ 1%@1kHz, 53Vrms (106Vrms tap)	≤ 1%@1kHz, 100Vrms (424Vrms tap)	≤ 1%@1kHz, 100Vrms (424Vrms tap)
Input Impedance	10kΩ			
Voltage Monitoring	5mV/V(±5%@Output,FS)			
Current Monitoring	100mV/A(±5%@Output,FS)			
Output Interface	Terminal			
Protection	Short-circuit protection, over-temperature protection, no-Load Protection			
Signal Ground	Connected to chassis and power line ground			
Power Supply Voltage	AC380V,50/60Hz,3phase			
Operating Temperature	0°C ~45°C			
Storage Temperature	-20°C ~50°C			
Working Humidity	≤ 80%RH,non-condensing			

Tap selection according to the output impedance

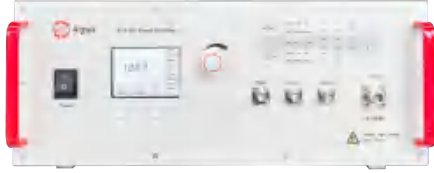
Model	Output impedance	Maximum output voltage	Maximum output current
L10	8.6Ω	106Vrms	12.32Arms
	17Ω	150Vrms	8.82Arms
	35Ω	212Vrms	6.06Arms
	69Ω	300Vrms	4.35Arms
	138Ω	424Vrms	3.07Arms
	277Ω	600Vrms	2.17Arms
	553Ω	848Vrms	1.53Arms
	1108Ω	1200Vrms	1.08Arms
L20	4.3Ω	106Vrms	24.65Arms
	8.6Ω	150Vrms	17.44Arms
	17Ω	212Vrms	12.47Arms
	35Ω	300Vrms	8.57Arms
	69Ω	424Vrms	6.14Arms
	138Ω	600Vrms	4.35Arms
	277Ω	848Vrms	3.06Arms
	553Ω	1200Vrms	2.17Arms
L30	45Ω	424Vrms	9.43Arms
	90Ω	600Vrms	6.67Arms
	180Ω	848Vrms	4.72Arms
	360Ω	1200Vrms	3.33Arms
L50	27.6Ω	424Vrms	15.14Arms
	55.3Ω	600Vrms	10.91Arms
	110.5Ω	848Vrms	7.64Arms
	221Ω	1200Vrms	5.41Arms

Note:

1、The effective value of the input signal is strictly prohibited from exceeding 1V, and appropriate adjustments can be made within 1V according to the actual use.

2、In actual use, it is necessary to strictly abide by the bandwidth, maximum output voltage and load capacity limit, and it is strictly prohibited to use beyond the range.

ATA-M Series Power Amplifier



Main features

- Short-circuit protection
- Digital gain control
- Current monitoring / Voltage monitoring
- Multi-range adjustable output impedance
- Pulse power 2000VA, 10%@1s

Applications

- Sonar detection
- Underwater communication
- Underwater imaging
- Underwater positioning
- Underwater ranging

Technical Parameters

Model	ATA-M2	ATA-M4	ATA-M8
Bandwidth(-3dB)	10kHz~500kHz	10kHz~500kHz	10kHz~500kHz
Maximum output voltage	175Vrms	345Vrms	690Vrms
Maximum output power	200VA	400VA	800VA
Maximum puls output power	500VA, 10%@1S	1000VA, 10%@1S	2000VA, 10%@1S
Input voltage at full amplitude output	1Vrms		
Input resistance	10kΩ		
Current monitor	100mV/A(±5%@Output, FS)		
Voltage monitor	10mV/ V(±5%@Output, FS)		
Total harmonic distortion(THD)	≤ 0.5%@50kHz,42Vrms(85Vrms tap)		
Output connector	N Type		
Protection	short-circuit protection, over voltage protection, over temperature protection, no-load protection		
Signal ground	It is connected with the grounding of the shell and the power line		
Operating temperature	0°C ~45°C		
Storage temperature	-20°C ~50°C		
Humidity	≤ 80%RH, no condensation		
Power Supply Voltage	AC110~240V, 50/60Hz		

Tap selection according to the output impedance

Model	Output power	Output impedance	Maximum output voltage	Maximum output current
M2	Maximum continuous output power	18Ω	60Vrms	3.33Arms
		36Ω	85Vrms	2.36Arms
		72Ω	120Vrms	1.67Arms
		153Ω	175Vrms	1.14Arms
		7.2Ω	60Vrms	8.33Arms
	Maximum pulse output power	14.4Ω	85Vrms	5.90Arms
		28.8Ω	120Vrms	4.17Arms
		61.2Ω	175Vrms	2.86Arms
		9Ω	60Vrms	6.67Arms
		18Ω	85Vrms	4.72Arms
M4	Maximum continuous output power	36Ω	120Vrms	3.33Arms
		77Ω	175Vrms	2.27Arms
		150Ω	245Vrms	1.63Arms
		298Ω	345Vrms	1.16Arms
		3.6Ω	60Vrms	16.67Arms
	Maximum pulse output power	7.2Ω	85Vrms	11.81Arms
		14.4Ω	120Vrms	8.33Arms
		30.6Ω	175Vrms	5.71Arms
		60Ω	245Vrms	4.08Arms
		119Ω	345Vrms	2.90Arms

Tap selection according to the output impedance

Model	Output power	Output impedance	Maximum output voltage	Maximum output current
M8	Maximum continuous output power	4.5Ω	60Vrms	13.33Arms
		9Ω	85Vrms	9.44Arms
		18Ω	120Vrms	6.67Arms
		38Ω	175Vrms	4.60Arms
		75Ω	245Vrms	3.27Arms
		149Ω	345Vrms	2.32Arms
		300Ω	490Vrms	1.63Arms
		595Ω	690Vrms	1.16Arms
	Maximum pulse output power	1.8Ω	60Vrms	33.33Arms
		3.6Ω	85Vrms	23.61Arms
		7.2Ω	120Vrms	16.67Arms
		15.3Ω	175Vrms	11.44Arms
		30Ω	245Vrms	8.17Arms
		59.5Ω	345Vrms	5.80Arms
		120Ω	490Vrms	4.08Arms
		238Ω	690Vrms	2.90Arms

Note:

- 1、The effective value of the input signal is strictly prohibited from exceeding 1V, and appropriate adjustments can be made within 1V according to the actual use.
- 2、In actual use, it is necessary to strictly abide by the bandwidth, maximum output voltage and load capacity limit, and it is strictly prohibited to use beyond the range.

