

dPA-153 dLAB High Efficiency Digital Vibration System Amplifiers



Compact High Power Class D Shaker Power Amplifiers

GENERAL DESCRIPTION

The Labworks dPA-153 Class D switch mode Power Amplifier utilizes patented high-efficiency output circuitry to produce the high output voltage and current peaks required to drive shakers to their maximum rated output force using a fraction of the input power required by conventional linear amplifiers.

The user-friendly front panel digital display indicates the operational status of the amplifier's output as well as a complete set of vibration shaker system diagnostics. The amplifier monitors all vital shaker system parameters to guard against vibration test system damage and reports the cause for any amplifier limiting or protective shutdowns via its digital display.

FEATURES

- Class D output stage provides maximum output power with minimum line input power requirements
- Full digital system and amplifier diagnostics
- Automatic over temperature protection
- Automatic shaker specific current limiting
- Shaker system operational interlocks

The dPA-153 Amplifier family features internal protection from both over current and over temperature conditions insuring long term amplifier reliability. Full external interlock capability is provided to guard against payload damage as may be required by a vibration test program or critical specimen parameter.

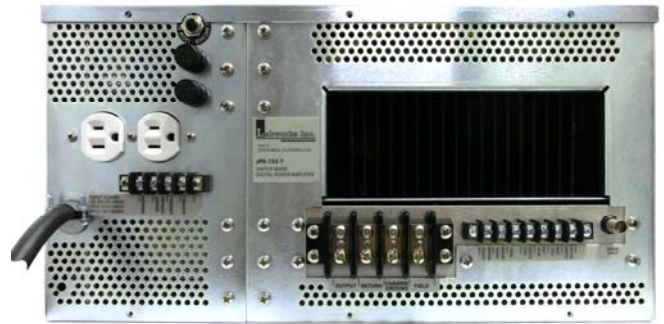
Shaker system specific dPA-153 models are available, matched to Labworks most popular shaker systems including field supplies, de-gauss supplies, cooling and overtravel interlocks all in one chassis where needed.

| Labworks Shaker | Amplifier Model |
|-----------------|-----------------|
| ET-140 | dPA-153-0 |
| FG-143 | dPA-153-3 |
| ET-127 | dPA-153-7 |
| ET-139 | dPA-153-9 |

- Quiet 2-speed cooling fans
- Low cooling heat load to environment

 **Labworks Inc.**

Labworks-inc.com
2950 Airway Ave #A-16
Costa Mesa, CA 92626
(714)549-1981
Fax (714) 549-8041



dPA-153 SPECIFICATIONS

Output Voltage (continuous)

| | |
|--------------|-----|
| Volts (rms) | 75 |
| Volts (peak) | 110 |

Output Current (continuous)

| | |
|----------------------|-----|
| Amps (peak) | 120 |
| Amps (rms) | |
| Maximum | 43 |
| High Current Limit | 25 |
| Medium Current Limit | 22 |
| Low Current Limit | 13 |

Frequency Range

| | |
|------|---------------|
| -3dB | 3.0 - 4000 Hz |
| -6dB | 2.0 - 6000 Hz |

Air Cooling

| | |
|---------------------|----------------|
| Dissipation Typical | 300W |
| Dissipation Maximum | 600W |
| Noise Level (L/H) | <50dB / <62 dB |

Inlet Air Temperature Range 40-100°F

Maximum Voltage Gain 45 dB

Digital Panel Display

| | |
|-----------------|---|
| Volts, pk | 10 segment + 3 digits |
| Amps, rms | 10 segment + 3 digits |
| Shaker | System Diagnostics |
| Internal | Amplifier Diagnostics |
| Ext. Interlocks | Fault Open, Closed, TTL |
| Operational | Current Limiting Amplifier Temperature |

Front Panel Status Lights, Controls

| | |
|----------|----------------------------|
| Lights | Fault, Ready, Interlock |
| Controls | Power, Gain, Current Limit |

Signal Input

| | |
|-----------------|--------|
| Max Voltage | 10 Vpk |
| Input impedance | 10 KΩ |
| Input Connector | BNC |

Self Protection

Over Current, Over Temperature

Line Input Power

Voltage 120*, 200 - 240Vac, 50-60 Hz, 1Ø
 Power (Max)

| | |
|-----------|----------|
| dPA-153-0 | 2100 VA* |
| dPA-153-3 | 2300 VA* |
| dPA-153-7 | 3500 VA* |
| dPA-153-9 | 1750 VA |

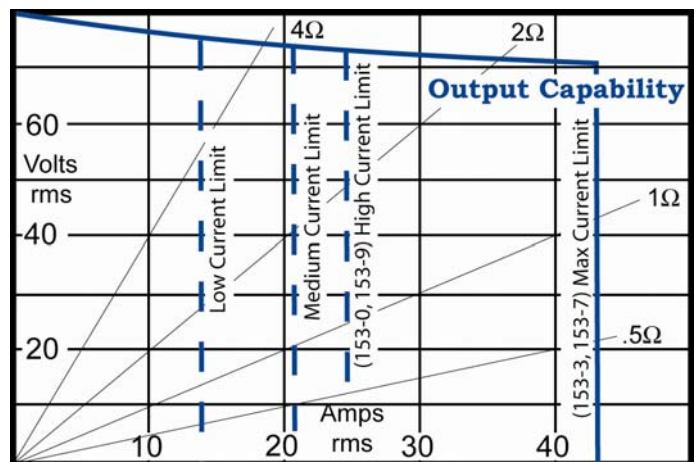
*This Power level is not available from a standard U.S.A. 115/120 V wall outlet

Dimensions

8.8"H x 19"W x 17"D

Weight

| | |
|-----------|---------|
| dPA-153-0 | 85 lbs |
| dPA-153-3 | 80 lbs |
| dPA-153-7 | 115 lbs |
| dPA-153-9 | 75 lbs |



TYPICAL DISPLAY MESSAGES



Welcome screen indicates firmware revision levels.



Vibration test system monitoring and control messages.



Normal operation screen peak output Voltage and rms output current