Aigtek

Xi'an Aigtek Electronic Technology Co., Ltd.

ATA-2000 Series High Voltage Amplifier

High voltage, multichannel (synchronous output)

Input and output resistance adjustable

The voltage gain is numerically adjustable

Technical Index

Bandwidth (-3dB) DC~1 MHz

Output voltage up to 1600 Vp-p (±800 Vp)

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

Introduction

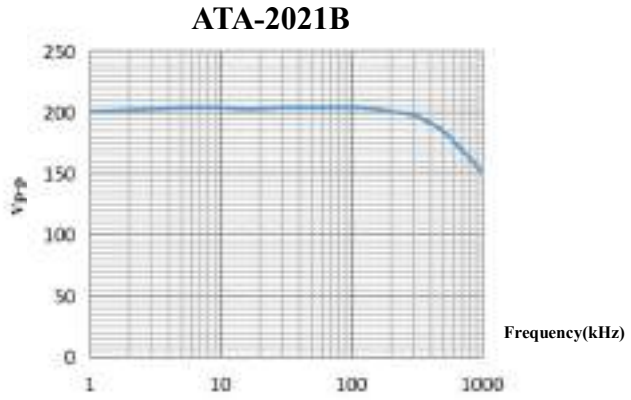
ATA-2000 series is an ideal high voltage amplifier that can amplify AC and DC signals. The maximum differential output is 1600 Vp-p (±800Vp) high voltage, which can drive high-voltage load. The voltage gain can be adjusted by numerical control, and the common settings can be saved with one click. At 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-2021B	ATA-2022B	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 (±100Vp)		300Vp-p (±150Vp)		400Vp-p (±200Vp)
Range of Output Voltage	Range1: +40V~-160V		/		/
	Range2: +100V~-100V		/		/
	Range3: +160V~-40V		/		/
Maximum output current	250mAp(DC~50Hz)		60mAp(DC~50Hz)		150mAp(DC~50Hz)
	500mAp(>50Hz)		120mAp(>50Hz)		300mAp(>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)
Upper limit of Load R_L	≥395Ω(DC~50Hz)		≥2.45kΩ(DC~50Hz)		≥1323Ω(DC~50Hz)
	≥195Ω(>50Hz)		≥1.2kΩ(>50Hz)		≥657Ω(>50Hz)
DC Offset	±160V (0.1V step/1V step)		/		/

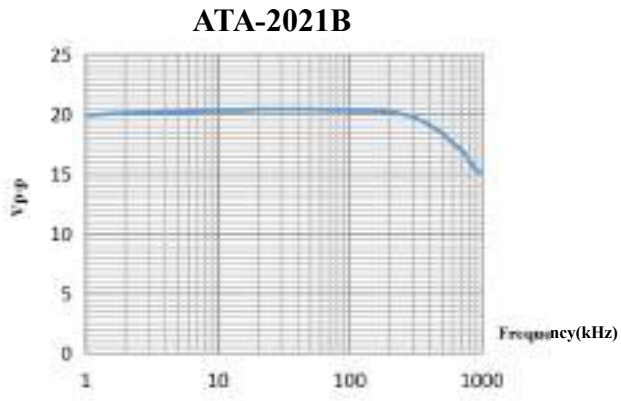
Voltage Range of DC Offset	Range1：+40V~-160V		/		/
	Range2：+100V~-100V		/		/
	Range3：+160V~-40V		/		/
Output resistance	5Ω /1kΩ (Customizable)		50Ω /2.5kΩ (Customizable)		10Ω /2.5kΩ (Customizable)
Slew rate	≥445V/μs		≥334V/μs		≥444.3V/μs
Voltage monitor	20mV/V		100:1		
Current monitor	2V/A		/		
Input 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				
Zero-point drift of output voltage	≤±0.1V				
Signal-noise ratio(SNR)	≥80dB				
Output connector	4mm Banana socket				
Protection	Overcurrent protection				
Signal ground	Ground connected with the case and the power line				
Supply voltage	AC110~240V, 50/60Hz				
Operating temperature	0℃~45℃				
Storage temperature	-20℃~50℃				
Humidity	≤80%RH，No condensation				
Dimension (W*H*D)：	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 (±200Vp)		800Vp-p (±400Vp)		1600Vp-p (±800Vp)
Maximum output current	50mAp(DC~50Hz)		20mAp(DC~50Hz)		20mAp(DC~50Hz)
	100mAp(>50Hz)		40mAp(>50Hz)		40mAp(>50Hz)
Maximum output power	20Wp		16Wp		32Wp
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	≥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 /10k (Customizable)