ATA-P Series Power Amplifier



Main features

- Maximum output power: 1300Wp
- Digital gain control
- Current monitoring / Voltage monitoring
- Overcurrent protection

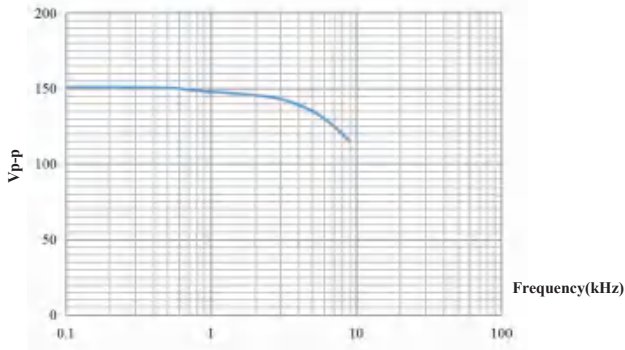
Applications

- Piezoelectric stack testing
- Precision machining
- Piezoelectric nanopositioning table
- Optical focusing

Technical Parameters

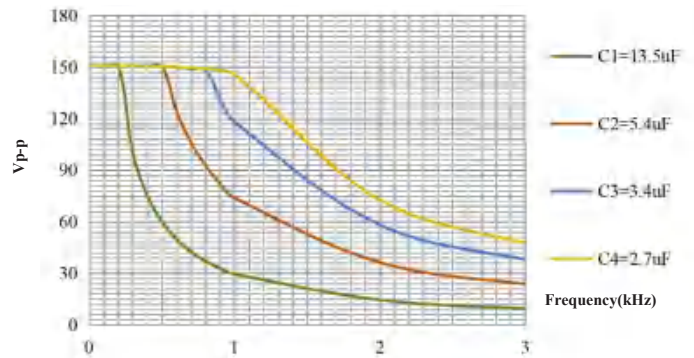
Model	ATA-P0102	ATA-P1005	ATA-P2010
Number of Channel	1	1	1
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~1kHz	DC~10kHz	DC~20kHz
Maximum Output Voltage	0V~150V	0V~150V	-20V~130V
Maximum Output Current	1.25Ap(DC~50Hz)	2.5Ap(DC~50Hz)	5Ap(DC~50Hz)
	2.5Ap(>50Hz)	5Ap(>50Hz)	10Ap(>50Hz)
Maximum Output Power	375Wp	750Wp	1300Wp
Fuse	8A/250V	8A/250V	15A/250V
Load R _L Upper Limit	≥ 119Ω(DC~50Hz)	≥ 59.5Ω(DC~50Hz)	≥ 25.75Ω(DC~50Hz)
	≥ 59Ω(>50Hz)	≥ 29.5Ω(>50Hz)	≥ 12.75Ω(>50Hz)
Voltage · Gain	x0~50(0.1step/1step)	x0~50(0.1step/1step)	x0~50(0.1step/1step)
Input Impedance	10kΩ	10kΩ	10kΩ
Output Impedance	1Ω	0.5Ω	0.25Ω
Slew Rate	≥ 0.67V/μs	≥ 6.7V/μs	≥ 11.5V/μs
Current Monitoring	1V/A(±5%@Output,FS)	500mV/A(±5%@Output,FS)	250mV/A(±5%@Output,FS)
Voltage Monitoring	50mV/V(±5%@Output,FS)		
Input Amplitude	0~10Vp-pMAX		
Output Voltage Error	≤ ±3%FS@1kHz		
Output Voltage Drift	≤ ±0.3V		
Output Interface	4mm Banana Plug		
Protection	Overcurrent Protection, over-voltage protection, and over-temperature protection		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0° C~45° C		
Storage Temperature	-20° C~50° C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V,50/60Hz		
Dimensions (W*H*D)	442*164*574mm		

