



# LF to UHF range of Prefiltered RF Preamplifiers

User manual. Rev 04  
September 2020



From 100kHz to 500MHz range of thirty five Prefiltered, Very Low Noise, High IP3 preamplifiers.

For general purpose use such as Antenna signal booster, Instrumentation and IF Buffer for SDR radios, applications.

Featuring Amplifier By-Pass function when the toggle switch is set to amplifier OFF position.

Range of high performance Pre-Filtered RF Preamplifiers incorporating a 7th order Elliptic Low Pas Filter prior a high IP3, low noise amplifier. High IP3 is an important feature denoting capability to handle strong signals without distortion.

Suitable for a wide range of purposes in applications such as IF buffer for SDRradios, signal booster for radio receivers, laboratory measurement, signal generation, local oscillator buffer, transmission driver, etc.

Featuring Amplifier By-Passing function when the toggle switch is set to amplifier OFF position.

### LPF available Fc range of frequencies:

- 100kHz	- 900kHz	- 3.0MHz	- 9.0MHz	- 30.0MHz	- 90MHz	- 250MHz
- 300kHz	- 1.0MHz	- 4.2MHz	- 10.0MHz	- 45.0MHz	- 100MHz	- 300MHz
- 500kHz	- 1.3MHz	- 4.5MHz	- 15.0MHz	- 60.0MHz	- 150MHz	- 400MHz
- 600kHz	- 1.5MHz	- 5.0MHz	- 17.0MHz	- 70.0MHz	- 200MHz	- 500MHz
- 620kHz	- 2.0MHz	- 6.0MHz	- 20.0MHz	- 88.0MHz	- 220MHz	
- 800kHz						

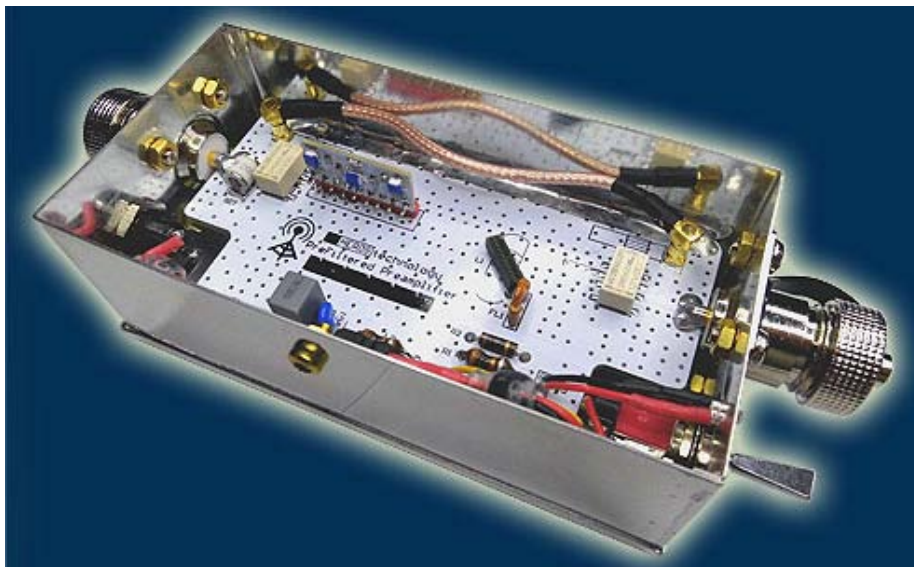


Depending on the working frequency technical specs are as follows:

LF to HF preamplifiers. Range from 100kHz to 45MHz.

Low Noise, High IP3 amplifier based on Mini-Circuits Gali-74+, a MMIC device manufactured using InGaP HBT technology.

