

ATA-2000 Series High Voltage Amplifier

High voltage, multichannel (synchronous output)

Input and output resistance adjustable

The voltage gain is numerically adjustable

100:1 voltage monitoring port



Technical Index

Bandwidth (-3dB) DC~1 MHz

Output voltage up to 1600 Vp-p (± 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 (± 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 with one click. At the same time, the output of dual channel high-voltage amplifier can also be adjusted synchronously, and can be used with mainstream signal generator to realize lossless signal amplification.

Model	ATA-2021H	ATA-2022H	ATA-2031	ATA-2032	ATA-214
Number of channels	1	2	1	2	1
Form of output	Single output		Single output		Single output
Bandwidth (-3dB)	DC~1MHz		DC~500kHz		DC~500kHz
Maximum output voltage	200Vp-p (± 100 Vp)		300Vp-p (± 150 Vp)		400Vp-p (± 200 Vp)
Maximum output current	250mA _p (DC~50Hz)		60mA _p (DC~50Hz)		150mA _p (DC~50Hz)
	500mA _p (>50Hz)		120mA _p (>50Hz)		300mA _p (>50Hz)
Maximum output power	50W _p		18W _p		60W _p
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	5Ω /1kΩ (Customizable)		50Ω /2.5kΩ (Customizable)		10Ω /2.5kΩ (Customizable)
Slew rate	$\geq 445V/\mu s$		$\geq 334V/\mu s$		$\geq 444.3V/\mu s$
Input resistance	50Ω / 5kΩ				
Input amplitude	0~10Vp-pMAX				

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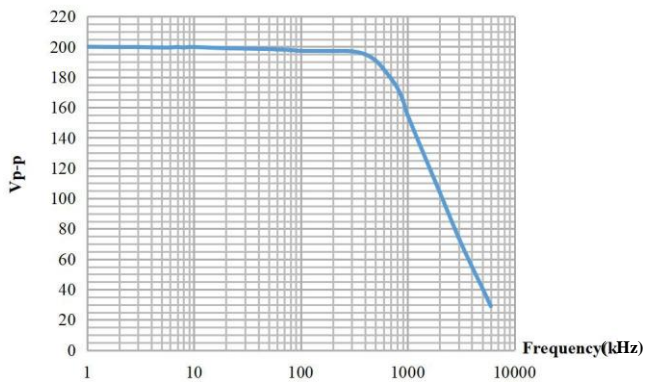
Output voltage error	$\leq \pm 3\% \text{ FS}@1\text{kHz}$				
Voltage monitoring	100:1 ($\pm 5\%$)				
Total harmonic distortion (THD)	$\leq 0.1\% @ 1\text{kHz}, 100\text{Vp-p}$				
Output voltage zero drift	$\leq \pm 0.1\text{V}$				
Signal-noise ratio(SNR)	$\geq 80\text{dB}$				
Output connector	4mm Banana socket				
Protection	Overcurrent protection				
Signal ground	Ground connected with the case and the power line				
Supply voltage	AC220V $\pm 10\%$, 50Hz				
Operating temperature	0°C~45°C				
Storage temperature	-20°C~50°C				
Humidity	$\leq 80\% \text{RH}$, 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
Form of output	Single output		Single output		Differential output
Bandwidth (-3dB)	DC~500kHz		DC~200kHz		DC~150kHz
Maximum output voltage	400Vp-p ($\pm 200\text{Vp}$)		800Vp-p ($\pm 400\text{Vp}$)		1600Vp-p ($\pm 800\text{Vp}$)
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 (0.1 step/1 step)		x0~120 (0.1 step/1 step)		x0~240 (0.1 step/1 step)
Load R _L upper limit	$\geq 3.95\text{k}\Omega$ (DC~50Hz)		$\geq 19.9\text{k}\Omega$ (DC~50Hz)		$\geq 39.8\text{k}\Omega$ (DC~50Hz)
	$\geq 1.95\text{k}\Omega$ (>50Hz)		$\geq 9.9\text{k}\Omega$ (>50Hz)		$\geq 19.8\text{k}\Omega$ (>50Hz)
Output resistance	50Ω /2.5kΩ (Customizable)		100Ω /5kΩ (Customizable)		200Ω /10kΩ (Customizable)
Slew rate	$\geq 445\text{V}/\mu\text{s}$		$\geq 356\text{V}/\mu\text{s}$		$\geq 534\text{V}/\mu\text{s}$
Input resistance	50Ω / 5kΩ				
Input amplitude	0~10V _{p-p} MAX				
Output voltage error	$\leq \pm 3\% \text{ FS}@1\text{kHz}$				
Voltage monitoring	100:1 ($\pm 5\%$)				
Total harmonic distortion (THD)	$\leq 0.1\% @ 1\text{kHz}, 100\text{Vp-p}$				
Output voltage zero drift	$\leq \pm 0.3\text{V}$				
Signal-noise ratio(SNR)	$\geq 80\text{dB}$				
Output connector	4mm Banana socket				
Protection	Overcurrent protection				