ATA-P0102



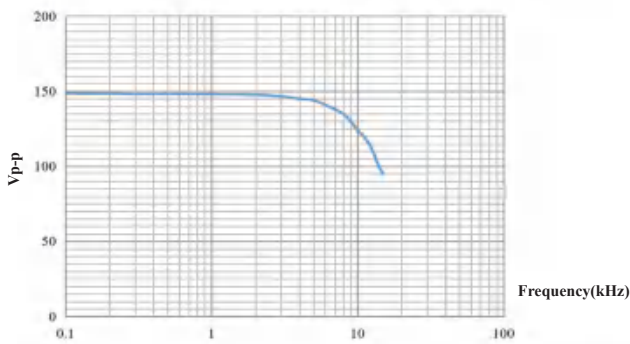
Amplitude-frequency characteristic

ATA-P0102



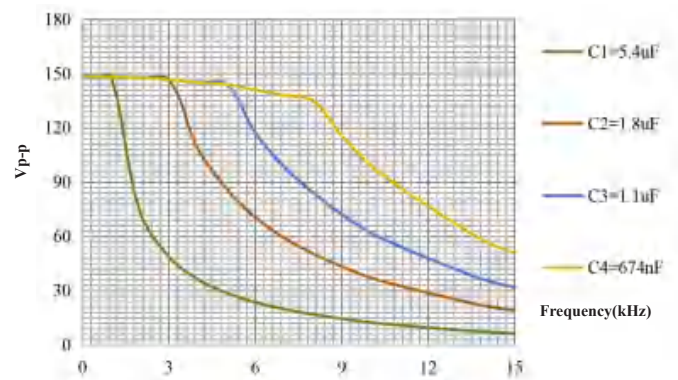
ATA-P0102 Capacitive loads curve

ATA-P1005



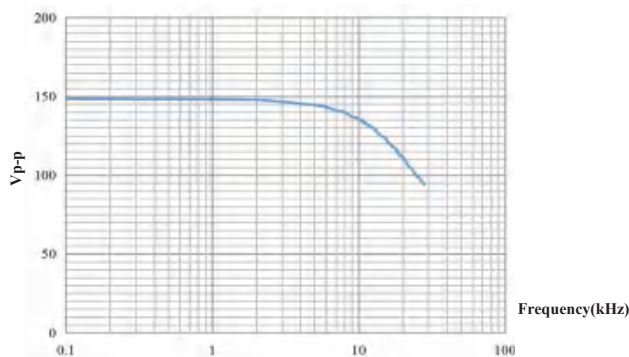
Amplitude-frequency characteristic

ATA-P1005



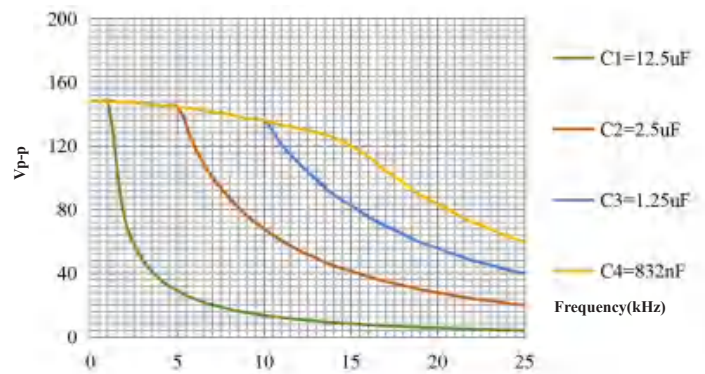
ATA-P1005 Capacitive loads curve

ATA-P2010



Amplitude-frequency characteristic

ATA-P2010



ATA-P2010 Capacitive loads curve

ATA-100 Series Power Amplifier



Main features

- Four-quadrant operation
- Two-range adjustable output impedance
- High cost-performance ratio
- Compact design

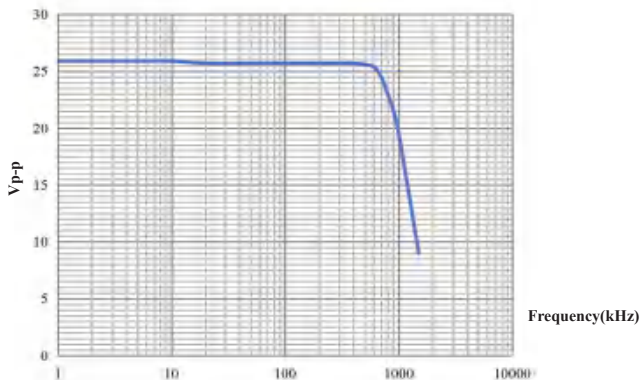
Applications

- Piezoelectric ceramic drive
- Ultrasonic transducer drive
- Medical ultrasound
- Electro-optic modulation
- Semiconductor device testing

Technical Parameters

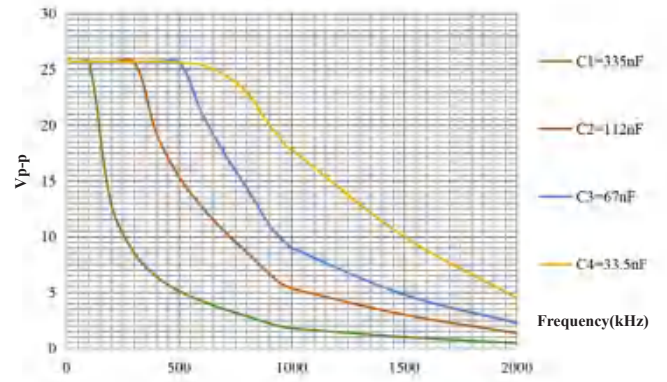
Model	ATA-101B	ATA-105B
Form of output	Single output	Single output
Bandwidth(-3dB)	DC~1MHz	DC~5MHz
Maximum output voltage	25Vp-p(±12.5Vp)	25Vp-p(±12.5Vp)
Maximum output current	1Ap(DC~50Hz)	1Ap(DC~50Hz)
	2Ap(>50Hz)	2Ap(>50Hz)
Maximum output power	25Wp	25Wp
Fuse	2A/250V	2A/250V
Voltage gain	0~20dB(2dB step)	0~20dB(2dB step)
Load R_L Upper Limit	$\geq 11\Omega$ (DC~50Hz)	$\geq 11\Omega$ (DC~50Hz)
	$\geq 4.75\Omega$ (>50Hz)	$\geq 4.75\Omega$ (>50Hz)
Slew rate	$\geq 56V/\mu s$	$\geq 278V/\mu s$
Output resistance	1.5Ω/50Ω	
Input resistance	50Ω/1MΩ	
Input amplitude	0~10Vp-pMAX	
Output voltage error	$\leq \pm 3\%FS@1kHz$	
Total harmonic distortion(THD)	$\leq 0.5\%@1kHz, 25Vp-p$	
Zero-point drift of output voltage	$\leq \pm 0.2V$	
Signal-noise ratio(SNR)	$\geq 60dB$	
Output connector	BNC	
Protection	Overcurrent protection	
Signal ground	It is connected with the grounding of the shell and the power line	
Operating temperature	0°C ~45°C	
Storage temperature	-20°C ~50°C	
Humidity	$\leq 80\%RH$, no condensation	
Power Supply Voltage	AC110~240V, 50/60Hz	
Size (w * h * d)	168*62*284mm	

ATA-101B



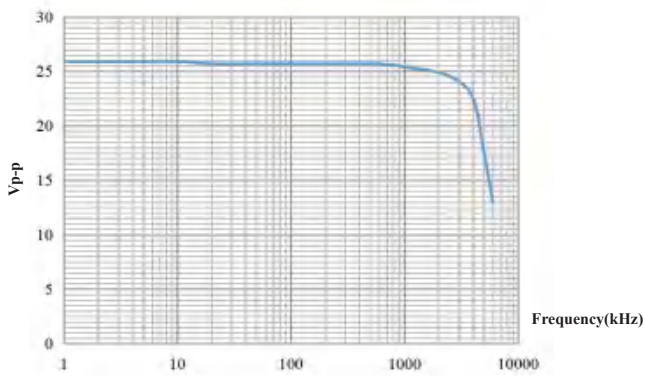
Amplitude-frequency characteristic

ATA-101B



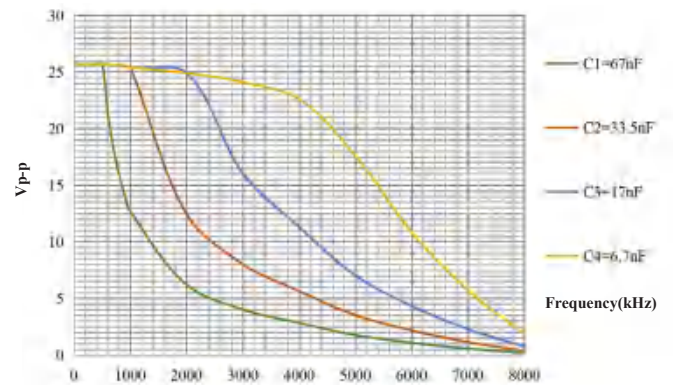
ATA-101B Capacitive loads curve

ATA-105B



Amplitude-frequency characteristic

ATA-105B



ATA-105B Capacitive loads curve

ATA-300 Series Power Amplifier



Main features

- Four-quadrant operation
- Amplification of any signal
- Low internal impedance output
- Current monitoring / Voltage monitoring
- Short-circuit protection