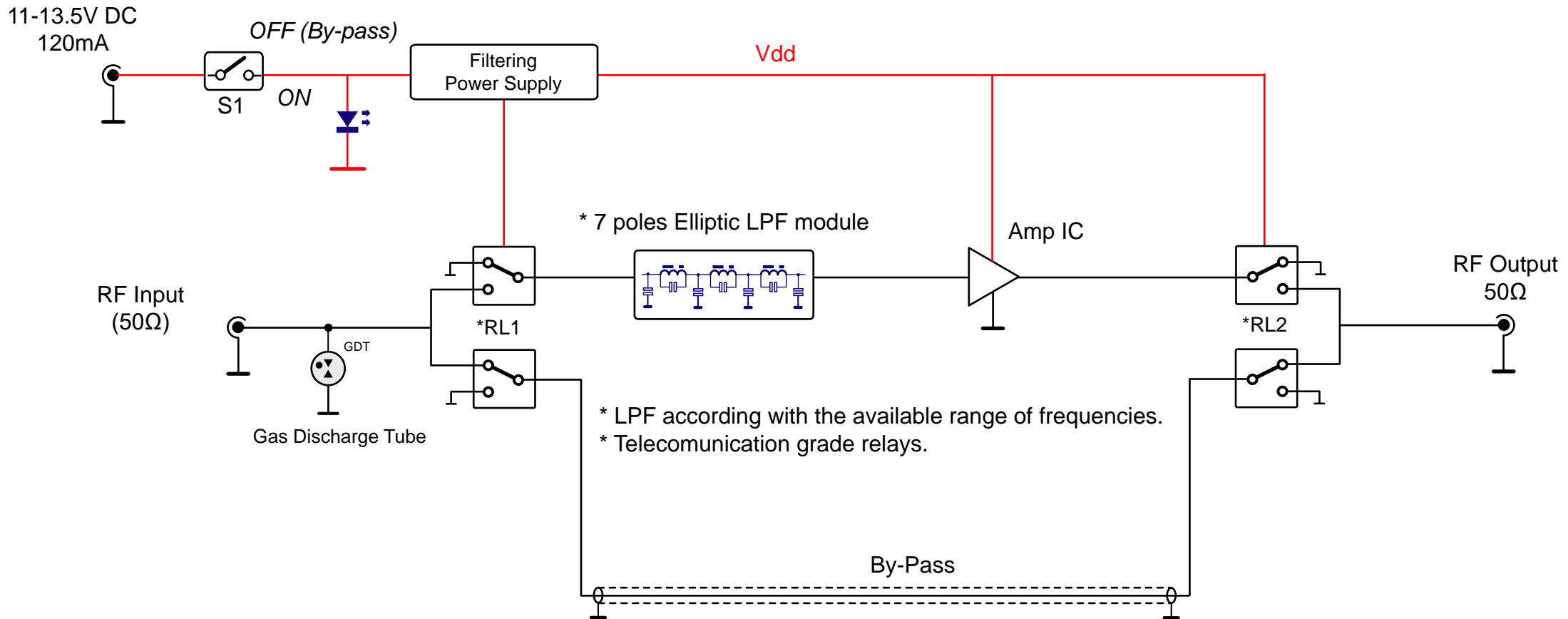
- Input/Output impedance: 50 Ohms.
- Input power CW: 10dBm. (10mW) ABSOLUTE MAXIMUM.
- Antenna surge suppression: Gas discharge tube on Input port.
- Passive, 7th order, Elliptic Low pass filter.
- Gain: 25dB
- IP3: 38dB
- Noise figure: 2.7dB.
- High isolation, very low insertion loss set of RF signal relays.
- Power supply circuitry includes protection and EMI rejection.
- Amplifier ON-OFF/By-pass functions switch.
- In OFF state the preamplifier is by-passed.
- 3mm LED signaling ON state.
- Power: 12V DC/120mA.
- Connectors: BNC, N, SO-239, SMA or combined types customized versions are available. Please ask.
- Case Size: 55x111x30mm (2.16x4.37x1.18in) ; Only for SO239 connectors size is: 55x111x40mm (2.16x4.37x1.57in)
- Coaxial cable tails and EMI power supply cable provided.