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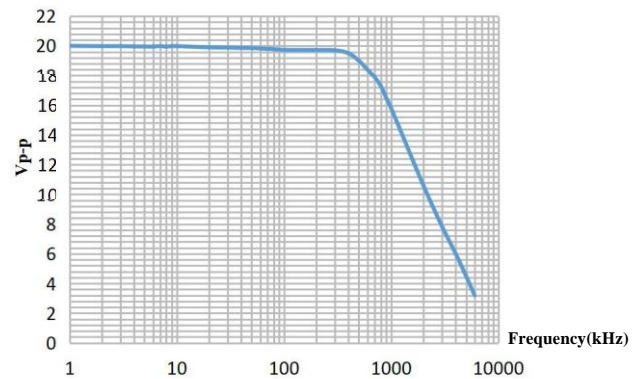
Signal ground	Ground connected with the case and the power line
Supply voltage	AC220V±10%, 50Hz
Fuse	2A/250V
Operating temperature	0°C~45°C
Storage temperature	-20°C~50°C
Humidity	80%RH, no condensation
Size (W * H * D)	365*163*365mm

ATA-2021H



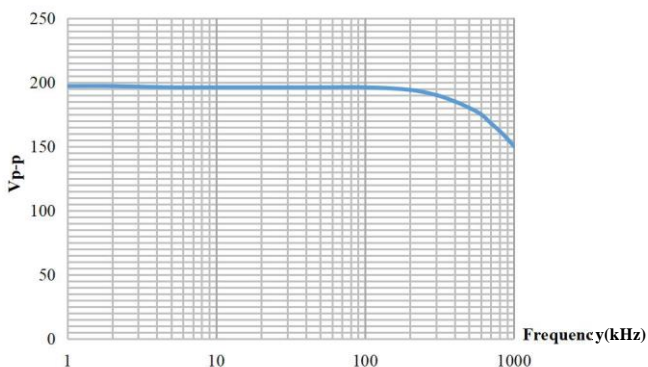
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2021H



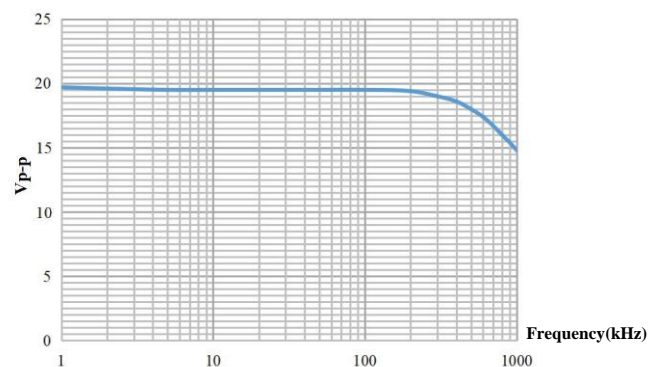
Small signal amplitude-frequency characteristic

