

## ATA-2000 Series High Voltage Amplifier

High voltage, multichannel (synchronous output)

Input and output resistance adjustable

One key saving common settings

Monitoring port 100:1



## Technical Index

Bandwidth (-3dB) up to DC~1 MHz

Output voltage up to 1600 Vp-p ( $\pm 800$  Vp)

Maximum output current 500mA (higher current can be customized)

## Introduction

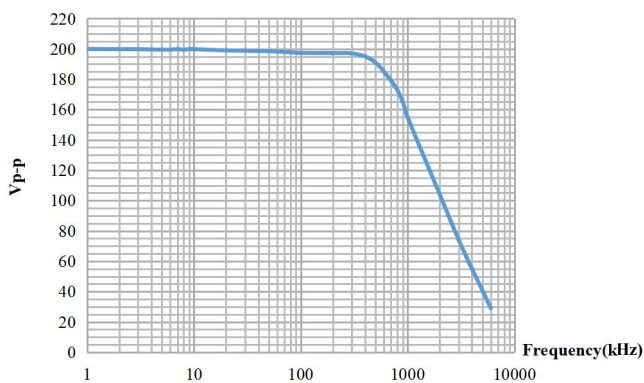
ATA-2000 series is an ideal high voltage amplifier that can amplify AC and DC signals. The maximum differential output is 1600 Vp-p ( $\pm 800$ Vp) high voltage, which can drive high-voltage load. The voltage gain can be adjusted by numerical control, and the common settings can be saved by one key. At the same time, the output of dual channel high-voltage amplifier can also be adjusted synchronously, which can be used with mainstream signal generator to realize perfect signal amplification.

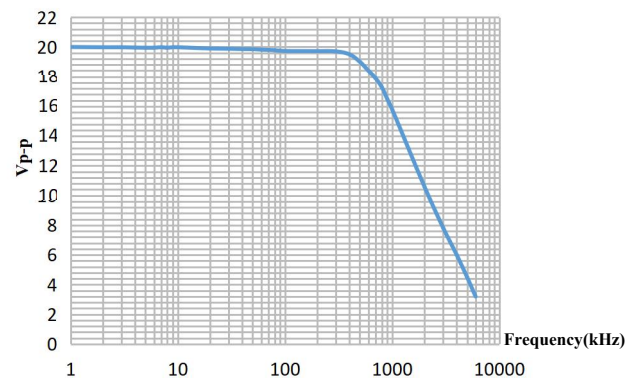
Model	ATA-2021H	ATA-2022H	ATA-2031	ATA-2032	ATA-214
Number of channels	1	2	1	2	1
Output form	Single output		Single output		Single output
Bandwidth (-3dB)	DC~1MHz		DC~500kHz		DC~500kHz
Maximum output voltage	200Vp-p ( $\pm 100$ Vp)		300Vp-p ( $\pm 150$ Vp)		400Vp-p ( $\pm 200$ Vp)
Maximum output current	250mA (DC~50Hz)		60mA (DC~50Hz)		150mA (DC~50Hz)
	500mA (>50Hz)		120mA (>50Hz)		300mA (>50Hz)
Maximum output power	50Wp		18Wp		60Wp
Fuse	2A/250V	5A/250V	2A/250V		2A/250V
Voltage gain	x0~60 (0.1 step/1 step)		x0~50 (0.1 step/1 step)		x0~100 (0.1 step/1 step)
Load $R_L$ upper limit	$\geq 395\Omega$ (DC~50Hz)		$\geq 2.45k\Omega$ (DC~50Hz)		$\geq 1323\Omega$ (DC~50Hz)
	$\geq 195\Omega$ (>50Hz)		$\geq 1.2k\Omega$ (>50Hz)		$\geq 657\Omega$ (>50Hz)
Output resistance	5 $\Omega$ /1k $\Omega$ (Customizable)		50 $\Omega$ /2.5k $\Omega$ (Customizable)		10 $\Omega$ /2.5k $\Omega$ (Customizable)
Slew Rate	$\geq 445V/\mu s$		$\geq 334V/\mu s$		$\geq 444.3V/\mu s$
Input resistance	50 $\Omega$ / 5k $\Omega$				
Input amplitude	0~10Vp-pMAX				

