

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

Input Characteristics

Frequency Range	3400 to 4200MHz
Impedance	50Ω
Return Loss	>23dB

Output Characteristics

Frequency Range	70 ± 20MHz 140 ± 40MHz (optional)
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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	0.7dB 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:

Input Side (35dB gain)	-50dBc @ -37dBm input per cxr
Output Side (full gain)	-50dBc @ +10dBm output per cxr

Output 1dB Compression	+18dBm @ 55dB Gain
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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
Frequency Aging:	
	±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)
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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)
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Miscellaneous

Remote Control	All Front Panel Functions Full Status Reporting
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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