ATA-2022H



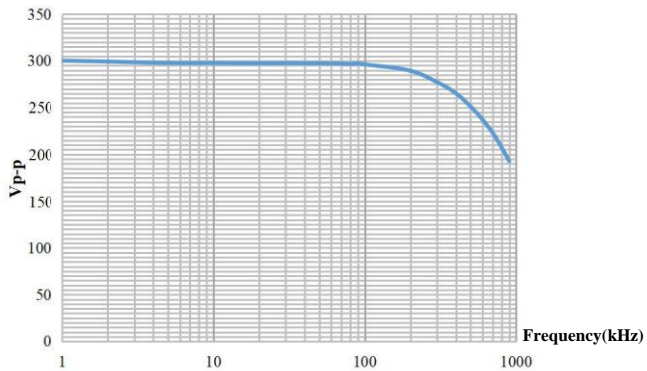
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2022H



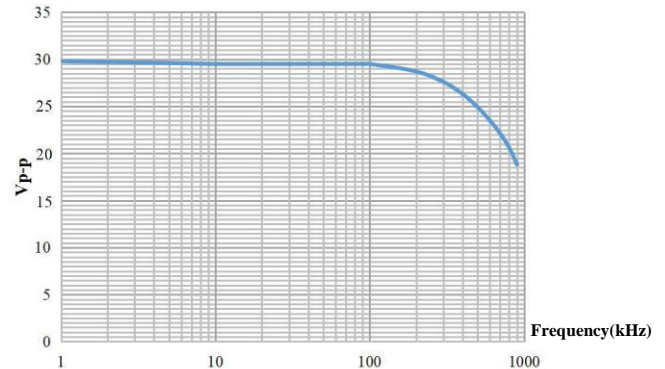
Small signal amplitude-frequency characteristic

ATA-2031



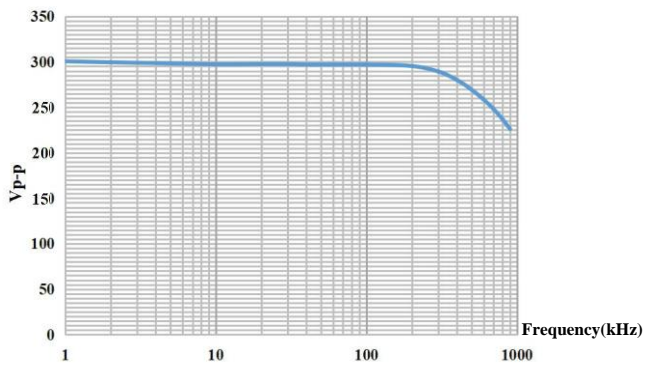
Amplitude-frequency characteristic
(Maximum output voltage V_{p-p})

ATA-2031



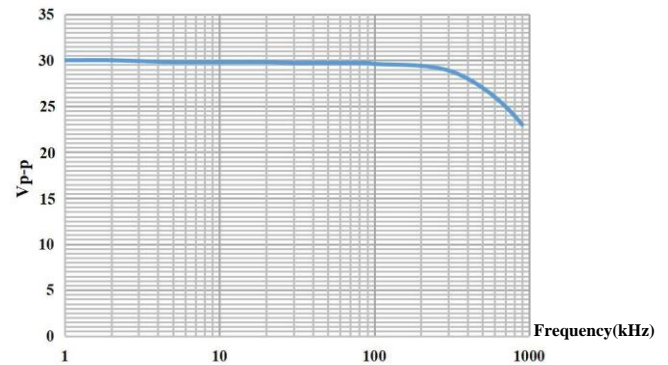
Small signal amplitude-frequency characteristic