Output voltage error	≤±3% FS@1kHz				
Voltage monitoring	100:1 (±5%)				
Total harmonic distortion (THD)	≤0.1%@1kHz, 100Vp-p				
Output voltage Zero-point drift	≤±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	AC220V±10%, 50Hz				
Operating temperature	0°C~45°C				
Storage temperature	-20°C~50°C				
Humidity	≤80%RH, No condensation				
Size (W * H * D)	365*163*365mm	440*163*470mm	365*163*365mm	365*163*365mm	365*163*365mm

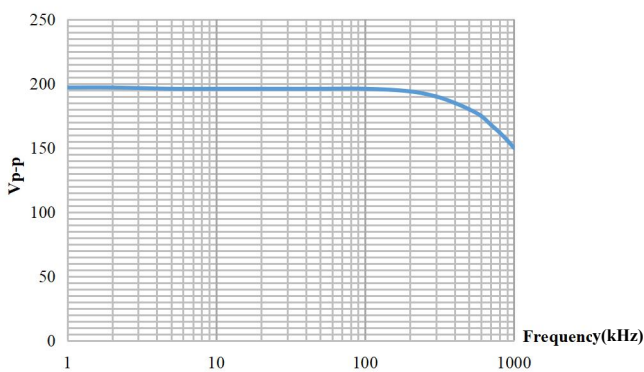
Model	ATA-2041	ATA-2042	ATA-2081	ATA-2082	ATA-2161
Number of channels	1	2	1	2	1
Output form	Single output		Single output		Differential output
Bandwidth (-3dB)	DC~500kHz		DC~200kHz		DC~150kHz
Maximum output voltage	400Vp-p (±200Vp)		800Vp-p (±400Vp)		1600Vp-p (±800Vp)
Maximum output current	50mA <sub>p</sub> (DC~50Hz)		20mA <sub>p</sub> (DC~50Hz)		20mA <sub>p</sub> (DC~50Hz)
	100mA <sub>p</sub> (>50Hz)		40mA <sub>p</sub> (>50Hz)		40mA <sub>p</sub> (>50Hz)
Maximum output power	20W <sub>p</sub>		16W <sub>p</sub>		32W <sub>p</sub>
Voltage gain	x0~60 (0.1 step/1 step)		x0~120 (0.1 step/1 step)		x0~240 (0.1 step/1 step)
Load R <sub>L</sub> 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 (Customizable)		100Ω /5kΩ (Customizable)		200Ω /10kΩ (Customizable)
Slew Rate	≥445V/μs		≥356V/μs		≥534V/μs
Input resistance	50Ω / 5kΩ				
Input amplitude	0~10Vp-pMAX				
Output voltage error	≤±3% FS@1kHz				
Voltage monitoring	100:1 (±5%)				
Total harmonic distortion (THD)	≤0.1%@1kHz, 100Vp-p				
Output voltage zero-point drift	≤±0.3V				
Signal-noise ratio(SNR)	≥80dB				
Output Connector	4mm Banana socket				

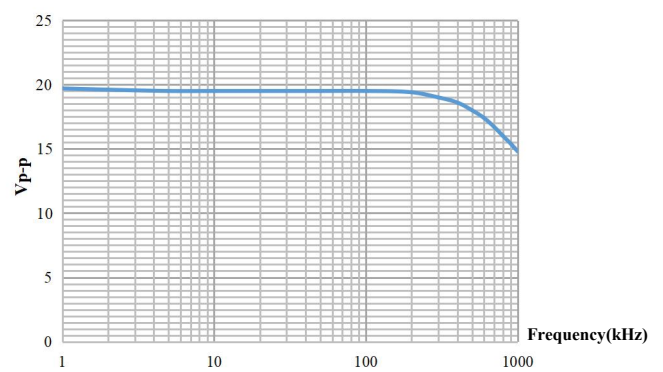
Protection	Overcurrent protection
Signal Ground	It is connected with the grounding of the shell and the power line
Supply voltage	AC220V±10%, 50Hz
Fuse	2A/250V
Operating temperature	0°C~45°C
Storage temperature	-20°C~50°C
Humidity	80%RH, no condensation
Size (W * H * D)	365*163*365mm

