

THE MICRO PHASE COMMUNICATION MP-9240 C-BAND DOWNCONVERTER SPECIFICATIONS

Input Characteristics

Frequency Range	3400 to 4200MHz
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 (3400 to 4200MHz)
Amplitude Flatness	±0.35dB (70 ± 20MHz)
Amplitude Ripple	±0.35dB (140 ± 40MHz)
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

Phase Noise (SSB)

100Hz	62dBc
1 kHz	89dBc
10kHz	90dBc
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	Type N (SMA optional)
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
<u>External Reference:</u>	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

Related Products

MP-9201	L-Band Downconverter
MP-9202	L-Band Upconverter
MP-9260	C-Band Upconverter