ATA-2032



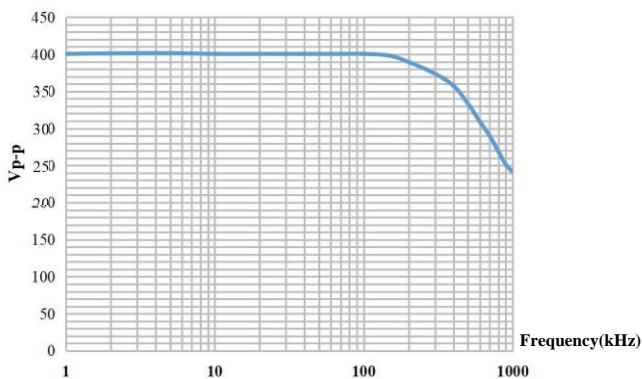
Amplitude-frequency characteristic
(Maximum output voltage V_{p-p})

ATA-2032



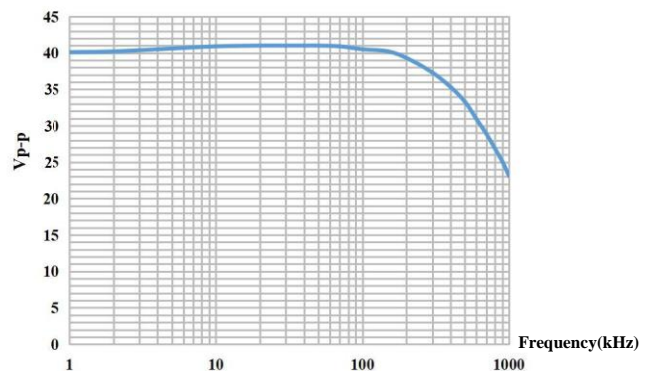
Small signal amplitude-frequency characteristic

ATA-214



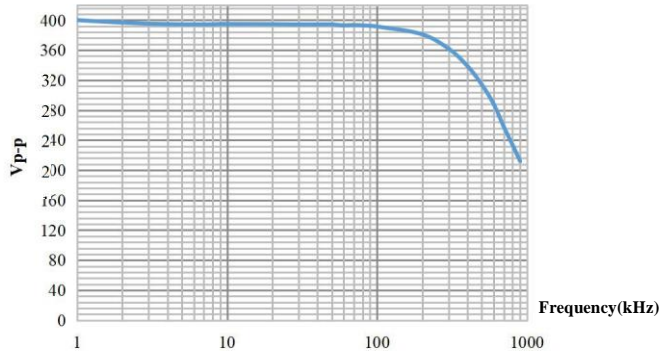
Amplitude-frequency characteristic

ATA-214



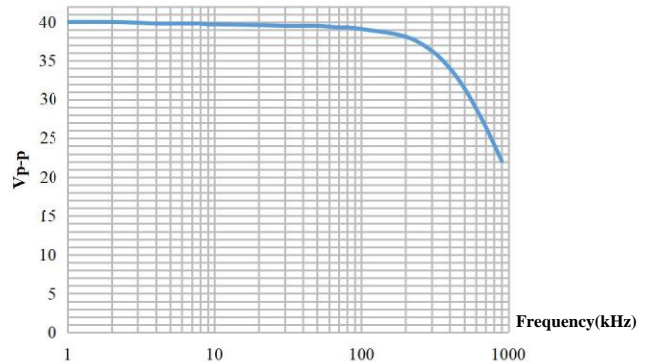
Small signal amplitude-frequency characteristic

ATA-2041



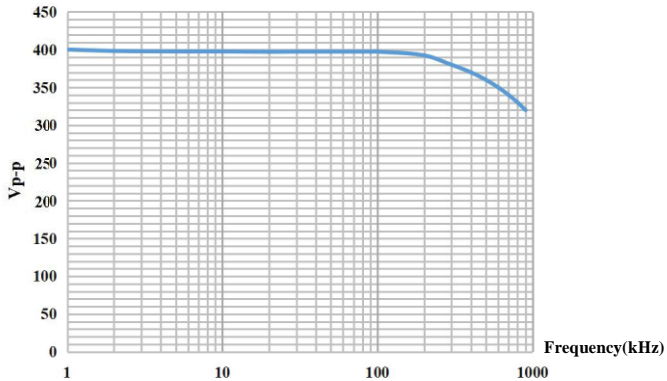
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2041



