

THE MICRO PHASE COMMUNICATION MP-9212 Ku-BAND DOWNCONVERTER SPECIFICATIONS

Input Characteristics

Input Frequency Range	10.95 – 11.75GHz (Opt 1) 11.70 – 12.50GHz (Opt 2) 12.20 – 13.00GHz (Opt 3)
Step Size	125kHz
Impedance	50Ω
Return Loss	>23dB

Output Characteristics

Frequency Range	70 ± 20MHz or 140 ± 40MHz (Front Panel Selectable)
Impedance	75Ω (50Ω optional)
Return Loss	>26dB

Transfer Characteristics

Noise Figure	17dB (Full Gain)
Conversion Gain	55dB
Gain Flatness	±0.5dB
Amplitude Flatness	±0.25dB (70 ± 20MHz)
Amplitude Ripple	0.5dB p-p (70 ± 20MHz)
Attenuator Range	0 to 30dB (continuous)
Attenuator Resolution	0.1dB
Gain Stability: Over 24hrs at constant temp 0°C to +50°C	±0.25dB ±0.35dB
<u>Phase Noise (SSB)</u>	
100Hz	62dBc
1 kHz	75dBc
10kHz	85dBc
100kHz	97dBc

Third Order Intermod Distortion:

Input Side (35dB gain)	-50dBc @ -37dBm input per cxx
Output Side (full gain)	-50dBc @ +10dBm output per cxx
Output 1dB Compression	+18dBm @ 55dB Gain

Group Delay:

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

Spurious:

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

Image Rejection:

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

Reference

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 Input	SMA
RF Output	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