VHF to UHF preamplifiers. Range from 60MHz to 500MHz

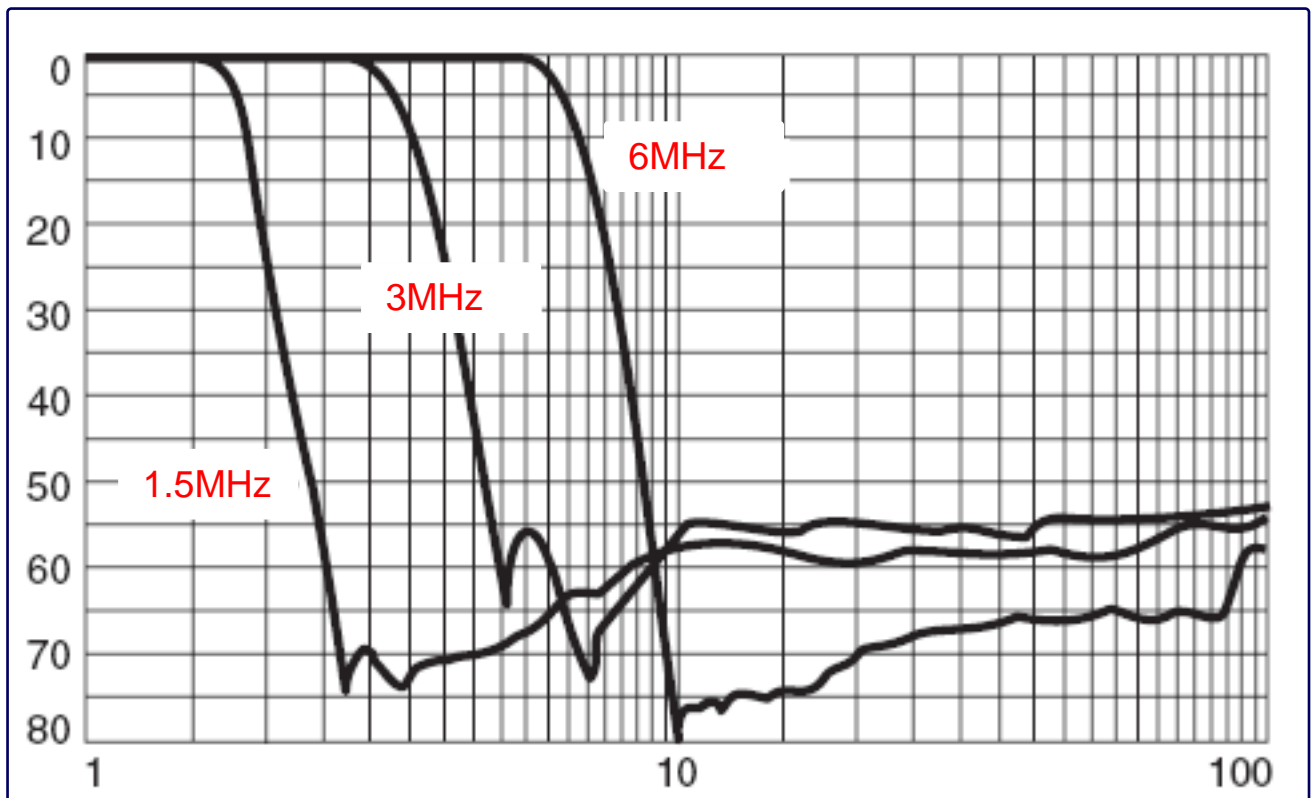
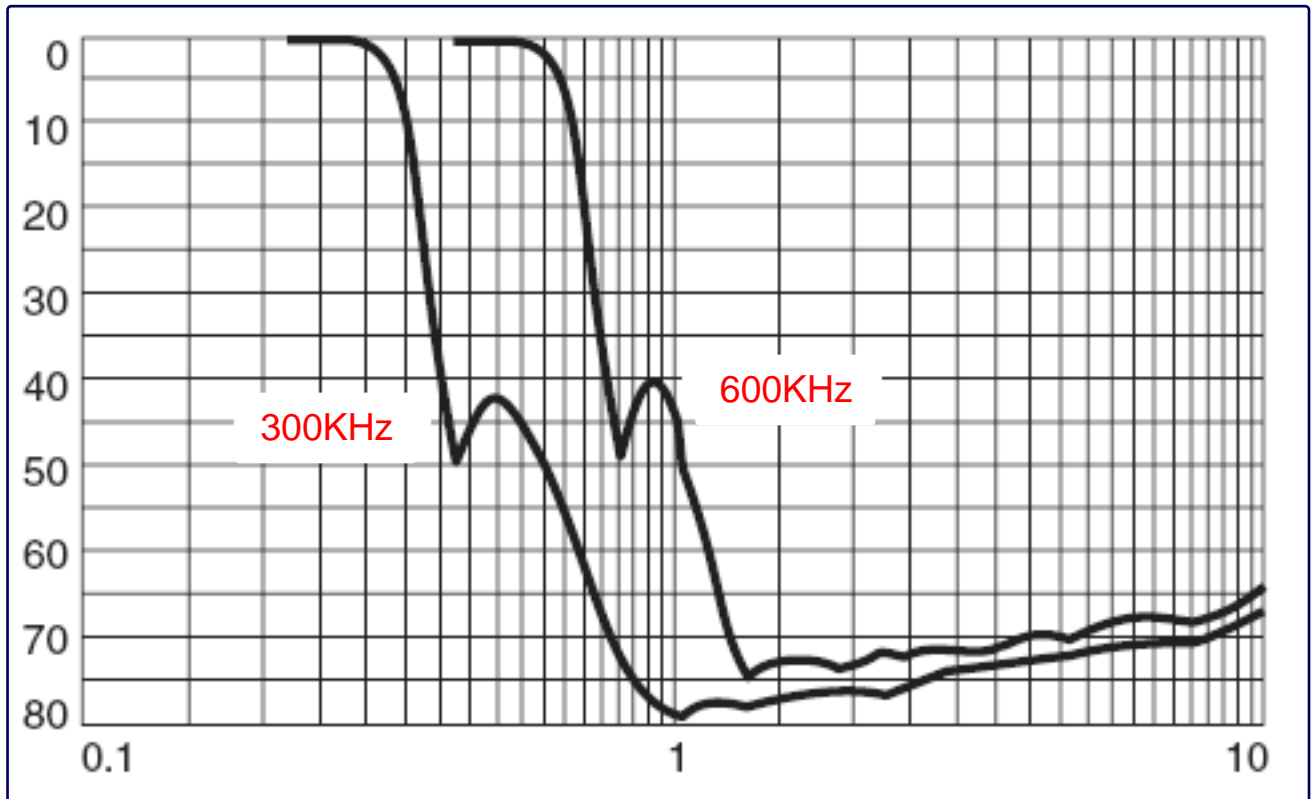
Very Low Noise, Ultra High IP3 amplifier, Minicircuits PGA-103+ MMIC device manufactured using E-PHEMT technology.