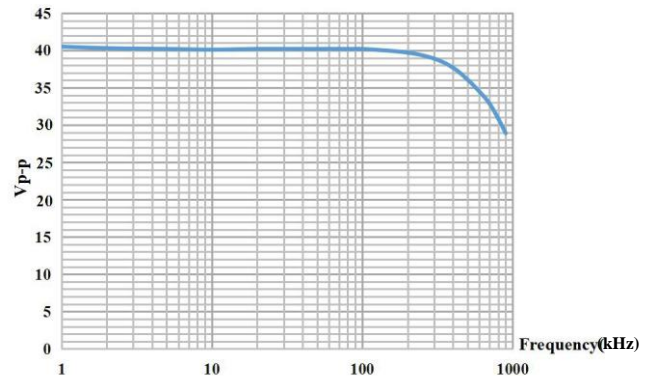
Small signal amplitude-frequency characteristic

ATA-2042



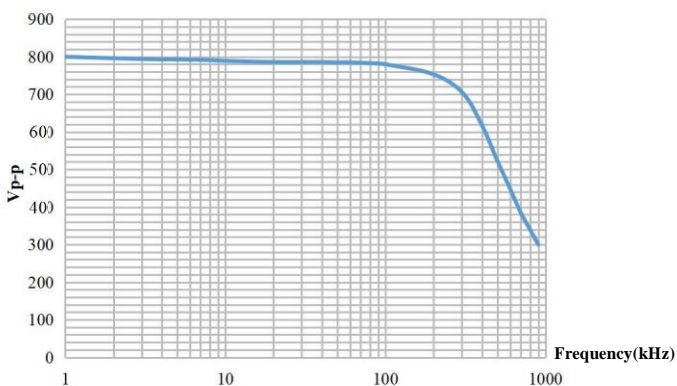
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2042



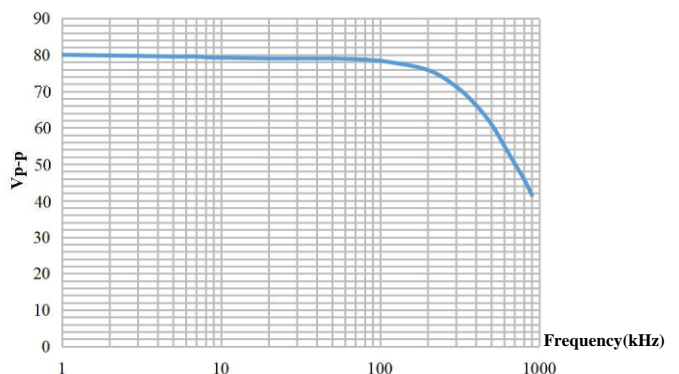
Small signal amplitude-frequency characteristic

ATA-2081



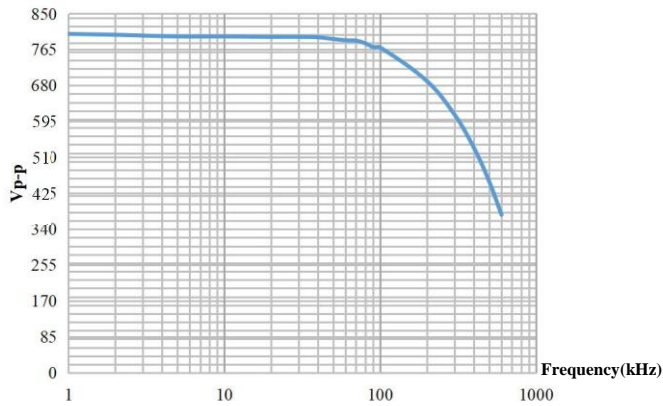
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2081