**ATA-2021H**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

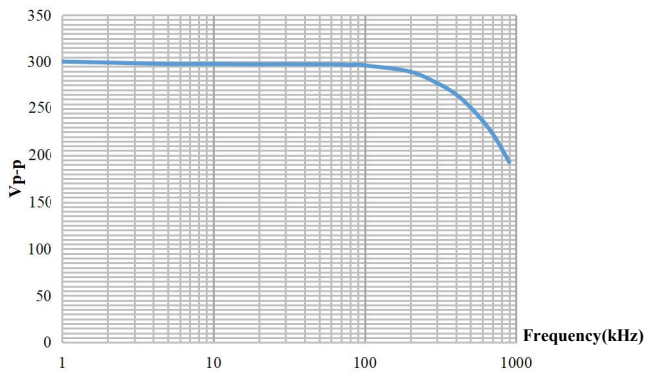
**ATA-2021H**


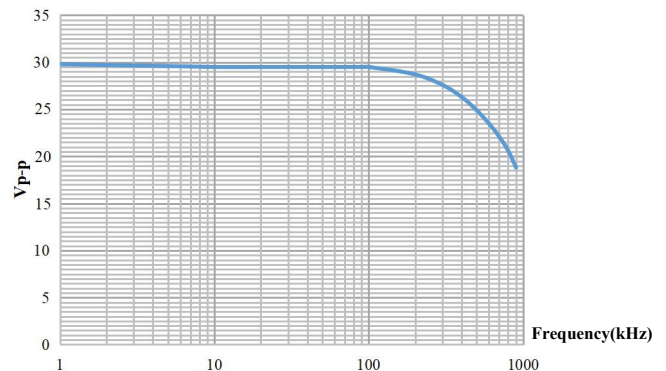
Small signal amplitude-frequency characteristic

**ATA-2022H**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

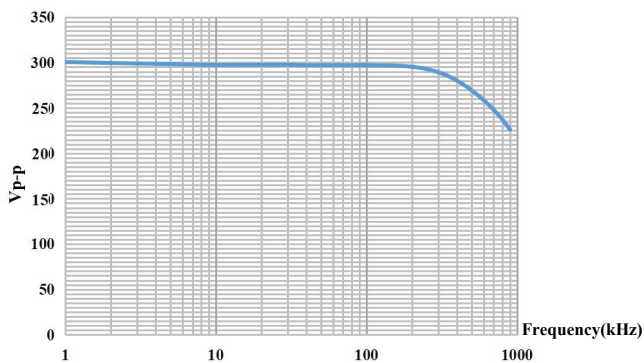
**ATA-2022H**


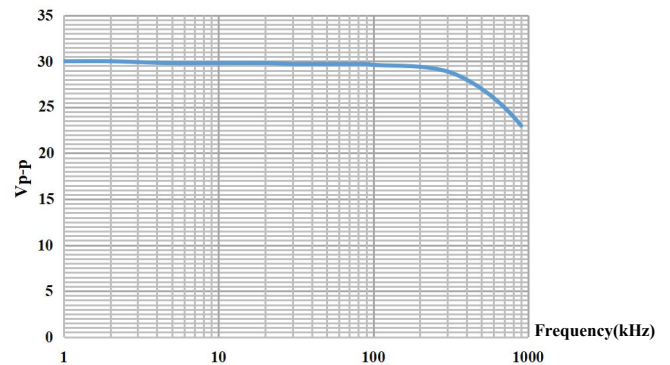
Small signal amplitude-frequency characteristic