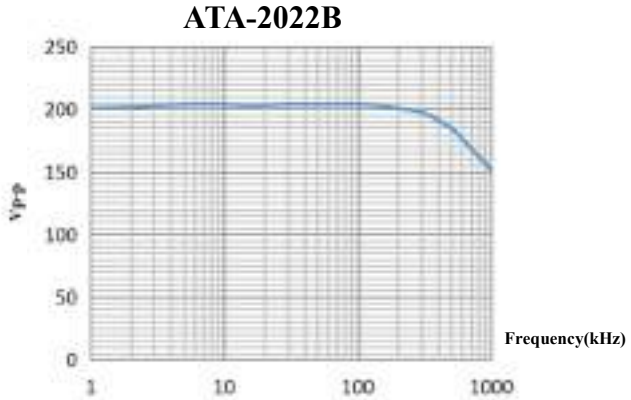
Slew rate	≥445V/μs	≥356V/μs	≥534V/μs
Input resistance	50Ω / 5kΩ		
Input amplitude	0~10Vp-pMAX		
Output voltage error	≤±3% FS@1kHz		
Voltage monitoring	100:1（±5%）		
Total harmonic distortion（THD）	≤0.1%@1kHz，100Vp-p		
Output voltage zero drift	≤±0.3V		
Signal-noise ratio(SNR)	≥80dB		
Output connector	4mm Banana socket		
Protection	Overcurrent protection		
Signal ground	Ground connected with the case and the power line		
Supply voltage	AC110~240V, 50/60Hz		
Fuse	2A/250V		
Operating temperature	0℃~45℃		
Storage temperature	-20℃~50℃		
Humidity	80%RH，no condensation		
Dimension（W*H*D）：	365*163*365mm		



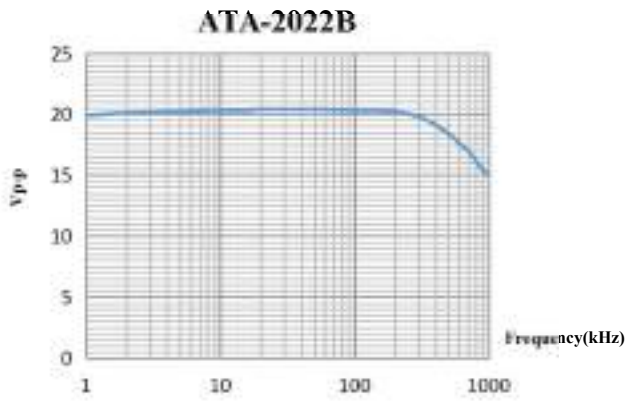
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)



Small signal amplitude-frequency characteristic

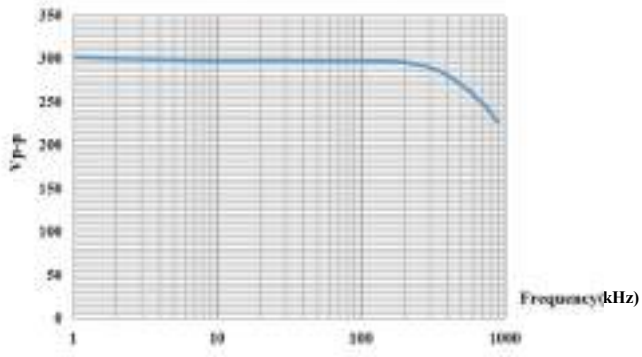


Amplitude-frequency characteristic
(Maximum output voltage Vp-p)