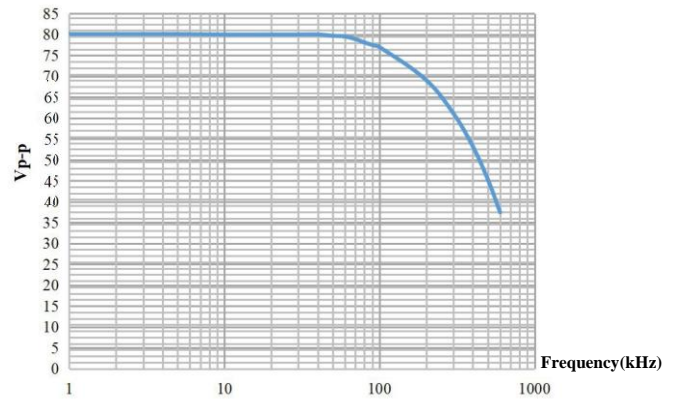
Small signal amplitude-frequency characteristic

ATA-2082



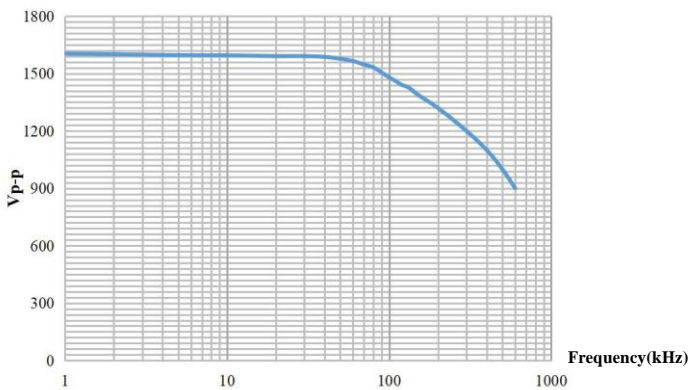
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2082



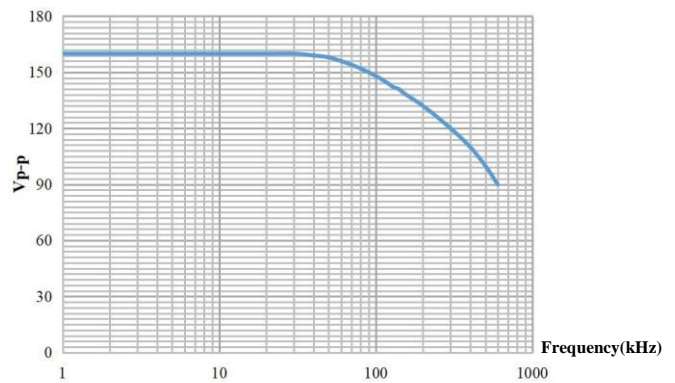
Small signal amplitude-frequency characteristic

ATA-2161



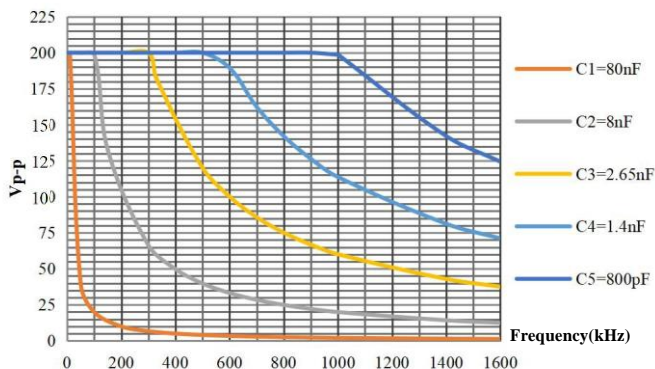
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2161