**ATA-2031**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

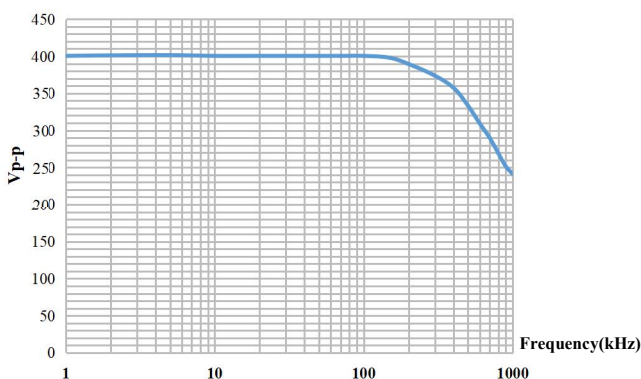
**ATA-2031**


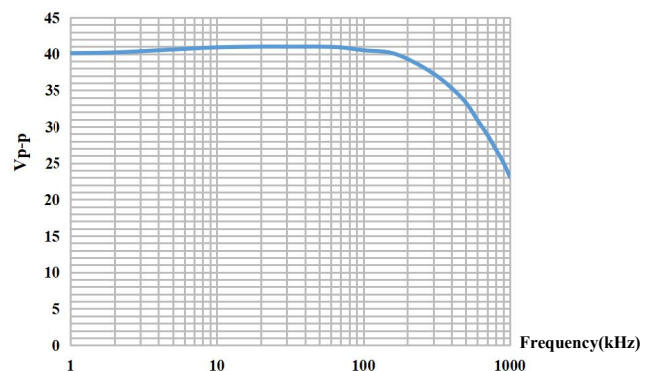
Small signal amplitude-frequency characteristic

**ATA-2032**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

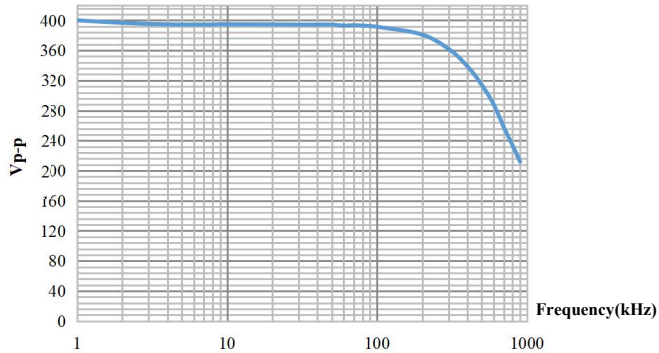
**ATA-2032**


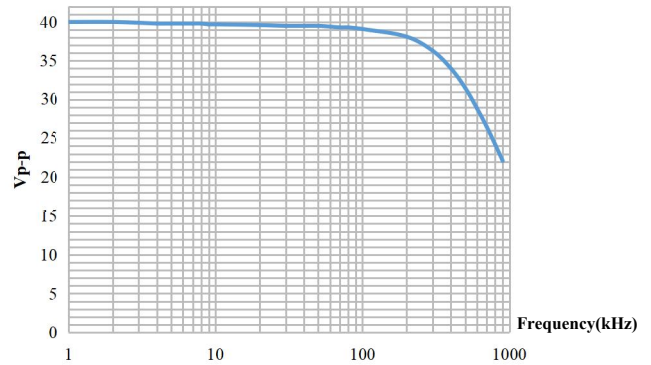
Small signal amplitude-frequency characteristic