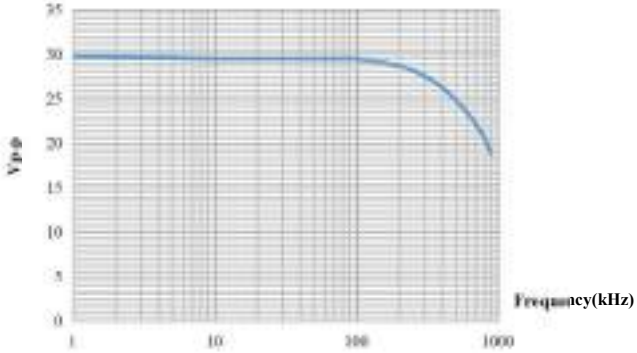
Small signal amplitude-frequency characteristic

ATA-2031



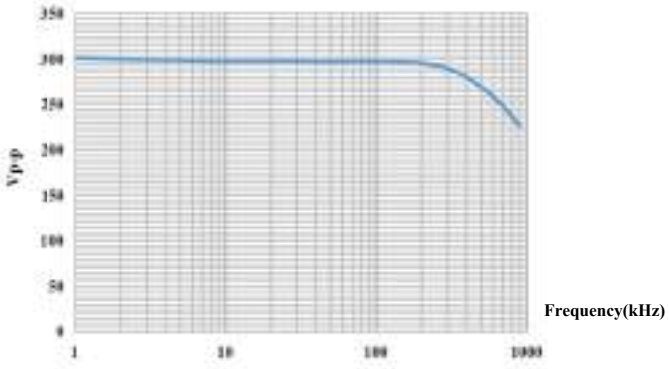
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2031



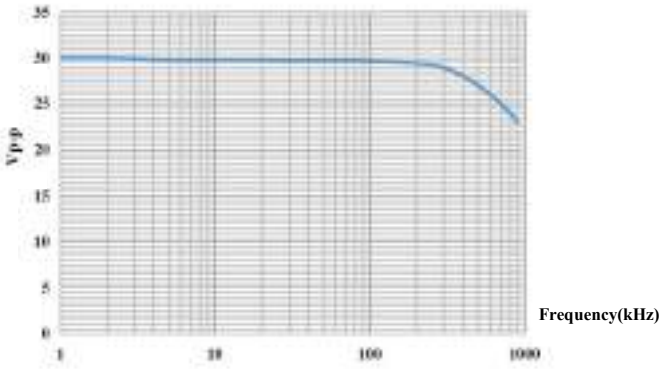
Small signal amplitude-frequency characteristic

ATA-2032



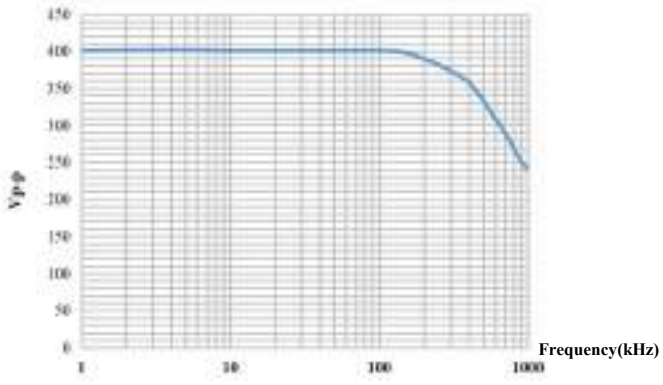
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2032



