The **AE Techron 7782HF** amplifier is a DC-enabled, extended frequency unit best suited for controlled voltage applications that require voltages between 50 kHz to 100 kHz. At frequencies below 20 kHz, the 7782HF can provide 40mSec bursts of 180 amps peak. At frequencies up to 100 kHz, the 7782HF can provide up to 40 volts.

The 7782HF can operate in either voltage or current operation modes. It is ideal for situations like DO-160 testing that require high current from DC to 20 kHz and DC to 150 kHz power bandwidth.

The **AE Techron 7782HF/HC** amplifier is a DC-enabled unit optimized for high-power, continuous operation into very-low-impedance loads. A single 7782HF/HC can output a 40 mSec pulse with up to 150 amperes peak current. If more current is needed, up to four amplifiers can be combined in parallel and operate as a single system.*

The 7782HF/HC can operate in either voltage or current mode. It provides very low noise and fast slew rates, and can safely drive a wide range of resistive, inductive loads.

Typical use includes as a power source for EMC testing in applications that require both continuous AC or DC signals and significant short term (burst) signals (DO-160, MIL 461, and MIL 704).

### Features
- **7782HF provides over 4,000 watts peak output; 2,858 watts RMS into a 2-ohm load.**
- **7782HF/HC delivers 40 mSec pulses of up to 150 amperes peak into a 1-ohm load.**
- System output of 800 volts and 70 amperes maximum are possible with multiple, interconnected amplifiers.
- **7782HF provides a frequency bandwidth of DC to 50 kHz at rated power into 8 ohms; DC to 200 kHz at reduced power.**
- Rugged chassis for stand-alone or rack mounted operation. No additional power supplies are required.
- Protection circuitry protects against input overloads, improper output connection (including shorted and improper loads), over-temperature, over-current, and supply voltages that are too high or low.
- Optional "P" versions offer precision control of output offset, DC drift and gain linearity.
- Shipped ready to operate from 208-volt (±10%) three-phase AC mains. Operation from 400-volt (±10%) AC mains is available on request (7782HF version only).

### 7782HF DC Power Over Time Summary

<table>
<thead>
<tr>
<th>Time in Minutes</th>
<th>Impedance</th>
<th>Volts</th>
<th>Amps</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>0.5</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>1.5</td>
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<td>75</td>
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<tr>
<td>5</td>
<td>1</td>
<td>40</td>
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</tr>
<tr>
<td>5</td>
<td>2</td>
<td>84</td>
<td>42</td>
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<tr>
<td>Continuous</td>
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<td>21</td>
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AC Specifications

<table>
<thead>
<tr>
<th>Ohms</th>
<th>7782HF</th>
<th>7782HF/HC</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>5 Min, 100% Duty Cycle</td>
<td>1 Hour, 100% Duty Cycle</td>
</tr>
<tr>
<td></td>
<td>5 Min, 100% Duty Cycle</td>
<td>1 Hour, 100% Duty Cycle</td>
</tr>
<tr>
<td>Volts</td>
<td>Amps</td>
<td>Volts</td>
</tr>
<tr>
<td>4</td>
<td>120</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
<td>60</td>
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<tr>
<td>1</td>
<td>80</td>
<td>80</td>
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<tr>
<td>0.5</td>
<td>46</td>
<td>92</td>
</tr>
</tbody>
</table>

Performance

**7782HF Maximum Continuous Output Power:**
2858 watts RMS

**Output Offset:**
7782HF/7782HF/HC: Less than 5 mV, field adjustable to less than 1 mV
7782HF-P/7782HF/HC-P: Less than 200 µV, field adjustable to less than 100 µV; adjustment via 20-turn precision trim control; DC offset adjustment range is ±10 mV with about 0.9 mV per turn

**Output Offset Current:**
Less than 10 milliamperes DC

**DC Drift:**
7782HF/7782HF/HC: ±1.5 mV
7782HF-P/7782HF/HC-P: ±200 µV (from cold to maximum operating temperature); ±75 µV (after 20 minutes of operation)

**7782HF-P/7782HF/HC-P Gain Linearity** (over input signal, from 0.2 V to 5 V):
DC: 0.0125%
AC: 0.030%

**Input Characteristics**

**Balanced with Ground:**
Three terminal barrier block connector
20k ohm differential

**Gain:**
Voltage Mode: 20 volts/volt
Current Mode: 20 amperes/volt

**Residual Noise:**
Less than 1 millivolt RMS

AE TECHRON 7782HF and 7782HF/HC Datasheet Information subject to change.
Slew Rate:
40 volts per microsecond

Display, Control, Status

Front Panel
LED Displays indicate:
Ready, Standby, High AC Mains, High Temperature, Signal Overload, and Fault conditions in the output stage

Slide Switches for:
Run/Standby, LED Indicator Reset

Physical Characteristics

Chassis:
All aluminum construction designed for stand-alone or rack-mounted operation; with sliver front panel and black chassis; the amplifier occupies six EIA 19-inch-wide rack units

Weight:
128 lbs. (57.9 kg)

AC Power:
Three-phase, 208 VAC ±10%, 47-60 Hz, 20A AC service; 400 VAC ±10% version available on request (7782HF version only)

Operating Temperature:
10°C to 50°C (50°F to 122°F), Maximum Output Power de-rated above 30°C (86°F)

Humidity:
70% or less, non-condensing

Cooling:
Internal fans forced air, 300 cfm

Dimensions:
19 in. x 22.37 in. x 10.5 in. (48.3 cm x 56.8 cm x 26.7 cm)

Protection

Over/Under Voltage:
± 10% from specified supply voltage amplifier is forced to Standby

Over Current:
Breaker protection on both main power and low voltage supplies

Over Temperature:
Separate Output transistor, heat sink, and transformer temperature monitoring and protection