**ATA-214**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

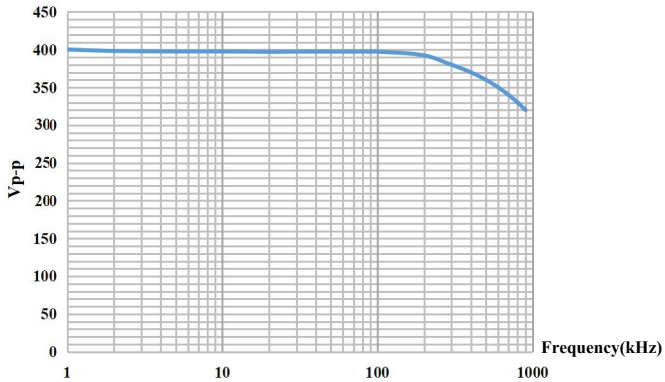
**ATA-214**


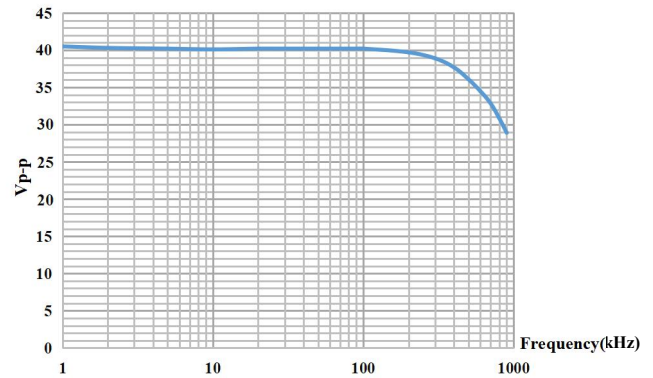
Small signal amplitude-frequency characteristic

**ATA-2041**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

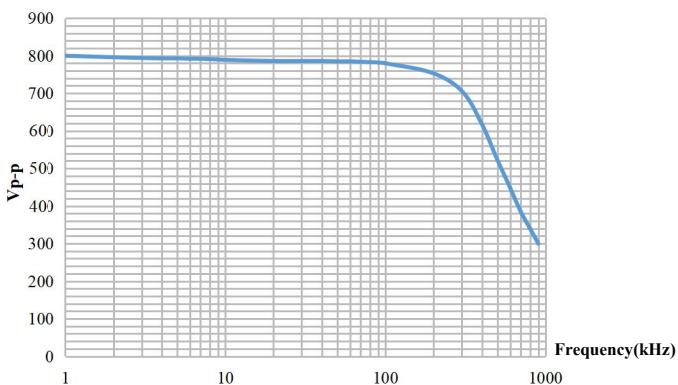
**ATA-2041**


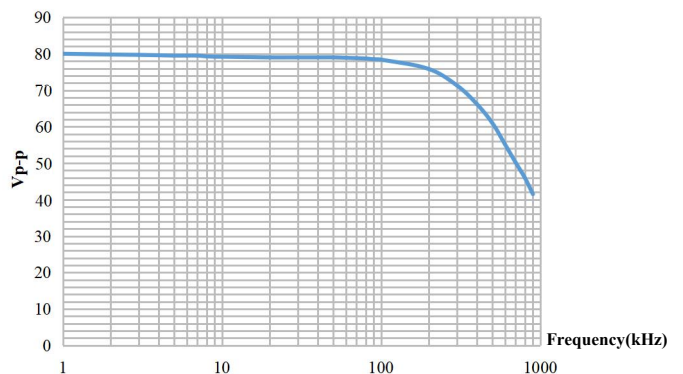
Small signal amplitude-frequency characteristic