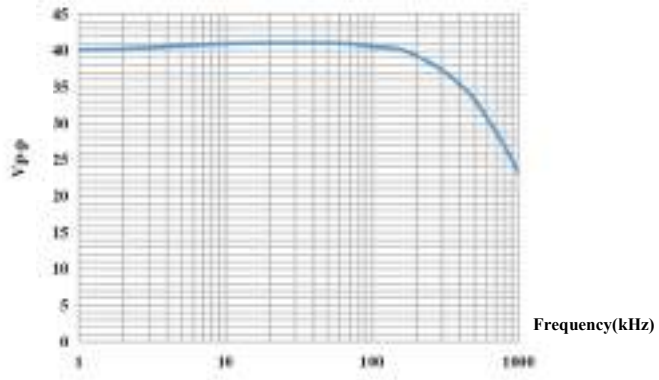
Small signal amplitude-frequency characteristic

ATA-214



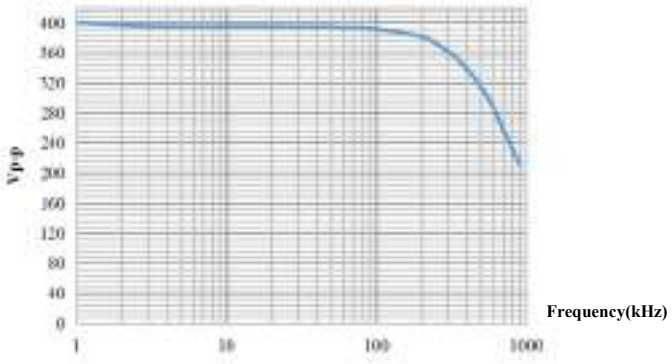
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-214



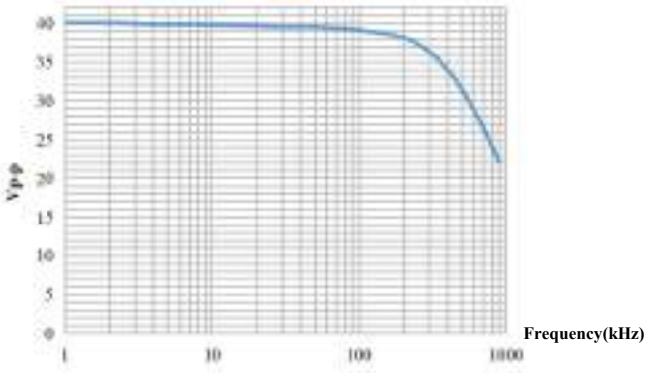
Small signal amplitude-frequency characteristic

ATA-2041



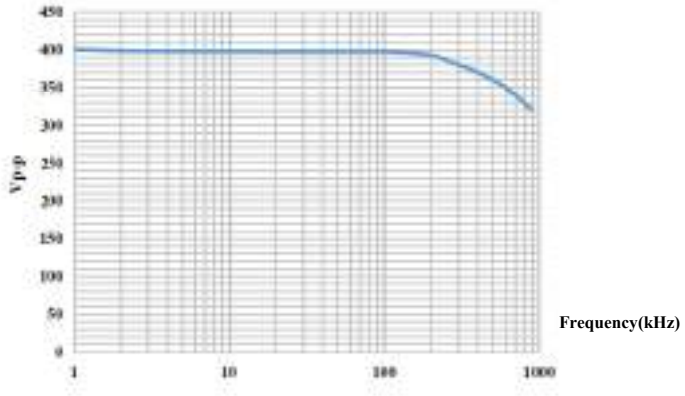
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2041



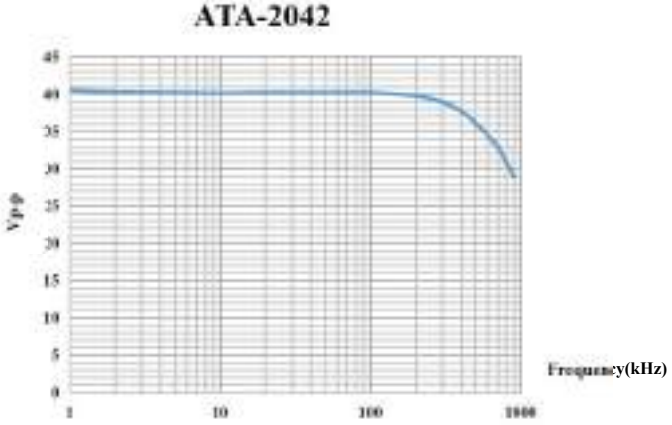
Small signal amplitude-frequency characteristic