Applications

- Magnetic material testing
- Transformer testing
- Motor drive
- Exciter testing
- Helmholtz coil testing

Technical Parameters

Model	ATA-304C	ATA-308C	ATA-309C
Output Type	Single-ended Output	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~30kHz	DC~30kHz	DC~30kHz
Maximum Output Voltage	100Vp-p(±50Vp)	160Vp-p(±80Vp)	100Vp-p(±50Vp)
Maximum Output Current	5Ap(DC~50Hz)	5Ap(DC~50Hz)	10Ap(DC~50Hz)
	10Ap(>50Hz)	10Ap(>50Hz)	20Ap(>50Hz)
Maximum Output Power	500Wp	800Wp	1000Wp
Voltage Gain	x0~30 (0.1step/1step)	x0~60 (0.1step/1step)	x0~30 (0.1step/1step)
Load R _L Upper Limit	≥ 9.9Ω(DC~50Hz)	≥ 15.9Ω(DC~50Hz)	≥ 4.9Ω(DC~50Hz)
	≥ 4.9Ω(>50Hz)	≥ 7.9Ω(>50Hz)	≥ 2.4Ω(>50Hz)
Slew Rate	≥ 6.6V/μs	≥ 10.6V/μs	≥ 6.6V/μs
DC Bias Adjustment	±50V (0.1Vstep/1Vstep)	±80V (0.1Vstep/1Vstep)	±50V (0.1Vstep/1Vstep)
Current Monitoring	0.1V/A(±5%@Output,FS)	0.1V/A(±5%@Output,FS)	0.05V/A(±5%@Output,FS)
Voltage Monitoring	20mV/V(±5%@Output,FS)		
Output Voltage Drift	≤ ±0.05V		
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection		
Output Interface	4mm Banana Plug		
Fuse	10A/250V		
Input Impedance	50Ω/100kΩ		
Output Impedance	0.1Ω		
Input Amplitude	0~10Vp-pMAX		
Output Voltage Error	≤ ±3%FS@1kHz		
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p		
Voltage ripple	≤ 0.01Vrms		
Signal Ground	Connected to chassis and power line ground		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V,50/60Hz		
Dimensions (W*H*D)	440*149*535mm		

ATA-300 Series Power Amplifier



Main features

- Four-quadrant operation
- Amplification of any signal
- Low internal impedance output
- Current monitoring / Voltage monitoring
- Short-circuit protection

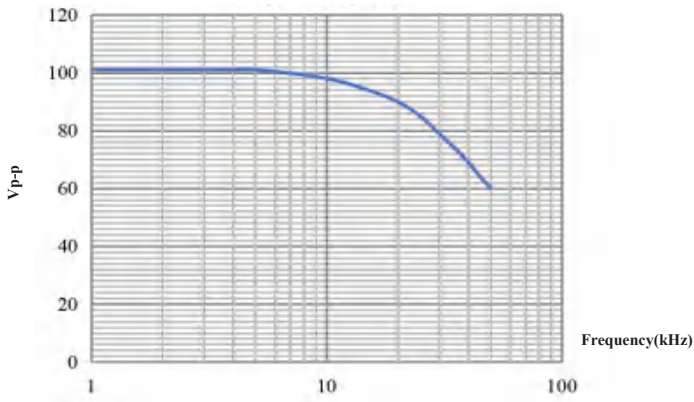
Applications

- Magnetic material testing
- Transformer testing
- Motor drive
- Exciter testing
- Helmholtz coil testing

Technical Parameters

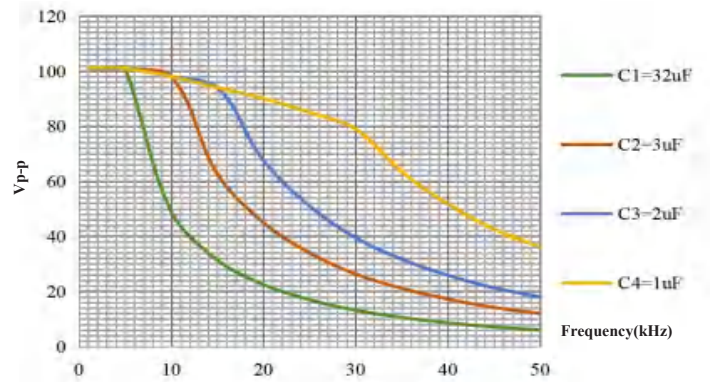
Model	ATA-314	ATA-315
Output Type	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~20kHz	10kHz~150kHz
Maximum Output Voltage	100Vp-p(±50Vp)	850Vp-p(±425Vp)
Maximum Output Current	20Ap(DC~50Hz) 40Ap(>50Hz)	2.12Ap
Maximum Output Power	2000Wp	901Wp
Voltage Gain	x0~30(0.1step/1step)	x0~300(1step)
Load R_L Upper Limit	$\geq 2.4\Omega$ (DC~50Hz) $\geq 1.15\Omega$ (>50Hz)	$180\Omega \geq R_L \geq 1k\Omega$
Slew Rate	$\geq 4.44V/\mu s$	188V/ μs
DC Bias Adjustment	$\pm 50V$ (0.1Vstep/1Vstep)	/
Voltage Monitoring	20mV/V($\pm 5\%$ @Output,FS)	10mV/V($\pm 5\%$ @Output,FS)
Current Monitoring	40mV/A($\pm 5\%$ @Output,FS)	1V/A($\pm 5\%$ @Output,FS)
Output Voltage Drift	$\leq \pm 0.1V$	/
Protection	Overcurrent Protection, over-voltage protection, and over-temperature protection	Overcurrent Protection, over-temperature protection
Output Interface	Aviation Connector	4mm Banana Plug
Fuse	/	10A/250V
Input Impedance	50 Ω /100k Ω	10k Ω
Output Impedance	0.1 Ω	200 Ω
Voltage ripple		$\leq 0.01V_{rms}$
Input Amplitude		0~10Vp-pMAX
Output Voltage Error		$\leq \pm 3\%FS@1kHz$
Total Harmonic Distortion(THD)		$\leq 0.1\%@1kHz,100Vp-p$
Signal Ground	Connected to chassis and power line ground	
Operating Temperature	0°C ~45°C	
Storage Temperature	-20°C ~50°C	
Working Humidity	$\leq 80\%RH$,non-condensing	
Power Supply Voltage	AC110~240V,50/60Hz	
Dimensions (W*H*D)	440*149*550mm	440*149*453mm

