

MF2400C Series

Microwave Frequency Counter



**MF2412/13/14C
Microwave Frequency Counter**

– Product Introduction –

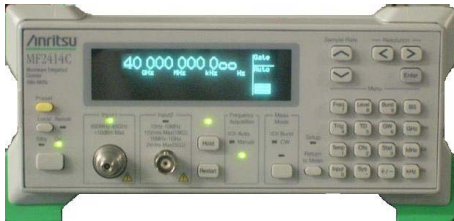
**September 2007
Anritsu Corporation
Version 1.00**

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**MF2400C
Microwave Frequency Counter**



Wideband Measurement
20/27/40 GHz models

High-Accuracy Burst Measurement
Supports burst signal widths of 100 ns to 0.1 s

Analog Display Function
Displays easy-to-see changes in measured frequency

High-Speed Transient Measurement
Up to 10 μ s transient capture
Data memory for 2000 points max.
Graphical frequency display using host PC

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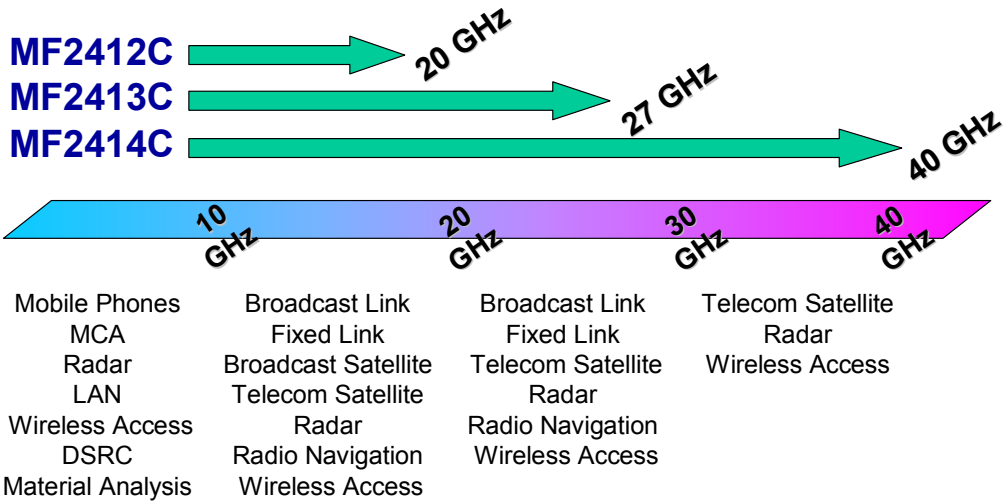
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Frequency Ranges to Match Application

The three models in the MF2400C Series have different upper frequencies to match the application and help cut capital investment.

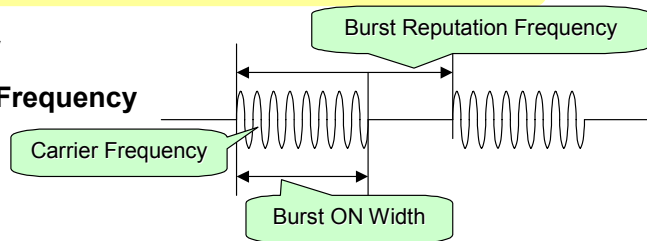


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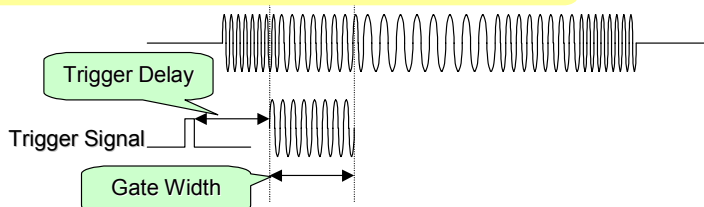
Full Range of Burst Signal Measurement Functions

The MF2400C Series has a full range of versatile burst measurement functions.

- Carrier Frequency
- Burst Reputation Frequency
- Burst ON Width



Any burst signal position and time interval can be specified for frequency measurement.

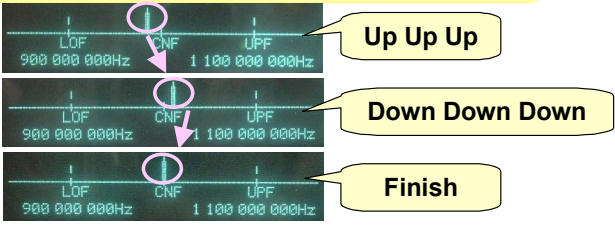


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Analog Display Function

The MF2400C analog meters display markers at positions equivalent to the measured value...



