

THE MICRO PHASE COMMUNICATION MP-9202 L-BAND UPCONVERTER SPECIFICATIONS

Input Characteristics

| | |
|-----------------|--------------------------------------|
| Frequency Range | 70 ± 20MHz 140 ± 40MHz (optional) |
| Impedance | 75Ω (50Ω optional) |
| Return Loss | >26dB |

Output Characteristics

| | |
|-----------------|--------------------|
| Frequency Range | 950 - 1750MHz |
| Impedance | 75Ω (50Ω optional) |
| Return Loss | >15dB |

Transfer Characteristics

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|-----------------------------|-------------------------|
| Conversion Gain | 30dB |
| Gain Flatness | ±0.5dB (950 to 1750MHz) |
| Amplitude Flatness | ±0.3dB (70 ± 20MHz) |
| Amplitude Ripple | 0.6dB p-p (70 ± 20MHz) |
| Attenuator Range | 0 to 30dB (continuous) |
| Attenuator Resolution | 0.1dB |
| Gain Stability: | |
| Over 24hrs at constant temp | ±0.25dB |
| 0 °C to +50 °C | ±0.35dB |

Phase Noise (SSB)

| | |
|--------|-------|
| 100Hz | 63dBc |
| 1 kHz | 75dBc |
| 10kHz | 85dBc |
| 100kHz | 97dBc |

Third Order Intermod Distortion:

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|------------------------|------------------------------|
| Output (full gain) | -40dBc @ 0dBm output per ckr |
| Output 1dB Compression | 0dBm @ 30dB Gain |

Group Delay:

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|-----------|----------------------------|
| Linear | 0.06ns/MHz |
| Parabolic | 0.015ns/(MHz) ² |

Spurious:

| | |
|---------------------|---------------------|
| Carrier Dependent | -70dBc at full gain |
| Carrier Independent | -70dBm at full gain |

Image Rejection:

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|-----------|----------------------|
| 1st Mixer | -75dBc (out of band) |
| 2nd Mixer | -75dBc (out of band) |
| 3rd Mixer | -80dBc (in band) |

| | |
|------|--------|
| Mute | -80dBc |
|------|--------|

Reference

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|-------------------------|--|
| Frequency | 10MHz |
| Frequency Stability | 5 x 10 ⁻⁹ from 0 to 50 °C |
| <u>Frequency Aging:</u> | ±5 x 10 ⁻¹⁰ per day |
| | ±1 x 10 ⁻⁷ per year |
| Warmup | ±1 x 10 ⁻⁷ after 2.5min @ 25 °C |

Front Panel

| | |
|----------------|------------------------------------|
| Display | LCD 2 x 40 Character (Backlit) |
| Data Entry | Keyboard |
| Indicators | Power, Alarm, Remote, Ext Ref |
| Monitor Points | IF (BNC Female) LO (BNC Female) |

Rear Panel

| | |
|---------------------------|------------------------------|
| RF Output | TNC Female (type N optional) |
| RF Input | BNC Female |
| Internal Reference Output | BNC Female |
| Ext Reference Input | BNC Female (5MHz or 10MHz) |

Remote Control:

| | |
|---------------|-------------------------------|
| RS232 | 9-pin D Male |
| RS485 | 9-pin D Male |
| Summary Alarm | 9-pin D Female (Form-C Relay) |

Miscellaneous

| | |
|----------------|--|
| Remote Control | All Front Panel Functions Full Status Reporting |
|----------------|--|

External Reference:

5/10MHz auto detect and locking of Internal 10MHz Reference

Lock Range ±5 x 10⁻⁷

General

| | |
|-------------------|---------------------------|
| Size | 13.5" D x 19" W x 1.75" H |
| Weight | 13lbs |
| Power Consumption | 30W max |
| Voltage | 100-240VAC 50/60Hz |
| Temperature | 0 to 50 °C |