The EMI-PREAMP preamplifier is intended for improving measurement system sensitivity during EMC compliance testing. With a frequency range of 1 to 1000 MHz and a gain of 33 dB, it amplifies the signals that were previously hidden below the noise floor of the EMI receiver so that they can be seen and measured. The preamplifier has a gain variation of ±3 dB for the entire frequency range to reduce measurement errors. It can be powered by the rechargeable NimH batteries included when an external power source is not available.

Key features

- Wide frequency range (1 MHz to 1 GHz)
- Internal battery or AC adapter operation (>13 hours per charge)
- High gain, low noise figure (33 dB Gain (typical)) (3.3 dB noise figure)
- Individual calibration included
Specifications

Preamplifier

- Frequency range: 1 MHz – 1 GHz
- Preamplifier gain: 33 dB (3 dB)

Linear RF input range: < -30 dBuV – 89 dBuV

- POUT at 1 dB compression: 18.3 dBm
- POUT at 3 dB intercept (IP3): 32 dBm
- Noise figure: < 3.3 dB
- Input sensitivity: -30 dBuV (< 31.6 nV)
- RF input/output ports: 50 Ω N-type (female)
- Return loss (RF input/output ports): 29.5 dB (minimum), 44 dB (average)
VSWR (RF input/output ports) 1.69:1 (maximum), 1.25:1 (average)

Reverse isolation >40 dB (output port to input port)

Operating temperature 0° to 40° C (32° to 104° F)
Maximum RF input ratings 107 dBµV (225 mV), 0 dBm (1 mW), 2 VDC
Power supply (input) 100 to 240 V AC, 50/60 Hz; IEC60320 C14 receptacle
Power supply (output) +15 V ±1%; 4 A maximum
Battery runtime >13 Hours (with new, fully-charged batteries)
Dimensions 6 cm x 16.7 cm x 21 cm
Weight 1.45 kg
Ordering information

EMI-PREAMP preamplifier and related accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMI-PREAMP</td>
<td>1 MHz to 1 GHz preamplifier</td>
</tr>
<tr>
<td>119-8727-00</td>
<td>Power supply: AC-DC, Desktop; 90-264VAC 47-63HZ, IEC320-C14 IN; 5 VDC 4 A, Cable with 5.5MM OD 2.5MM ID Barrel out; comes with 133-0099-00 ADAPTER PLUG; Safety controlled</td>
</tr>
</tbody>
</table>

International power plugs

Opt. A0 North America power plug (115 V, 60 Hz)
Opt. A1 Universal Euro power plug (220 V, 50 Hz)
Opt. A2 United Kingdom power plug (240 V, 50 Hz)
Opt. A3 Australia power plug (240 V, 50 Hz)
Opt. A4 North America power plug (240 V, 50 Hz)
Opt. A5 Switzerland power plug (220 V, 50 Hz)
Opt. A6 Japan power plug (100 V, 50/60 Hz)
Opt. A10 China power plug (50 Hz)
Opt. A11 India power plug (50 Hz)
Opt. A12 Brazil power plug (60 Hz)
Opt. A99 No power cord

Service

All service provided by Com-Power Corporation. Contact https://www.com-power.com/index.html for service.
## Datasheet

### ASEAN / Australasia
- **(65) 6356 3900**

### Austria
- **00800 2255 4835**

### Brazil
- **+55 (11) 3759 7627**

### Central Europe & Greece
- **+41 52 675 3777**

### China
- **400 820 5835**

### Denmark
- **+45 80 88 1401**

### Finland
- **+41 52 675 3777**

### France
- **00800 2255 4835**

### Germany
- **00800 2255 4835**

### Hong Kong
- **400 820 5835**

### India
- **000 800 650 1835**

### Italy
- **00800 2255 4835**

### Japan
- **81 (3) 6714 3086**

### Luxembourg
- **+41 52 675 3777**

### Mexico, Central/South America & Caribbean
- **52 (55) 56 04 50 90**

### The Netherlands
- **00800 2255 4835**

### Norway
- **800 16098**

### People’s Republic of China
- **400 820 5835**

### Portugal
- **00800 2255 4835**

### Republic of Korea
- **+822 6917 5084, 822 6917 5080**

### Russia & CIS
- **+7 (495) 6647564**

### Spain
- **00800 2255 4835**

### Sweden
- **00800 2255 4835**

### Switzerland
- **00800 2255 4835**

### Taiwan
- **886 (2) 2656 6688**

### United Kingdom & Ireland
- **00800 2255 4835**

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* European toll-free number. If not accessible, call: +41 52 675 3777

For Further Information, Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tek.com](http://www.tek.com).

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