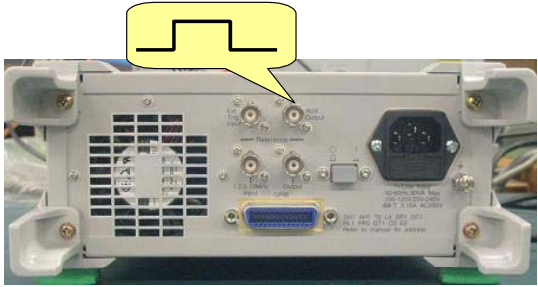
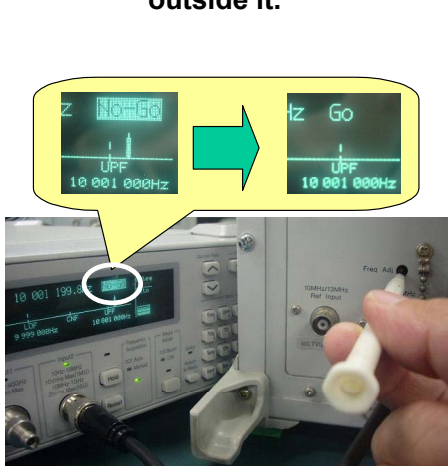
... making it easy to see changes in measured frequency. Frequency can be fine-tuned and Go/No-Go evaluation performed simply and quickly.



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Template Function

Go/No-Go is displayed at the preset limit.

When the upper and lower frequency limits are preset, Go is displayed when in the range, and No-Go is displayed when outside it.



The Go/No-Go signal is output as a TTL signal from the back-panel AUX connector, which is useful for configuring automatic test systems.



**MF2400C
Option**

High Stability Reference Crystal Oscillator

	Standard	Option-003
Frequency	10 MHz	10 MHz
Start Up Characteristics	$\pm 5 \times 10^{-8}$ /10 minutes (After power-on, referenced to frequency after 1 h)	Unspecified
Aging Rate	$\pm 5 \times 10^{-9}$ /day (After power-on, referenced to frequency after 24 h)	$\pm 5 \times 10^{-10}$ /day $\pm 2 \times 10^{-8}$ /year (After power-on, referenced to frequency after 72 h)
Temperature Characteristics	$\pm 5 \times 10^{-8}$ (25° ± 25°C)	$\pm 5 \times 10^{-9}$ (-10° to +60°C, 25°C reference)

Appendix

Changes from MF2400 "B" to "C"



Changes from MF2400 “B” to “C” Basic Specifications

Improved Display Visibility

The MF2400C Series uses a vacuum fluorescent display (VFD) offering good visibility in dark locations and wide viewing angle.



High-Stability Reference Crystal Oscillator

The MF2400C Series has a reference crystal oscillator with an order-of-magnitude better accuracy, eliminating the need to purchase an option and helping cut setup costs.

	“B” Series Standard Crystal Oscillator	“C” Series Standard Crystal Oscillator
Starting Characteristics	$\pm 5 \times 10^{-8}/10$ day (After 30-minute warm-up)	$\pm 5 \times 10^{-8}/10$ minutes (After power-on, referenced to frequency after 1 h)
Aging Rate	$\pm 2 \times 10^{-8}/\text{day}$ (After power-on, referenced to frequency after 24 h)	$\pm 5 \times 10^{-9}/\text{day}$ (After power-on, referenced to frequency after 24 h)
Temperature Characteristics	$\pm 5 \times 10^{-8}$ ($25^\circ \pm 25^\circ\text{C}$)	$\pm 5 \times 10^{-8}$ ($25^\circ \pm 25^\circ\text{C}$)

GPIB Function

The MF2400C Series does not support the GPIB talker function.

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Changes from MF2400 “B” to “C” Options

The MF2400C Series has a reference crystal oscillator with an order-of-magnitude better accuracy, eliminating the need to purchase an option and helping cut setup costs.

“B” Series	Standard (10 MHz)	Opt-01 (10 MHz)	Opt-02 (10 MHz)	Opt-03 (10 MHz)
Starting Characteristics	$\pm 5 \times 10^{-8}/10$ day (After after 30-minutes warm-up)			
Aging Rate	$\pm 2 \times 10^{-8}/\text{day}$ (After power-on, referenced to frequency after 24 hours)	$\pm 5 \times 10^{-9}/\text{day}$ $\pm 5 \times 10^{-8}/\text{month}$ $\pm 7.5 \times 10^{-8}/\text{year}$ (After power-on, referenced to frequency after 24 h)	$\pm 2 \times 10^{-9}/\text{day}$ $\pm 3 \times 10^{-8}/\text{month}$ $\pm 4.5 \times 10^{-8}/\text{year}$ (After power-on, referenced to frequency after 24 h)	$\pm 5 \times 10^{-10}/\text{day}$ $\pm 1 \times 10^{-8}/\text{month}$ $\pm 1.5 \times 10^{-8}/\text{year}$ (After power-on, referenced to frequency after 24 h)
Temperature Characteristics	$\pm 5 \times 10^{-8}$ (0° to 50°C)	$\pm 5 \times 10^{-8}$ (-10° to 60°C , 25°C reference)	$\pm 1.5 \times 10^{-8}$ (-10° to 60°C , 25°C reference)	$\pm 5 \times 10^{-9}$ (-10° to 60°C , 25°C reference)

“C” Series	Standard (10 MHz)	Opt-003 (10 MHz)
Starting Characteristics		$\pm 5 \times 10^{-8}/10$ minute (After power-on, referenced to frequency after 1 h)
Aging Rate		$\pm 5 \times 10^{-9}/\text{day}$ (After power-on, referenced to frequency after 24 h)
Temperature Characteristics		$\pm 5 \times 10^{-8}$ ($25^\circ \pm 25^\circ\text{C}$)

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