HIGH VOLTAGE/HIGH CURRENT SIGNAL CONVERTERS

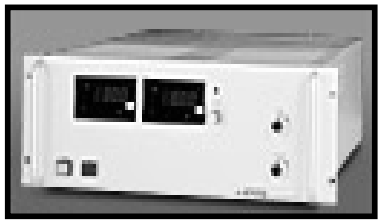
(CLASS-D Amplifier) **MHVCDVA-Series**

Introduction:

MHVCCDA series of high voltage /low current class-D amplifiers are available upto 20,000 v/(15.0 to 10,000 watts), in more than 20 different models working in constant voltage/current mode virtually offering solutions to vibration control, instrumentation, electrical Measurement, pollution control, electrostatic precipitators, Petrochemical industry, organic/inorganic chemical, heavy electrical/mechanical industries, high voltage testing, smart sensors and actuators, electrorheology, biotechnology, solids state physics application and many uncountable defense/nuclear applications. Updated design topology ensures better controllability and efficiency with additional integrated power/voltage and frequency control/protection. These converters may operate in parallel to make it more redundant. Company offers tailor made solution to custom requirement.

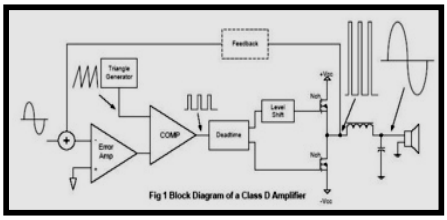
Operating Principle:

These class-D amplifier is a switching amplifier. In this type of amplifier, the switches are either fully on or fully off, significantly reducing The power losses in the output devices.The audio signal is used to modulate a PWM carrier signal which drives the output devices, with The last stage being a low pass filters to remove the high frequency PWM carrier frequency. The input signal is with a frequency ranging from 20Hz to 20 kHz typically. This signal is compared with a high frequency triangle or saw tooth waveform to create the PWM signal s seen below. This PWM signal is then used to drive the power stage, creating the amplified digital signal, and finally a low pass filter is applied to the signal to filter out the PWM carrier frequency and retrieve the sinusoidal audio signal .



MHVCCDA-020010

MHVCCDA-050020



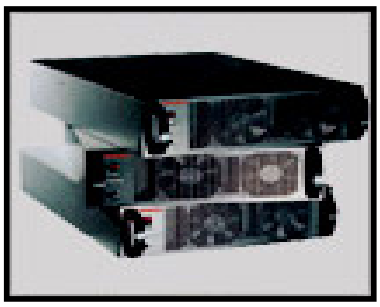
PICTORIAL PRESENTATION OF VOLAGE AMPLIFIER

Voltage amplifier **Current amplifier**

Model	Power watts	K.Vout/Vin (100 m.v.)	Current m.a.	T.D.H.	Frequency K.Hz	Model	Power watts	Volts	Iout/Iin (100 m.v.)	T.D.H.	Frequency K.Hz
MHVCDVA-002005	200.0	05.0	40.0	0.3%	100	MHCCDCA-002005	200.0	05.0	40.0	0.3%	100
MHVCDVA-005005	500.0	05.0	100.0	0.3%	100	MHCCDCA-005005	500.0	05.0	100.0	0.3%	100
MHVCDVA-002010	200.0	10.0	20.0	0.3%	100	MHCCDCA-002010	200.0	10.0	20.0	0.3%	100
MHVCDVA-005010	500.0	10.0	50.0	0.3%	100	MHCCDCA-005010	500.0	10.0	50.0	0.3%	100
MHVCDVA-010010	1000.0	10.0	100.0	0.3%	100	MHCCDCA-010010	1000.0	10.0	100.0	0.3%	100
MHVCDVA-020010	5000.0	10.0	500.0	0.3%	100	MHCCDCA-020010	5000.0	10.0	500.0	0.3%	100
MHVCDVA-100020	10,000.0	10.0	1000.0	0.3%	100	MHCCDCA-100020	10,000.0	10.0	1000.0	0.3%	100
MHVCDVA-010020	1000.0	20.0	50.0	0.3%	100	MHCCDCA-010020	1000.0	20.0	50.0	0.3%	100
MHVCDVA-020020	2000.0	20.0	100.0	0.3%	100	MHCCDCA-020020	2000.0	20.0	100.0	0.3%	100
MHVCDVA-200020	20,000.0	20.0	1000.0	0.3%	100	MHCCDCA-200020	20,000.0	20.0	1000.0	0.3%	100