ATA-304C



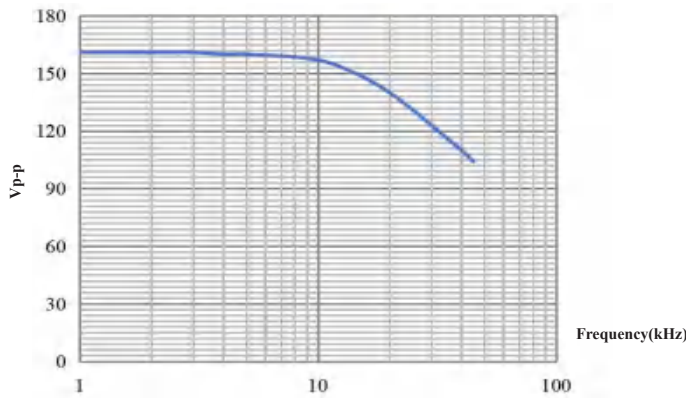
Amplitude-frequency characteristic

ATA-304C



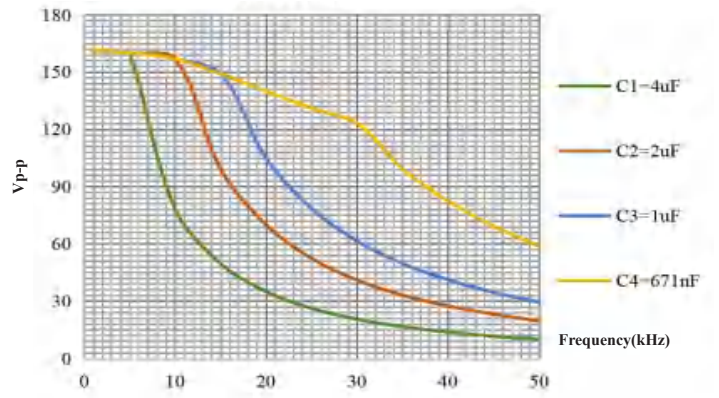
ATA-304C Capacitive loads curve

ATA-308C



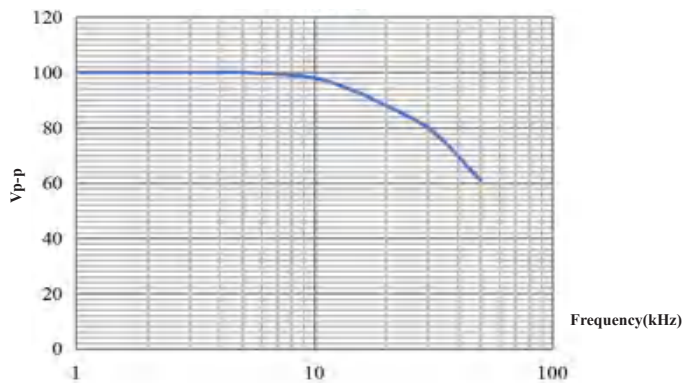
Amplitude-frequency characteristic

ATA-308C



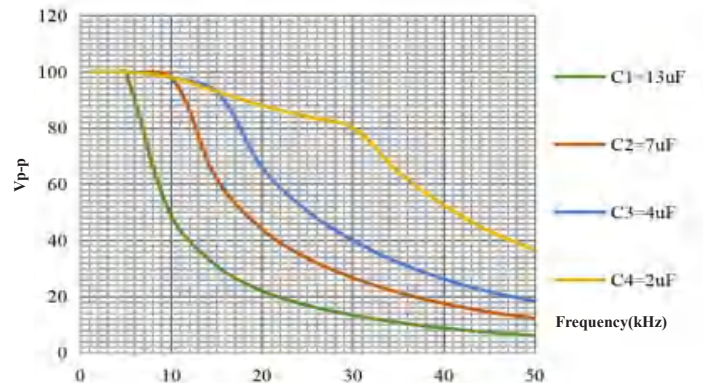
ATA-308C Capacitive loads curve

ATA-309C



Amplitude-frequency characteristic

ATA-309C



ATA-309C Capacitive loads curve

ATA-400 Series High Voltage Power Amplifier



Main features

- Four-quadrant operation
- Low internal impedance output
- Digital gain control
- DC bias adjustment
- Short-circuit protection

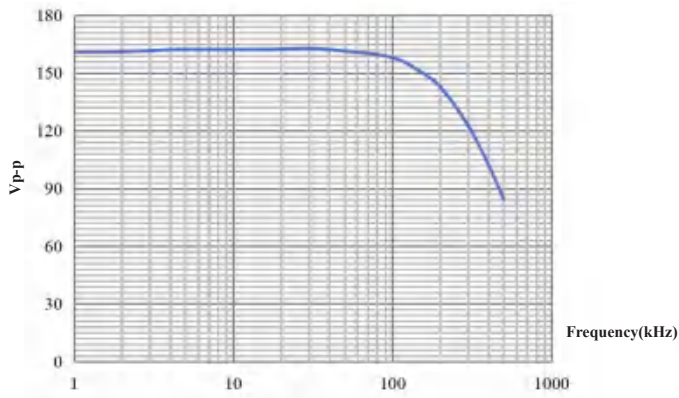
Applications

- Capacitor (MLCC) testing
- Ultrasonic motor
- Magnetic material testing
- Piezoelectric element drive
- Display interference noise testing