**ATA-2042**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

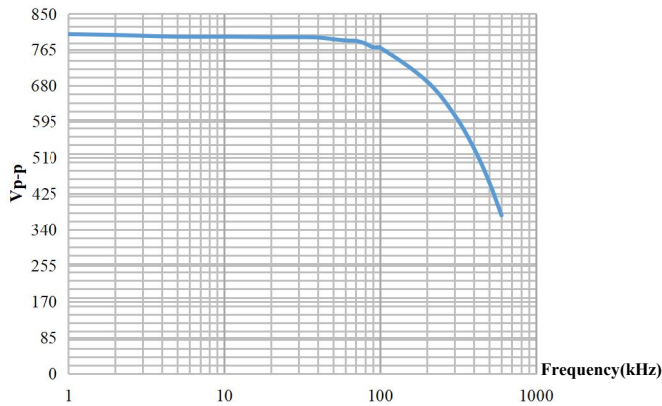
**ATA-2042**


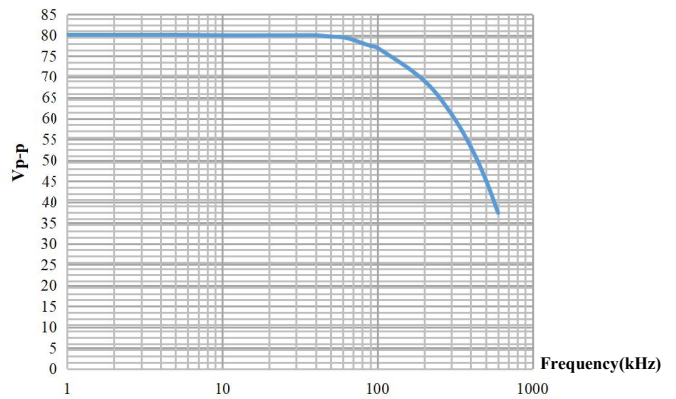
Small signal amplitude-frequency characteristic

**ATA-2081**

 Amplitude-frequency characteristic  
 (Maximum output voltage  $V_{p-p}$ )

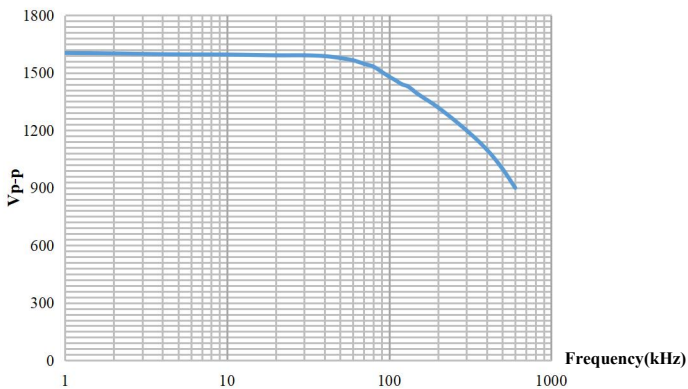
**ATA-2081**


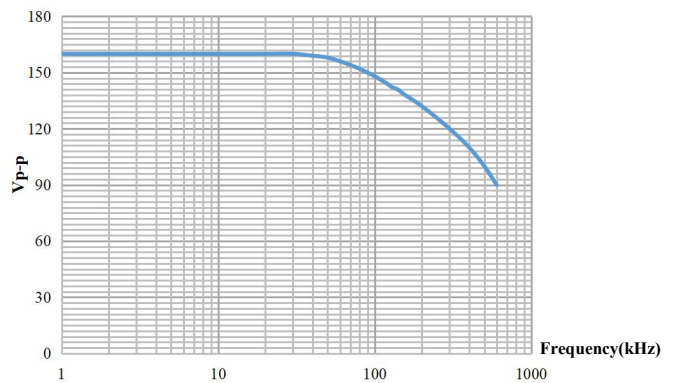
Small signal amplitude-frequency characteristic

