QDC42.dsp

QUAD DUAL CHANNEL AMPLIFIER

INTEGRATED DIGITAL SYSTEM PROCESSOR AMPLIFIER

acoustic technologies

The Acoustic Technologies QDC42.dsp is an elegantly designed eight channel audio amplifier featuring extensive fully integrated digital signal processing systems on board. The QDC42's amplifiers produce 40 Watts into 4 Ohm Loads, are highly linear, unconditionally stable and feature extensive on-chip thermal management & protection circuitry.

The DSPB23 Digital Signal Processing System (DSP) offers comprehensive audio processing capabilities. Fully featured Equalisation, Crossover, Gain, Delay and Dynamics Controls are provided. A PC based graphical user interface provides a familiar DSP programming environment.

The QDC42.dsp is a highly refined system building block, intended for use in professional audio applications including :

- Courts of Law
- Public Transportation Terminals - Airports, Bus Terminals & Railway Stations
- Parliamentary Debating Chambers
- Luxury Home Audio Distribution Systems
- Supermarkets, Shopping Centres
- Conference Centres
- Corporate Board Rooms

Such systems will generally employ multiple amplifiers within the overall system. With this in mind the QDC42 is convection cooled, eliminating the noise, maintenance and reliability issues associated with in-built cooling fans.

In Summary: The QDC42.dsp integrated digital system processor amplifier offers superb audio performance with extensive configuration capabilities in a footprint specifically engineered to meet the complex requirements encountered within large scale installations.

QDC42.dsp **EXCELLENCE IN AUDIO**

QDC42.dsp

QDC42.dsp AMPLIFIER

FEATURES

- **Integrated Signal Processing and Amplification**
- **Extensive DSP Capabilities**
- **8 Channels 40 Watts / Channel**
- **Convection Cooled**
- **Superb Audio Performance**

QDC42.dsp

SPECIFICATIONS - AUDIO AMPLIFIERS

Number of Channels	4 Input Channels - 8 Output Channels
Output Power per Channel (See Note 1)	25 Watts RMS @ 1kHz - 8 Ohms 40 Watts RMS @ 1kHz - 4 Ohms
Frequency Response (See Note 2)	10Hz to 22kHz +0dB , -3dB
Input Sensitivity (with DSPB23 Gain of 0dB)	0.755 Volts RMS for 25 Watts into 8 Ohm
Input Impedance	16k Ohms Balanced per Channel Pair
Load Impedance	4 Ohms to 16 Ohms
Damping Factor	Greater than 100:1 referenced to 8 Ohms @ 1kHz
Signal to Noise Ratio with DSPB23 Gain of 0dB	Greater than 85dB
Audio Input & Output Connections	Phoenix Style Screw Terminal Plug
Mains Connector & Fuse	IEC Mains Inlet / Fuse Holder. 3 Amp M205 Ceramic Fuse.
RS232 Programming Connector	Female DB9
User Interface	16 Character x 2 Line LCD with Backlight, Recessed Push Button for Menu Selection, Custom Software for DSP Programming.
Power Requirements	240 Volts AC @ 2 Amps
Dimensions	Standard 19" x 3½" (2RU) Rack Mount 345mm Deep excluding connectors
Weight	11.2 Kgs Net 13.2 Kgs Shipping

SPECIFICATIONS - DSPB23 DIGITAL SIGNAL PROCESSING

Number of DSPB23 Systems	4x Dual Channel Processors
Sample Rate	48kHz 256 x Oversampling
Word Size	24 Bit
Internal Processing	48 Bits double precision floating point
Latency	0.833mSec
Dynamic Range	105dB

FUNCTIONS - DSPB23 DIGITAL SIGNAL PROCESSING

Parametric Equalization	7x PEQ's / Channel - 2nd Order Response Parametric Constant Q, Parametric Adaptive Q, Lo & Hi Shelf, LP Butterworth, HP Butterworth, Band Pass, Stop Band, All Pass 1, All Pass 2, Low Pass Q, High Pass Q, IIR Coefficients, Bypass.
Crossover	1x LPF + 1x HPF / Channel - 2nd Order Response Butterworth, Linkwitz-Riley, Bessel, Bypass Can be configured to provide 1x LPF or 1x HPF 4th Order.
Gain	Channel Gain, Phase Invert and Mute
Output Delay	0.00mSecs - 3.42mSecs in 0.02mSec Increments / Channel
Dynamics	Compression, Limiting and Noise Gate / Channel Threshold / Limit, Ratio, Knee & Noise Gate Level
User Interface	Graphical User Interface Software for a PC or Laptop providing on-screen control panels for all DSPB23 Functions

1. All power measurements conducted according to the IHF202A Standard.
2. Frequency response limits determined by DSPB23 Sample Rate.

Acoustic Technologies reserve the right to alter or amend the QDC42.dsp without prior warning in the interests of product improvement.

APPLICATIONS

- **Courts of Law**
- **Transport Terminals**
  Airports
  Bus Depots
  Railway Stations
- **Parliamentary Debating Chambers**
- **Luxury Home Audio Distribution Systems**
- **Supermarkets & Shopping Centres**
- **Conference Centres**
- **Corporate Board Rooms**

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