Technical Parameters

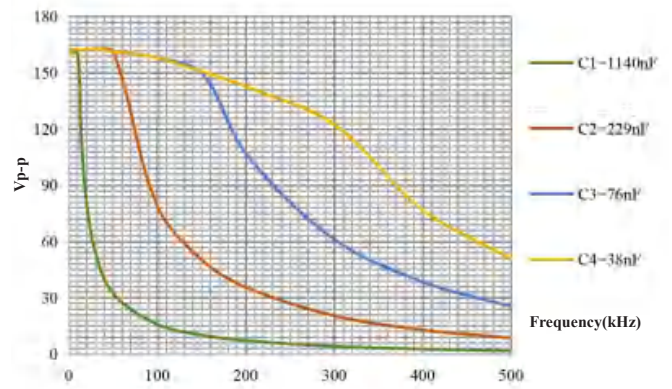
Model	ATA-401	ATA-402
Output Type	Single-ended Output	Single-ended Output
Bandwidth (-3 dB)	DC~300kHz	DC~120kHz
Maximum Output Voltage	160Vp-p(±80Vp)	310Vp-p(±155Vp)
Maximum Output Current	2Ap(DC~50Hz)	1.25Ap(DC~50Hz)
	5.65Ap,4Arms(>50Hz)	3.53Ap,2.5Arms(>50Hz)
Maximum Output Power	452Wp	547.1Wp
Fuse	8A/250V	10A/250V
Voltage Gain	x0~50(0.1step/1step)	x0~100(0.1step/1step)
Load R _L Upper Limit	≥ 39.75Ω(DC~50Hz)	≥ 123.4Ω(DC~50Hz)
	≥ 13.91Ω(>50Hz)	≥ 43.3Ω(>50Hz)
Output Impedance	0.25Ω+0.6μH	0.625Ω+1.2μH
Slew Rate	≥ 107V/μs	≥ 83V/μs
DC Bias Adjustment	±75V(0.1Vstep/1Vstep)	±150V(0.1Vstep/1Vstep)
Input Impedance	50Ω/100kΩ	
Voltage Monitoring	100:1(±5%@Output,FS)	
Input Amplitude	0~10Vp-pMAX	
Output Voltage Error	≤ ±3%FS@1kHz	
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,100Vp-p	
Output Voltage Drift	≤ ±0.02V	
Voltage ripple	≤ 0.01Vrms	
Output Interface	BNC	
Protection	Short-circuit protection, over-voltage protection, and over-temperature protection	
Signal Ground	Connected to chassis and power line ground	
Operating Temperature	0°C ~45°C	
Storage Temperature	-20°C ~50°C	
Working Humidity	≤ 80%RH,non-condensing	
Power Supply Voltage	AC110~240V,50/60Hz	
Dimensions (W*H*D)	440*149*454mm	

ATA-401



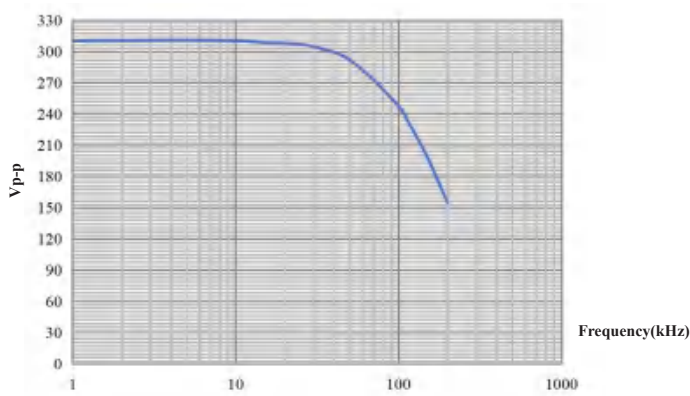
Amplitude-frequency characteristic

ATA-401



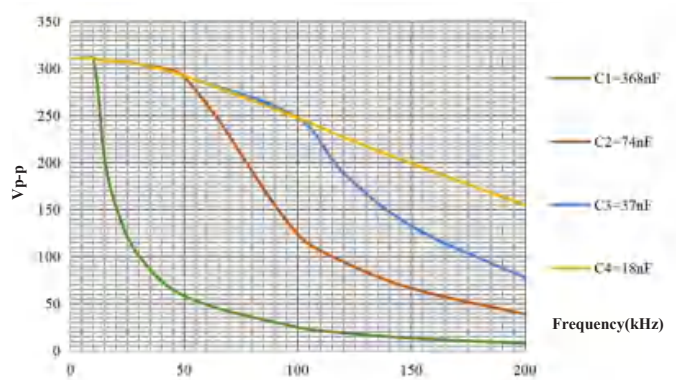
ATA-401 Capacitive loads curve

ATA-402



Amplitude-frequency characteristic

ATA-402



ATA-402 Capacitive loads curve

ATS-M1000C Series Broadband Current Transformer Excitation Source



Main features

- Four-quadrant operation
- Amplification of any waveform
- Broadband, high current output
- Multiple fixtures for different sensors

Applications

- Current sensor testing
- Hall current sensor testing
- Response time testing
- Frequency response testing
- Battery thermal management

Technical Parameters

Model	ATS-M1010C	ATS-M1020C	ATS-M1040C
Bandwidth (-3 dB)	DC~10MHz	DC~10MHz	DC~10MHz
Maximum Output Current	10Arms@ ≤ 1MHz	20Arms@ ≤ 1MHz	40Arms@ ≤ 1MHz
Current Monitoring	0.625V/A	0.3125V/A	0.1562V/A
Current Sensitivity	0.072V/A@100Hz	0.036V/A@100Hz	0.05V/A@100Hz
Maximum Input Amplitude	2.828Vp-pMAX	3.5Vp-pMAX	10Vp-pMAX
Total Harmonic Distortion(THD)	≤ 0.1%@1kHz,10Arms	≤ 0.1%@1kHz,20Arms	≤ 0.1%@1kHz,40Arms
Input Impedance	50Ω		
Protection	Overcurrent protection indication, Over-temperature protection indication		
Operating Temperature	0°C ~45°C		
Storage Temperature	-20°C ~50°C		
Working Humidity	≤ 80%RH,non-condensing		
Power Supply Voltage	AC110~240V,50/60Hz		
Dimensions (W*H*D)	400*213*485mm	400*227*485mm	605*230*467mm

Power Signal Generator Selection Guide



1. Waveform

Sine wave, square wave, triangle wave, pulse wave.

2. Bandwidth

It refers to the frequency at which the sine wave curve input signal attenuates to 70.7% of the true signal amplitude, that is -3dB point.

3. Amplitude

When selecting the power signal source, it is necessary to consider whether the output amplitude is sufficient or not, and the output amplitude will be attenuated to 70.7% at -3dB frequency point, so redundancy should be considered.

4. Current

According to the impedance of the measured load, the power signal source which can meet the current demand is selected.

5. Load

According to the test conditions of the tested load, verify whether the selected power signal source meets the requirements.

Note: The input signal of power signal source can be connected by internal or external devices, which provides a flexible and rich test environment for customers.

(1) The power signal source mode is used when the built-in access is adopted, and the waveform parameters can be directly output;

(2) The external access mode is amplifier mode. The signal is input from the 'input' port. The signal can be amplified by adjusting the "amplifier" magnification.