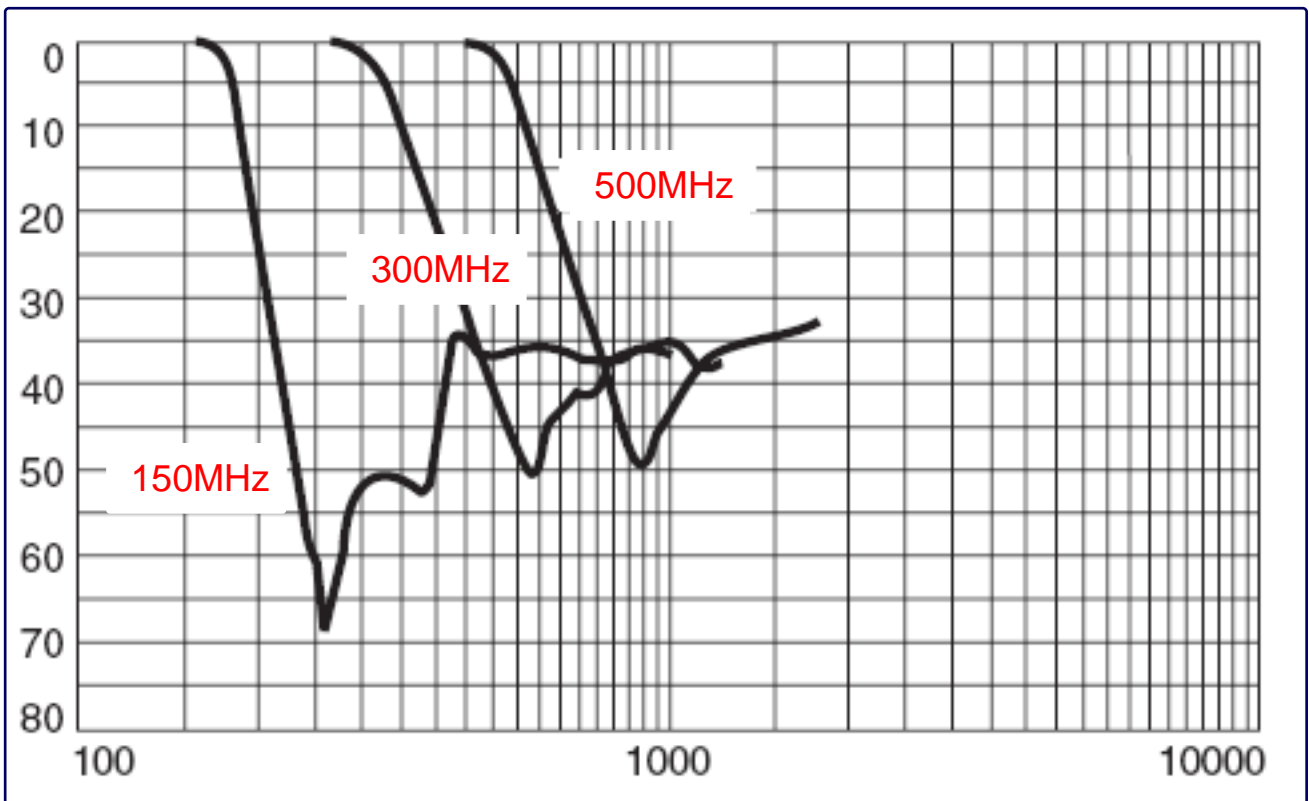
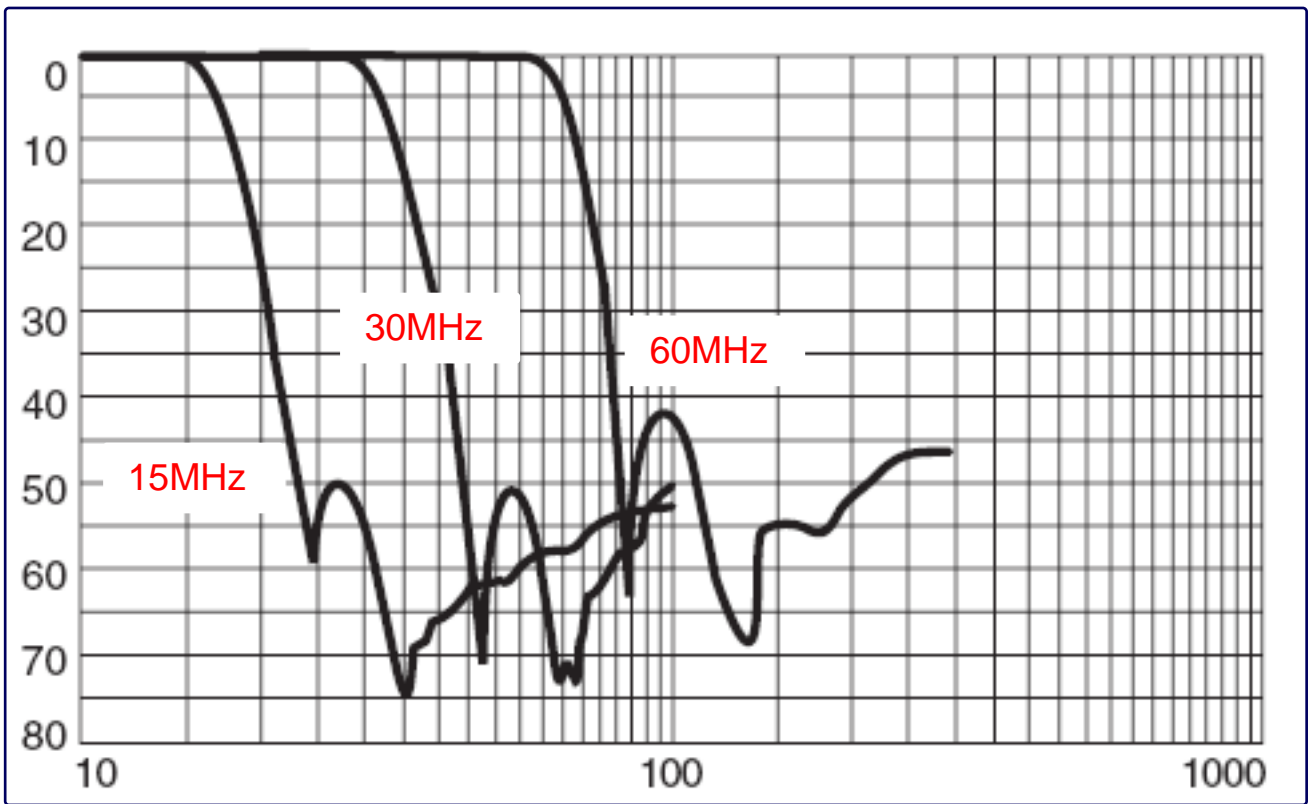
- Input/Output ports impedance: 50  $\Omega$
- Input power CW: +20dBm (100mW) ABSOLUTE MAXIMUM.
- Input port surge suppression: Gas discharge tube.
- Input Low Pass Filter: Passive, 7th order, Elliptic
- Gain: 25dB @ 150MHz; 22dB @ 500MHz.
- Output IP3: 37dBm @ 150MHz; 40dBm @ 500MHz,
- Noise figure: 0.5dB typ. 50MHz - 500MHz.
- Reverse Isolation: 25dB
- Power supply circuitry includes protection and EMI rejection.
- Amplifier ON-OFF/By-pass functions toggle switch.
- In OFF state the preamplifier is by-passed.
- 3mm LED signaling ON state.
- Power: 12V DC/150mA.
- Connectors: BNC, N, SO-239, SMA or combined types customized versions are available. Please ask.
- Case Size: 55x111x30mm (2.16x4.37x1.18in) ; Only for SO239 connectors case size is: 55x111x40mm (2.16x4.37x1.57in)
- Coaxial cable tails and EMI power supply cable provided.



LPF available Fc range of frequencies:

- 100kHz - 900kHz - 3.0MHz - 9.0MHz - 30.0MHz - 90MHz - 250MHz
- 300kHz - 1.0MHz - 4.2MHz - 10.0MHz - 45.0MHz - 100MHz - 300MHz
- 500kHz - 1.3MHz - 4.5MHz - 15.0MHz - 60.0MHz - 150MHz - 400MHz
- 600kHz - 1.5MHz - 5.0MHz - 17.0MHz - 70.0MHz - 200MHz - 500MHz
- 620kHz - 2.0MHz - 6.0MHz - 20.0MHz - 88.0MHz - 220MHz
- 800kHz





## NOTES:

---

*Heros technology Limited disclaims all liability arising from this information and its use.*

*It is your responsibility to ensure that your application meets with your specifications.*

*Information contained in this publication regarding device applications and the like is provided only for your convenience and may be superseded by updates.*

*Heros technology Limited makes no representations or warranties of any kind whether express or implied, written or oral, statutory or otherwise, related to the information, including but not limited to its condition, quality, performance, merchantability or fitness for purpose.*