**ATA-2082**

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

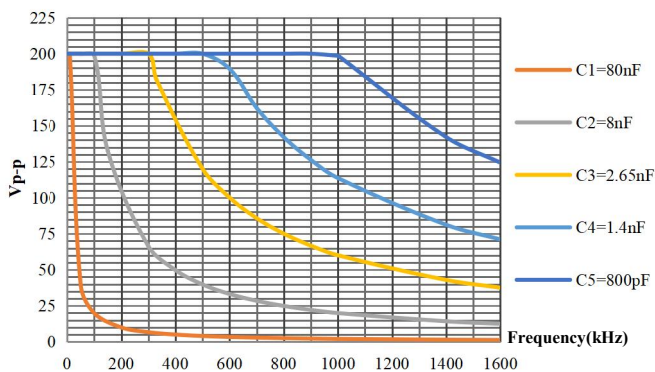
**ATA-2082**


Small signal amplitude-frequency characteristic

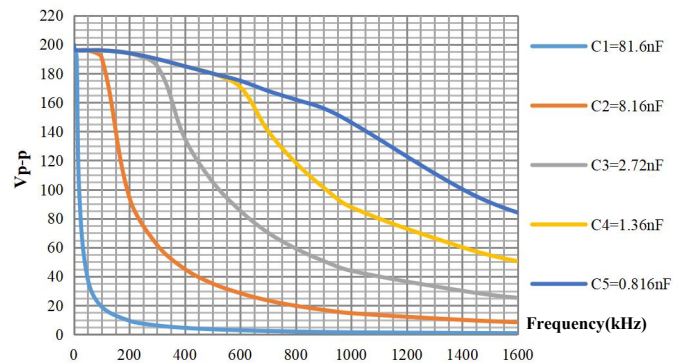
**ATA-2161**

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

**ATA-2161**


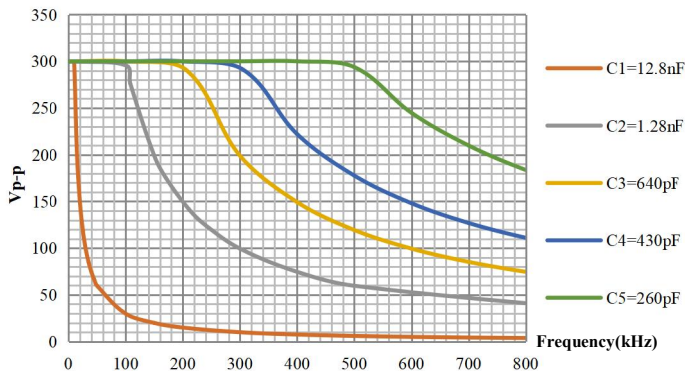
Small signal amplitude-frequency characteristic