ATG-2000 Series Power Signal Generator



Main features

- Amplification of any signal
- Digital gain control
- Current monitoring / Voltage monitoring
- Variable voltage rail
- DC bias adjustment

Applications

- Electroluminescent device testing
- Dielectrophoresis
- MEMS device testing
- Non-destructive testing
- Cell sorting

Technical Parameters

Model	ATG-2021B	ATG-2022B	ATG-2031	ATG-2032
Number of channels	1	2	1	2
Output Type	Single output		Single output	
Bandwidth(-3dB)	DC~1MHz		DC~500kHz	
Maximum output voltage	200Vp-p(±100Vp)		300Vp-p(±150Vp)	
Range of output voltage	Range1:+40V~-160V		/	
	Range2:+100V~-100V		/	
	Range3:+160V~-40V		/	
Maximum output current	250mA _p (DC~50Hz)		60mA _p (DC~50Hz)	
	500mA _p (>50Hz)		120mA _p (>50Hz)	
Maximum output power	50W _p		18W _p	
Fuse	2A/250V	5A/250V	2A/250V	
Voltage gain	x0~60(1 step)		x0~50(1 step)	
Load R _L Upper Limit	≥ 395Ω(DC~50Hz)		≥ 2.45kΩ(DC~50Hz)	
	≥ 195Ω(>50Hz)		≥ 1.2kΩ(>50Hz)	
Output resistance	5Ω/50Ω		50Ω/2.5kΩ	
Slew rate	≥ 445V/μs		≥ 334V/μs	
Input resistance	10kΩ		5kΩ	
Voltage monitor	20mV/(±5%@Output,FS)		10mV/(±5%@Output,FS)	
Current monitor	2V/A(±5%@Output,FS)		10V/A(±5%@Output,FS)	
Input amplitude	0~10Vp-pMAX			
Output voltage error	≤ ±3%FS@1kHz			
Total harmonic distortion(THD)	≤ 0.1%@1kHz, 100Vp-p			
Zero drift of output voltage	≤ ±0.1V			
Signal-noise ratio (SNR)	≥ 80dB			
Output connector	4mm banana connector			
Protection	Over current protection			
Signal ground	It is connected with the grounding of the shell and the power line			

Operating temperature:	0°C ~45°C		
Storage temperature:	-20°C ~50°C		
Humidity:	≤ 80% RH, no condensation		
Power Supply voltage	AC110~240V, 50/60Hz	AC220V±10%,50Hz	
Size (w * h * d)	366*164*369mm	442*164*474mm	366*164*369mm

Technical Parameters

Model	ATG-2041	ATG-2042	ATG-2081	ATG-2082	ATG-2161
Number of channels	1	2	1	2	1
Output Type	Single output		Single output		Differential output
Bandwidth(-3dB)	DC~500kHz		DC~200kHz		DC~150kHz
Maximum output voltage	400Vp-p(±200Vp)		800Vp-p(±400Vp)		1600Vp-p(±800Vp)
Maximum output current	50mA _p (DC~50Hz)		20mA _p (DC~50Hz)		20mA _p (DC~50Hz)
	100mA _p (>50Hz)		40mA _p (>50Hz)		40mA _p (>50Hz)
Maximum output power	20W _p		16W _p		32W _p
Voltage gain	x0~60(1 step)		x0~120(1 step)		x0~240(1 step)
Load R _L Upper Limit	≥ 3.95kΩ(DC~50Hz)		≥ 19.9kΩ(DC~50Hz)		≥ 39.8kΩ(DC~50Hz)
	≥ 1.95kΩ(>50Hz)		≥ 9.9kΩ(>50Hz)		≥ 19.8kΩ(>50Hz)
Output resistance	50Ω/2.5kΩ		100Ω/5kΩ		200Ω/10kΩ
Slew rate	≥ 445V/μs		≥ 356V/μs		≥ 534V/μs
Current monitor	10V/A (±5%@Output,FS)		20V/A (±5%@Output,FS)		/
Voltage monitor			100:1(±5%@Output,FS)		
Input resistance			5kΩ		
Input amplitude			0~10Vp-pMAX		
Output voltage error			≤ ±3%FS@1kHz		
Total harmonic distortion(THD)			≤ 0.1%@1kHz, 100Vp-p		
Zero-point drift of output voltage			≤ ±0.3V		
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				
Fuse			2A/250V		
Operating temperature	0°C ~45°C				
Storage temperature	-20°C ~50°C				
Humidity	≤ 80%RH, no condensation				
Power Supply voltage	AC220V±10%,50Hz				
Size (w * h * d)	366*164*369mm				

ATG-3000 Series Power Signal Source



Main features

- Capable of outputting sine waves, square waves, triangle waves, and pulse waves
- Internal or external input signal
- Maximum output power: 810Wp
- Operating frequency (-3dB): DC to 100kHz
- Digitally adjustable voltage gain

Applications

- Magnetic material testing
- Transformer testing
- Motor drive
- Exciter testing
- Helmholtz coil testing

Technical Parameters

Model	ATG-3040	ATG-3080	ATG-3090
Output Type	Single output	Differential output	Single output
Bandwidth(-3dB)	DC~100kHz	DC~100kHz	DC~100kHz
Maximum output voltage	90Vp-p(±45Vp)	180Vp-p(±90Vp)	90Vp-p(±45Vp)
Maximum output current	4Ap(DC~50Hz)	4Ap(DC~50Hz)	9Ap(DC~50Hz)
	8Ap(>50Hz)	8Ap(>50Hz)	18Ap(>50Hz)
Maximum output power	360Wp	720Wp	810Wp
Fuse	8A/250V	8A/250V	10A/250V
Voltage gain	x0~30(1 step)	x0~60(1 step)	x0~30(1 step)
Load R _L Upper Limit	≥ 11.15Ω(DC~50Hz)	≥ 22Ω(DC~50Hz)	≥ 4.9Ω(DC~50Hz)
	≥ 5.5Ω(>50Hz)	≥ 10.75Ω(>50Hz)	≥ 2.4Ω(>50Hz)
Output resistance	0.1Ω/50Ω	0.5Ω/100Ω	0.1Ω/50Ω
Slew rate	≥ 20V/μs	≥ 40V/μs	≥ 20V/μs
Input resistance		5kΩ	
Input amplitude		0~10Vp-pMAX	
Output voltage error		≤ ±3%FS@1kHz	
Total harmonic distortion(THD)		≤ 0.1%@1kHz, 90Vp-p	
Zero-point drift of output voltage		≤ ±0.3V	
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°C ~45°C		
Storage temperature	-20°C ~50°C		
Humidity	≤ 80%RH, no condensation		
Power Supply voltage	AC220V±10%,50Hz		
Size (w * h * d)	442*164*474mm		