ATA-2042



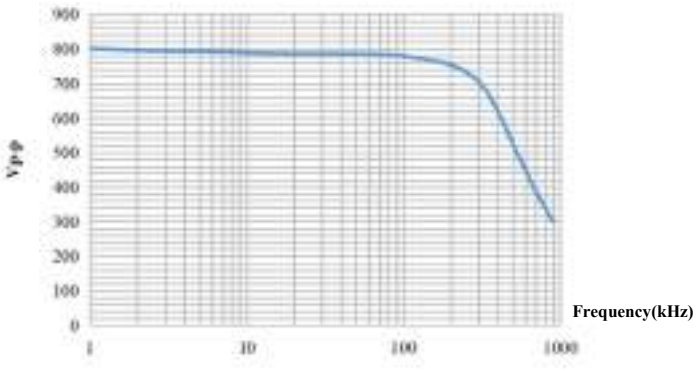
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2042



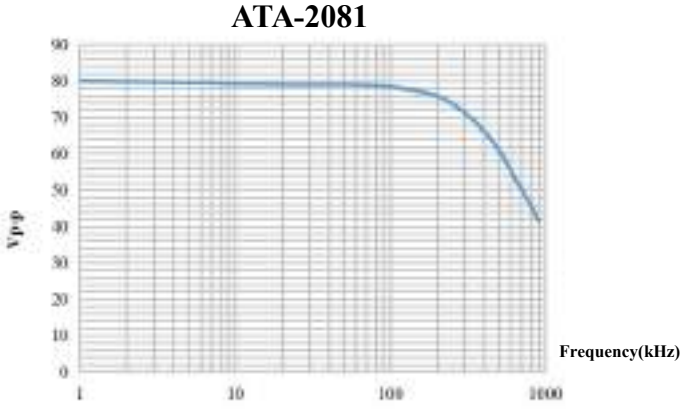
Small signal amplitude-frequency characteristic

ATA-2081



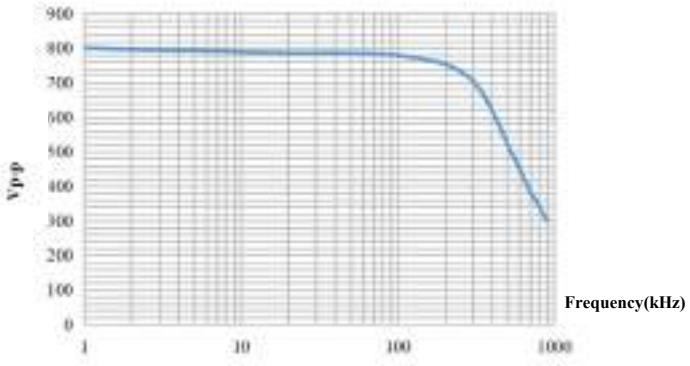
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2081



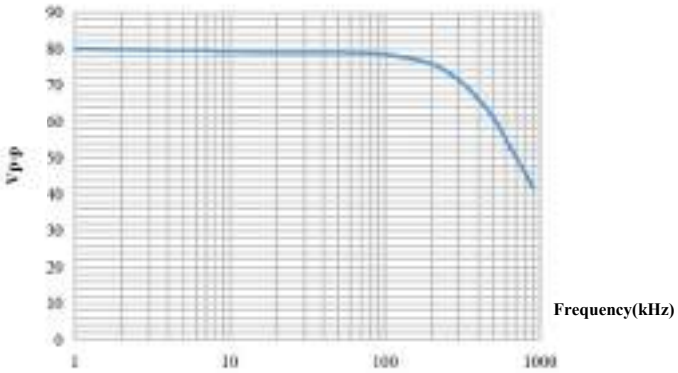
Small signal amplitude-frequency characteristic