**ATA-2021H**


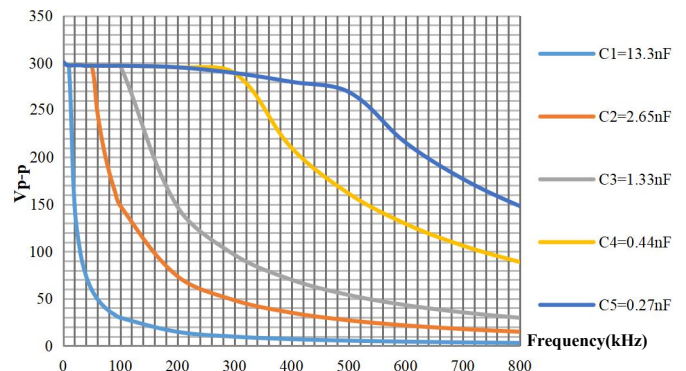
ATA-2021H Capacitive loads curve

**ATA-2022H**


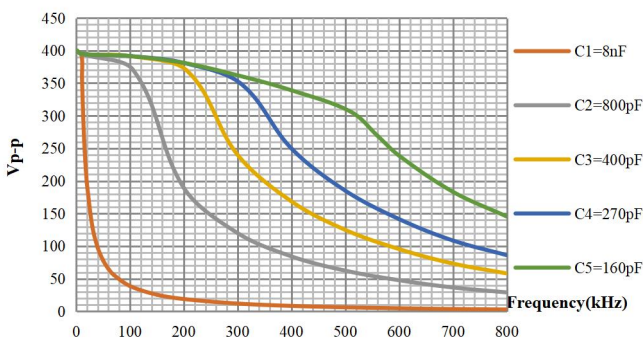
ATA-2022H Capacitive loads curve

**ATA-2031**


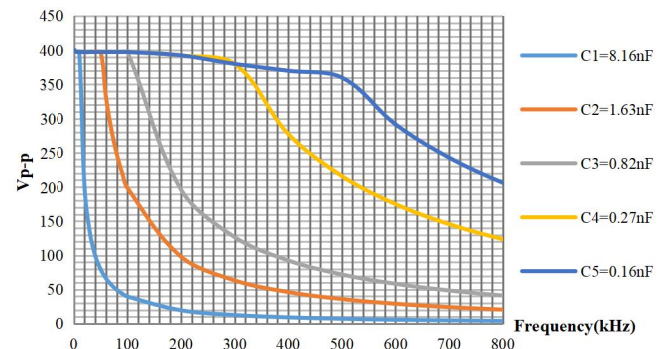
ATA-2031 Capacitive loads curve

**ATA-2032**


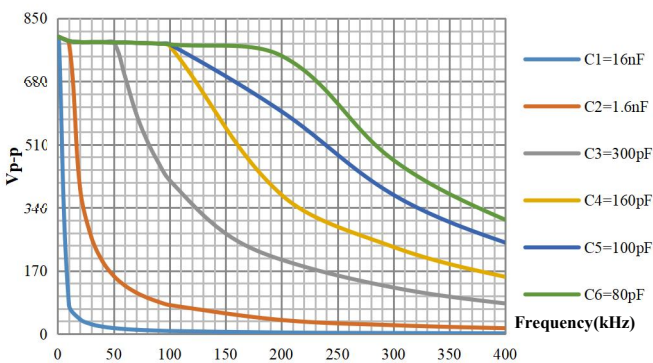
ATA-2032 Capacitive loads curve

**ATA-2041**


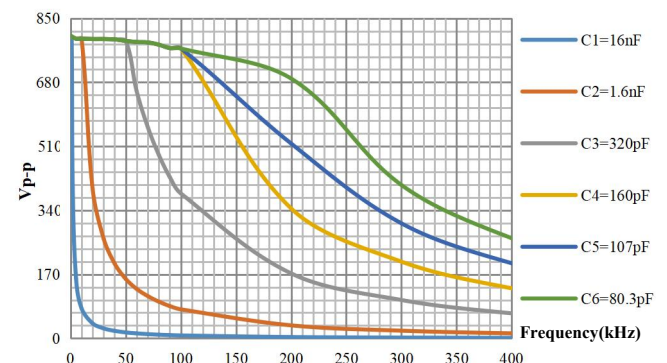
ATA-2041 Capacitive loads curve

**ATA-2042**


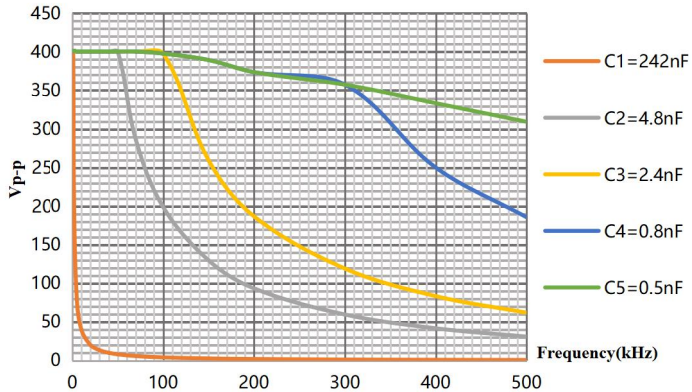
ATA-2042 Capacitive loads curve

**ATA-2081**


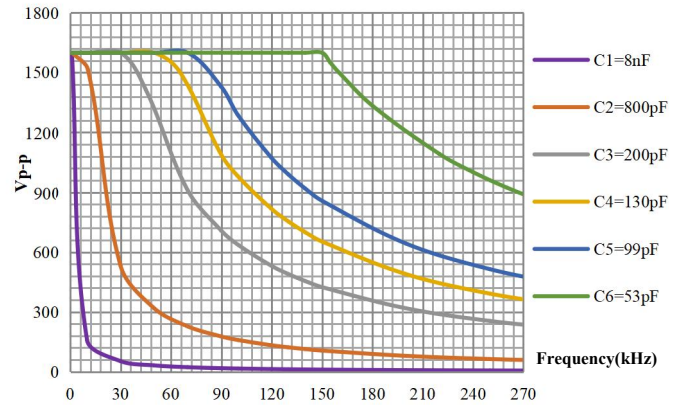
ATA-2081 Capacitive loads curve

**ATA-2082**


ATA-2082 Capacitive loads curve

**ATA-214**


ATA-214 Capacitive loads curve

**ATA-2161**


ATA-2161 Capacitive loads curve

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