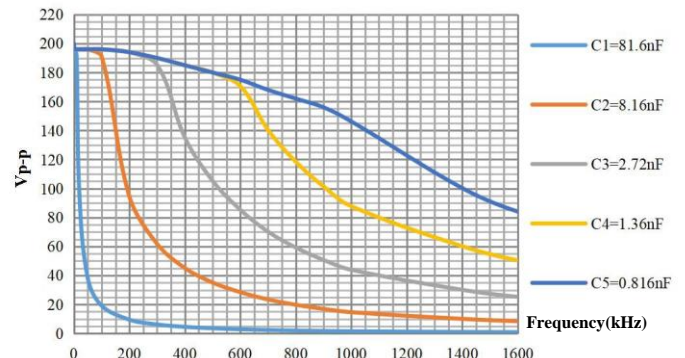
Small signal amplitude-frequency characteristic

ATA-2021H



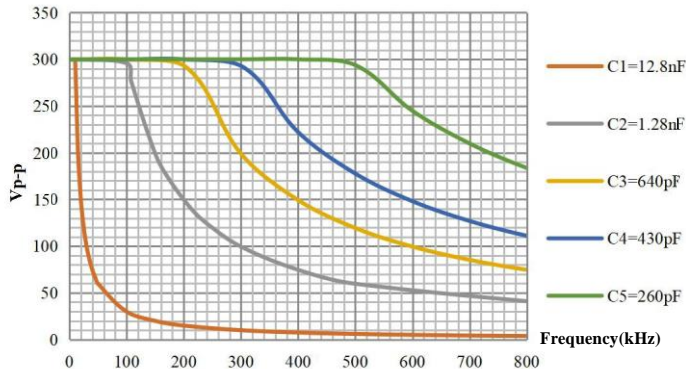
ATA-2021H Capacitive loads curve

ATA-2022H



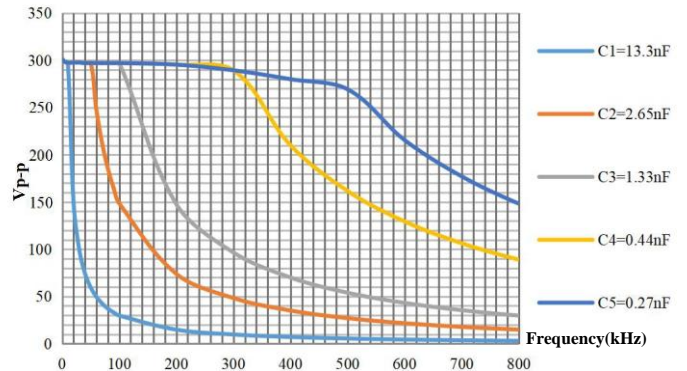
ATA-2022H Capacitive loads curve

ATA-2031



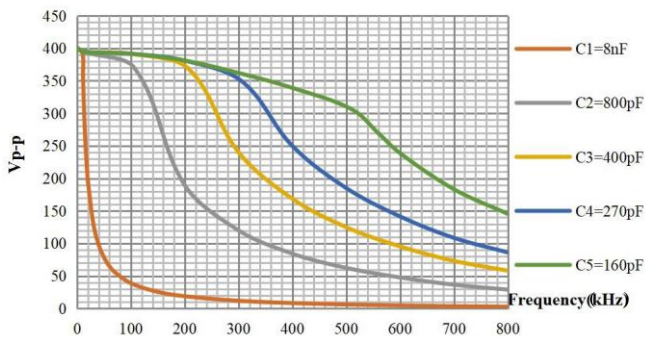
ATA-2031 Capacitive loads curve

ATA-2032



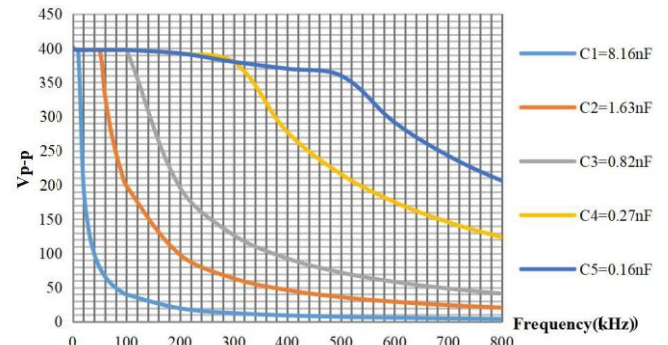
ATA-2032 Capacitive loads curve