ATG-300 Series Power Signal Source



Main features

- Capable of outputting sine waves, square waves, triangle waves, and pulse waves
- Internal or external input signal
- Maximum output power: 810Wp
- Operating frequency (-3dB): DC to 30kHz
- Digitally adjustable voltage gain

Applications

- Magnetic material testing
- Transformer testing
- Motor drive
- Exciter testing
- Helmholtz coil testing

Technical Parameters

Model	ATG-304	ATG-308	ATG-309
Output Type	Single output	Differential output	Single output
Bandwidth(-3dB)	DC~30kHz	DC~30kHz	DC~30kHz
Maximum output voltage	90Vp-p(±45Vp)	180Vp-p(±90Vp)	90Vp-p(±45Vp)
Maximum output current	4Ap(DC~50Hz)	4Ap(DC~50Hz)	9Ap(DC~50Hz)
	8Ap(>50Hz)	8Ap(>50Hz)	18Ap(>50Hz)
Maximum output power	360Wp	720Wp	810Wp
Fuse	8A/250V	8A/250V	10A/250V
Voltage gain	x0~30(1 step)	x0~60(1 step)	x0~30(1 step)
Load R _L Upper Limit	≥ 11.15Ω(DC~50Hz)	≥ 22Ω(DC~50Hz)	≥ 4.9Ω(DC~50Hz)
	≥ 5.5Ω(>50Hz)	≥ 10.75Ω(>50Hz)	≥ 2.4Ω(>50Hz)
Output resistance	0.1Ω	0.5Ω	0.1Ω
Slew rate	≥ 6V/μs	≥ 12V/μs	≥ 6V/μs
Input resistance		5kΩ	
Input amplitude		0~10Vp-pMAX	
Output voltage error		≤ ±3%FS@1kHz	
Total harmonic distortion(THD)		≤ 0.5%@1kHz, 90Vp-p	
Zero-point drift of output voltage		≤ ±0.3V	
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°C ~45°C		
Storage temperature	-20°C ~50°C		
Humidity	≤ 80%RH, no condensation		
Power Supply voltage	AC220V±10%,50Hz		
Size (w * h * d)	442*164*474mm		

ATA-5000 Series Preamplifier



Main features

- Modular design
- DC power supply
- Optional ultra-low noise power supply

Applications

- Non-destructive testing
- Magnetoacoustic imaging
- Sonar detection
- Small signal amplification

Technical Parameters

Model	ATA-5210	ATA-5220	ATA-5310	ATA-5320	ATA-5410
Bandwidth(-3dB)	1kHz~5MHz	1kHz~5MHz	1kHz~10MHz	1kHz~10MHz	1kHz~20MHz
Input resistance	50Ω	50Ω	50Ω	50Ω	50Ω
Input conversion noise voltage	0.7nV/√Hz below (1kHz) 0.5nV/√Hz typ (1k~1MHz)	1.7nV/√Hz below (1kHz) 1.5nV/√Hz typ (1k~1MHz)	0.7nV/√Hz below (100kHz) 0.5nV/√Hz typ (10k~1MHz)	1.7nV/√Hz below (100kHz) 1.5nV/√Hz typ (10k~1MHz)	1.2nV/√Hz below (100kHz) 0.9nV/√Hz typ (10k~1MHz)
Input conversion noise current	7pA/√Hz typ (10kHz)	13pA/√Hz typ (10kHz)	7pA/√Hz typ (10kHz)	13pA/√Hz typ (10kHz)	7pA/√Hz typ (10kHz)
Maximum output voltage	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)
Output resistance	50Ω	50Ω	50Ω	50Ω	50Ω
Voltage gain	46 dB	60 dB	46 dB	60 dB	46 dB
Supply voltage	DC15V, 200mA				
Size (w * h * d)	128*70*24mm				

Model	ATA-5420	ATA-5510	ATA-5520	ATA-5610	ATA-5620
Bandwidth(-3dB)	1kHz~20MHz	1kHz~50MHz	1kHz~50MHz	1kHz~100MHz	1kHz~100MHz
Input resistance	50Ω	50Ω	50Ω	50Ω	50Ω
Input conversion noise voltage	1.9nV/√Hz below (100kHz) 1.2nV/√Hz typ (10k~1MHz)	1.2nV/√Hz below (100kHz) 0.9nV/√Hz typ (10k~1MHz)	1.9nV/√Hz below (100kHz) 1.2nV/√Hz typ (10k~1MHz)	1.2 nV/√Hz below (100kHz) 0.9nV/√Hz typ (10k~1MHz)	1.9nV/√Hz below (100kHz) 1.2nV/√Hz typ (10k~1MHz)
Input conversion noise current	13pA/√Hz typ (10kHz)	7pA/√Hz typ (10kHz)	13pA/√Hz typ (10kHz)	7pA/√Hz typ (10kHz)	13pA/√Hz typ (10kHz)
Maximum output voltage	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)	2 Vp-p (50Ω)
Output resistance	50Ω	50Ω	50Ω	50Ω	50Ω
Voltage gain	60 dB	46 dB	60 dB	46 dB	60 dB
Supply voltage	DC15V, 200mA				
Size (w * h * d)	128*70*24mm				

ATA-P5000 preamplifier low noise power supply(Optional)

Fuse	0.5A/250V
Operating temperature	0°C ~45°C
Storage temperature	-20°C ~50°C
Humidity	≤ 80%RH, no condensation

Supply voltage	AC110~240V, 50/60Hz
Output voltage	DC15V
Maximum output current	200mA
Output noise voltage	<50μVrms(10Hz to 20MHz)



About Aigtek

Xi'an Aigtek Electronic Technology Co., Ltd. is a globally recognized manufacturer of test instruments.

The company is dedicated to the research, development, and manufacturing of test instruments such as power amplifiers, power amplifier modules, RF power amplifiers, power signal sources, and measurement calibration sources. These products are widely applied in scientific research fields, including ultrasound acoustics, material testing, biomedicine, underwater communication, piezoelectric drive, and electromagnetic field drive.

This selection manual version is V1.2, dated April 2025. Changes to the version may occur without notice. Please request the latest product specifications from our company before placing an order.

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