

# Preamplifier for Tektronix EMC pre-compliance

EMI-PREAMP (Com-Power PAM-103 offered by Tektronix)



## Key features

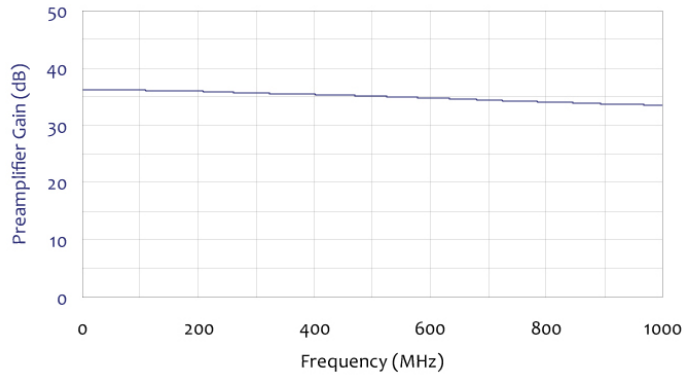
- Wide frequency range (1 MHz to 1 GHz)
- Internal battery or AC adapter operation (>13 hours per charge)
- High gain, low noise figure (33 dB Gain (typical)) (3.3 dB noise figure)
- Individual calibration included

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  $\pm 3$  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.

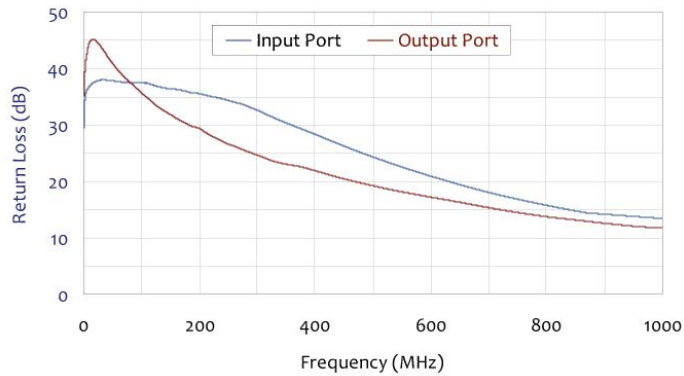
# Specifications

## Preamplifier

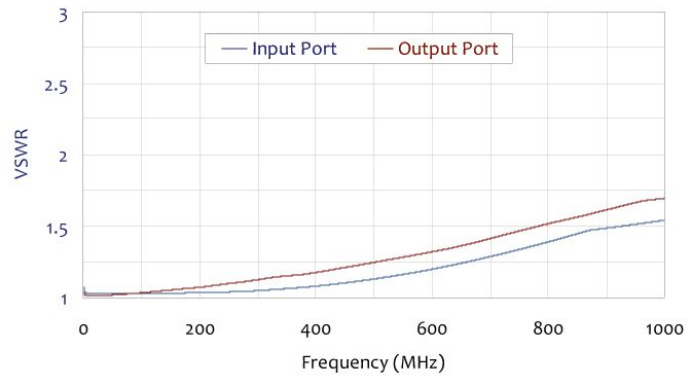
Frequency range 1 MHz –1 GHz  
 Preamplifier gain 33 dB (3 dB)



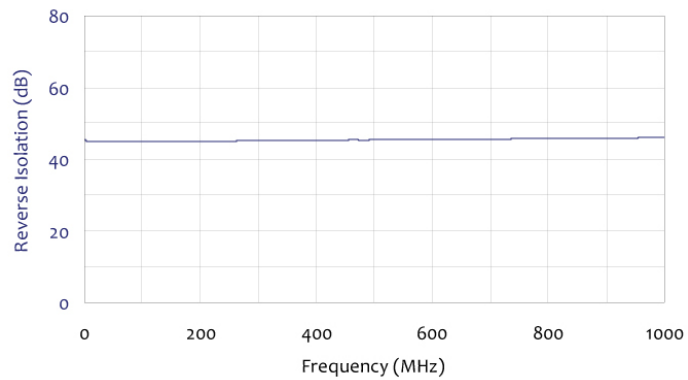
Linear RF input range < -30 dBuV – 89 dBuV  
 POUT at 1 dB compression 18.3 dBm  
 POUT at 3 dB intercept (IP3) 32 dBm  
 Noise figure < 3.3 dB  
 Input sensitivity -30 dBuV (< 31.6 nV)  
 RF input/output ports 50 Ω N-type (female)  
 Return loss (RF input/output ports) 29.5 dB (minimum), 44 dB (average)



VSWR (RF input/output ports) 1.69:1 (maximum), 1.25:1 (average)



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



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

## Ordering information

### EMI-PREAMP preamplifier and related accessories

Item	Description
EMI-PREAMP	1 MHz to 1 GHz preamplifier
119-8727-00	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

### 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.



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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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