ATA-2041



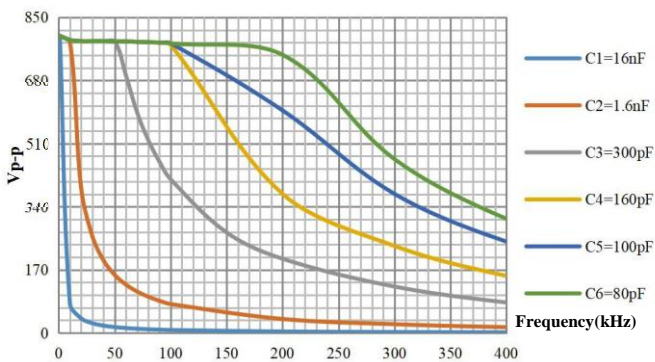
ATA-2041 Capacitive loads curve

ATA-2042



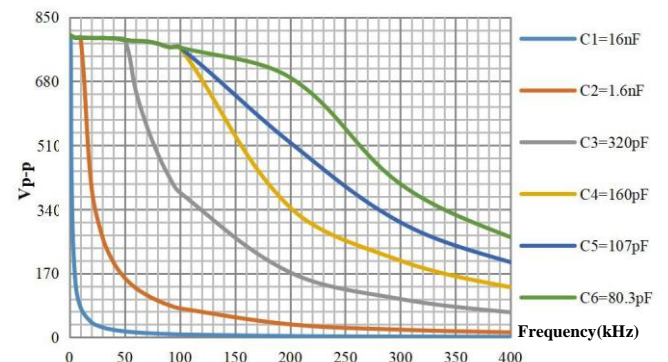
ATA-2042 Capacitive loads curve

ATA-2081



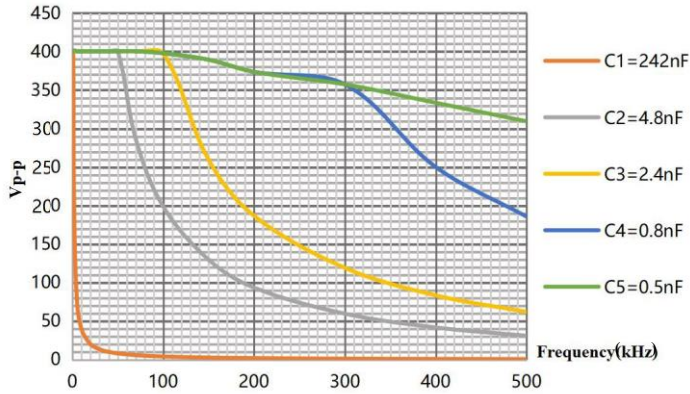
ATA-2081 Capacitive loads curve

ATA-2082



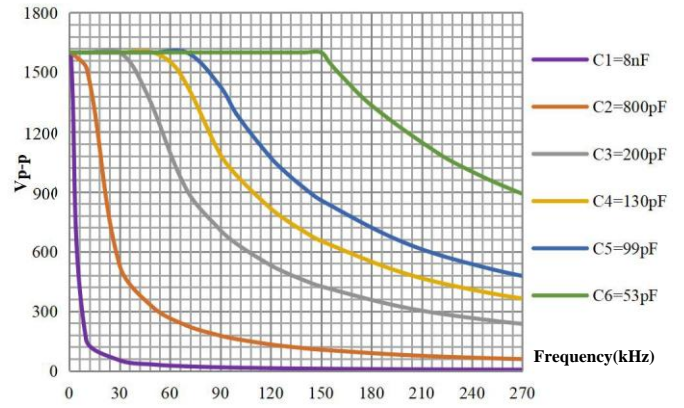
ATA-2082 Capacitive loads curve

ATA-214



ATA-214 Capacitive loads curve

ATA-2161



ATA-2161 Capacitive loads curve