ATA-2082



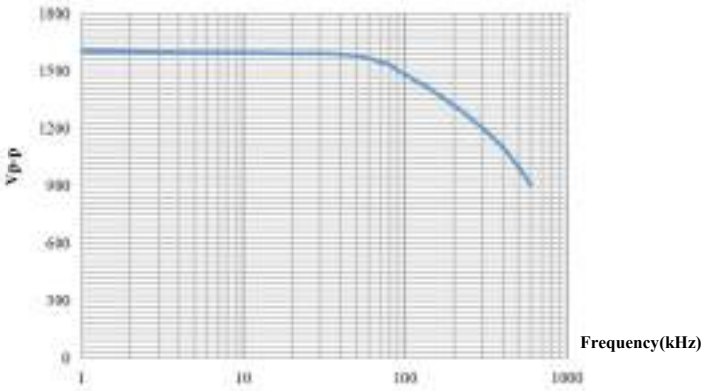
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2082



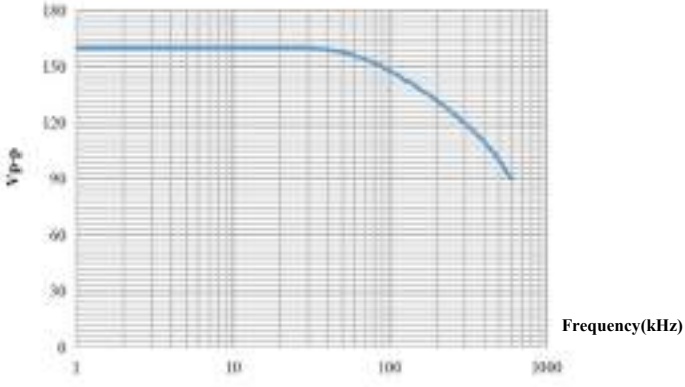
Small signal amplitude-frequency characteristic

ATA-2161



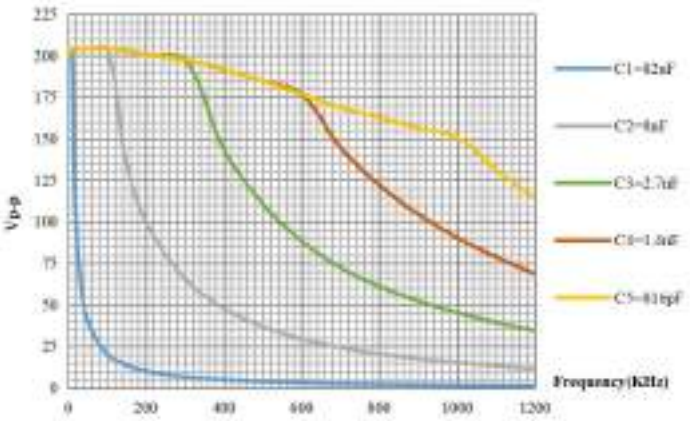
Amplitude-frequency characteristic
(Maximum output voltage Vp-p)

ATA-2161



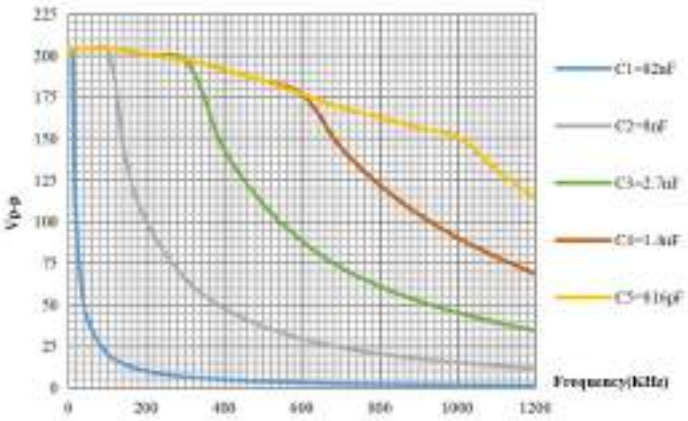
Small signal amplitude-frequency characteristic