HIGH VOLTAGE/HIGH CURRENT SIGNAL CONVERTERS SPECIFICATIONS:

Operating voltage 220 VOLTS/1/3-Phase,50 hzs
Output current as above
Voltage/current control accuracy 99.9% of set point
Resolution 0.1 volts/amps D.C.
Repeatability 100 percent
Response time 0.5 –1.1 mill-seconds
Interface Signal 0.0-12.0 volts D.C. proportional to output voltage
Voltage/Current control ranges 0.0-100 %
Step down range: 1: 1000
Control options 1.cascade feedback control with soft start
2. Ratio control (option) 3. Constant voltage/current with External adjustment.
Display Voltage/current/kilowatt in 3½ red glow LED display
Protection over voltage/short ckt.

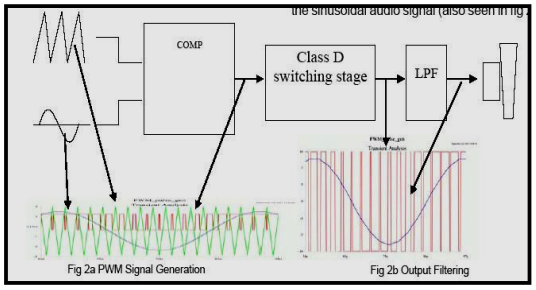


Low power voltage amplifier

SWITCH MODE HIGH VOLTAGE/LOW CURRENT AMPLIFIERS SPECIFICATION:

MHVCCDA-002005	08X06X06	MHVCCDA-005050	14X12X12
MHVCDA-005005	10X06X06	MHVCCDA-010050	16X14X14
MHVCCDA-002010	12X08X08	MHVCCDA-020050	18X16X16
MHVCCDA-005010	12X10X10	MHVCCDA-050050	20X18X18
MHVCCDA-010010	12X10X10	MHVCCDA-010100	20X18X18
MHVCCDA-020010	12X10X10	MHVCCDA-020100	20X18X18
MHVCCDA-050010	08X06X06	MHVCCDA-050200	14X12X12
MHVCCDA-010020	10X06X06	MHVCCDA-100100	16X14X14
MHVCCDA-020020	18X16X14	MHVCCDA-100200	18X16X16

Three numerals after MHVCCDA indicates power x100 of power supply and last three digit Indicates K.VOLTS.All dimensions are in inches. Above models are in current range of production, however company



PICTORIAL PRESENTATION OF VOLAGE AMPLIFIER

Undertake any tailor made specification power supply.

Voltage/current specs of above power supplies are of regular production, however company is regularly manufacturing power supplies of higher voltage/current options

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General Electrical specification of Voltage amplifier:

Voltage amplifier **Current amplifier**

Model	Power watts	Vout/Vin (100 m.v.)	Current m.a.	T.D.H.	Frequency K.Hz	Model	Power watts	Volts	Iout/Iin (100 m.v.)	T.D.H.	Frequency K.Hz
MHVCDVA-0020051	200.0	050	00400	0.3%	100	MHCCDCA-0020052	200.0	050	00400	0.3%	100
MHVCDVA-0050051	500.0	050	01000	0.3%	100	MHCCDCA-0050052	500.0	050	01000	0.3%	100
MHVCDVA-0020101	200.0	100	00200	0.3%	100	MHCCDCA-0020102	200.0	100	00200	0.3%	100
MHVCDVA-0050101	500.0	100	00500	0.3%	100	MHCCDCA-0050102	500.0	100	00500	0.3%	100
MHVCDVA-0100101	1000.0	100	01000	0.3%	100	MHCCDCA-0100102	1000.0	100	01000	0.3%	100
MHVCDVA-0200101	5000.0	100	05000	0.3%	100	MHCCDCA-0200102	5000.0	100	05000	0.3%	100
MHVCDVA-1000201	10,000.0	100	10000	0.3%	100	MHCCDCA-1000202	10,000.0	100	10000	0.3%	100
MHVCDVA-0100201	1000.0	200	00500	0.3%	100	MHCCDCA-0100202	1000.0	200	00500	0.3%	100
MHVCDVA-0200201	2000.0	200	01000	0.3%	100	MHCCDCA-0200202	2000.0	200	01000	0.3%	100
MHVCDVA-2000201	20,000.0	200	10000	0.3%	100	MHCCDCA-2000202	20,000.0	200	10000	0.3%	100

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