ATA-2021B



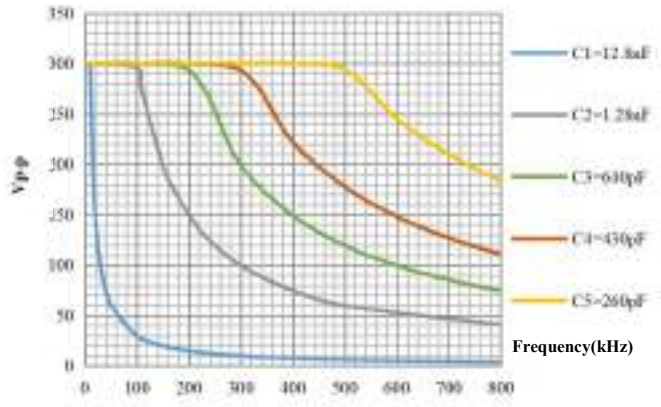
ATA-2021B Capacitive loads curve

ATA-2022B



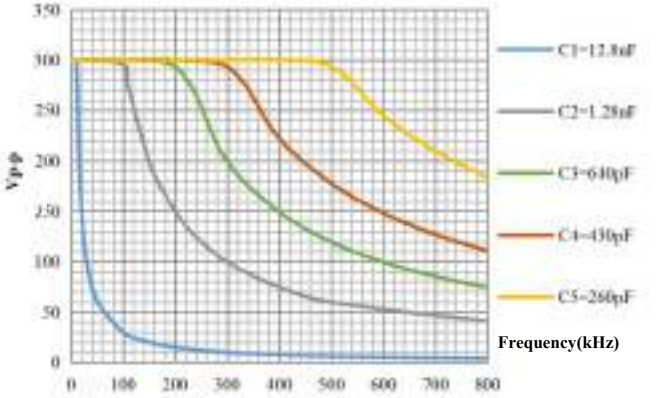
ATA-2022B Capacitive loads curve

ATA-2031



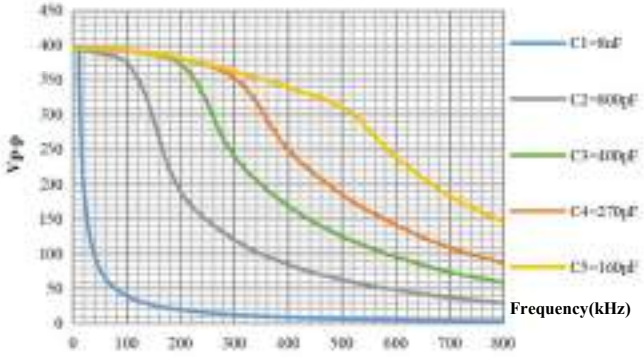
ATA-2031 Capacitive loads curve

ATA-2032



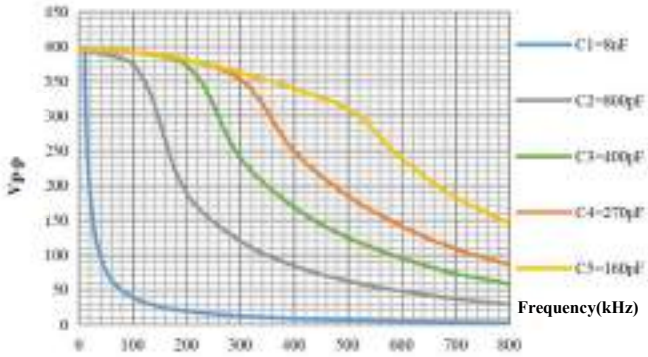
ATA-2032 Capacitive loads curve

ATA-2041



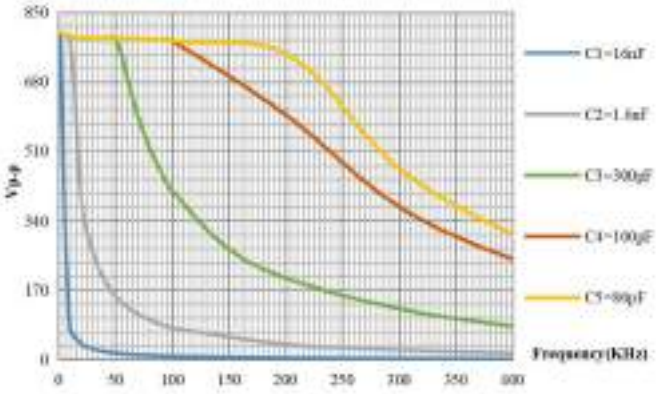
ATA-2041 Capacitive loads curve

ATA-2042



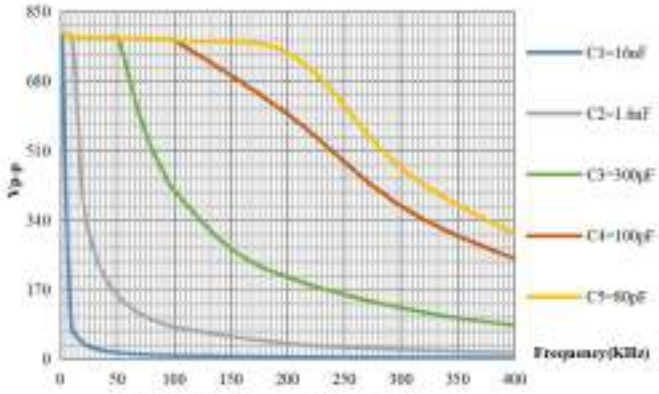
ATA-2042 Capacitive loads curve

ATA-2081



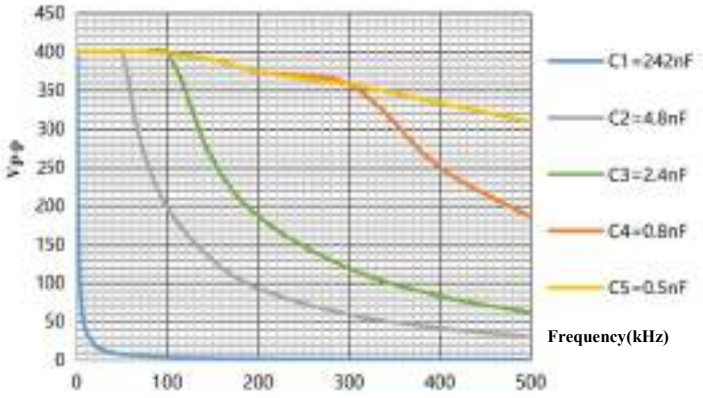
ATA-2081Capacitive loads curve

ATA-2081



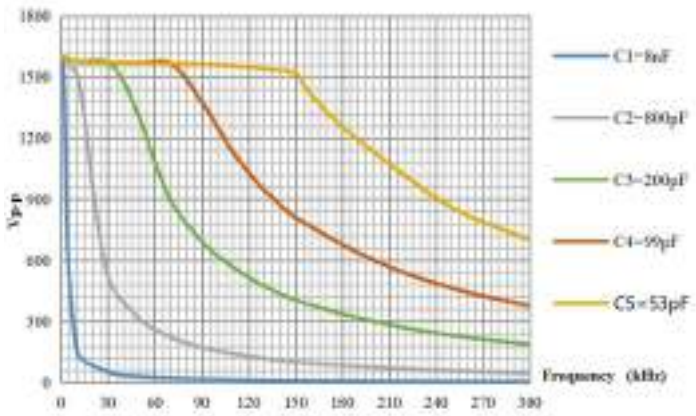
ATA-2082 Capacitive loads curve

ATA-214



ATA-214 Capacitive loads curve

ATA-2161



ATA-2161 Capacitive loads curve