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Instruments You Can Count On

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Phase Matrix EIP 545B/548B
Full Function Microwave Frequency Counters
with Selective Power Measurement

EIP/PhaseMatrix 545B and 548B
CW Frequency Counters

10 Hz to 20 GHz / 10 Hz to 26 GHz
The combination of accuracy, simple operation, and the widest range of standard features and options available in a microwave counter makes the 545B/548B family the best choice for your R&D lab or production test bench. Wherever a microwave counter has multiple duties and a variety of applications to meet, only a full function counter with YIG-tuned preselection can provide the capabilities that you need.

Features at a glance:

Keyboard controlled frequency limit selection
Power Measurement to 0.1 dB resolution
Power Measurement accuracy to ±0.5 dB typical
-30 dBm sensitivity
200 Watt (+53 dBm) peak damage protection
10 dB automatic amplitude discrimination
200 ms acquisition time
Up to 800 MHz/sec tracking speed
20 MHz P-P FM tolerance up to a 10 MHz rate

Frequency Extension to 110 GHz

Option 06 provides the ability to extend the frequency range of your 548B, in bands, up to 110 GHz. Remote sensors allow you to reach out to connect to virtually any wave guide system without the complications of the additional plumbing necessary to bring the signal to your counter. A wide selection of sensors provides measurement capability in the wave guide band that you are working in now, and the flexibility to change as your application changes without having to purchase another counter.

Frequency Limits

Automatic amplitude discrimination enables the 545B/548B counters to automatically select and measure the input signal with the highest level, and ignore all other harmonics and other spurious signals that are present. "Frequency Limits" extend this signal selection capability by allowing you to select upper and lower limits, The counter will measure the frequency and power level of only the highest level signal within these limits - even if there are higher level signals present at the counters input. This gives you the ability to measure the frequency and power of a low level signal (such as a harmonic) even when a signal of much higher level (the fundamental) is present.

Specifications at a glance:

Frequency Range

Band 1: 10 Hz to 100 MHz
Band 2: 10 MHz to 1 GHz
Band 3: 1 GHz to 20 GHz (545B) or 26 GHz (548B).
548B expandable to 110 GHz.

Sensitivity

Band 1: 25 mV RMS
Band 2: -20 dBm
Band 3: -30 dBm to 12.4 GHz,
-25 dBm to 20 GHz,
-20 dBm to 26.5(548B)

Acquisition Time
Normal Mode : 200 ms
Center Frequency Mode: 20 ms

Power Measurement
Range : Same as Band 3
Accuracy : ±0.5 dB typical

Options:

01 Digital to Analog Converter
02 Power Measurement Display Offsets
06 High Frequency Extension
05 High Stability Oven Time Base
09 Rear Panel Inputs
10 Chassis Slides 24"
14 2 Year Warranty Extension (Total 3 years)

Accessories:

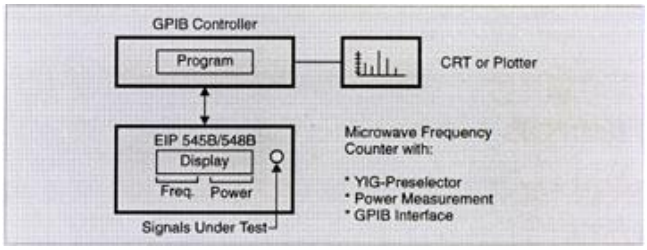
010 Transit Case
020 Rack Mount Kit
018 Front Panel Handle Kit
031 Extra Operations Manual
032 Service Manual
042 Service Kit

Frequency Extension Accessories for 54XB*

590 Frequency extension cable kit
091 26.5-40 GHz remote sensor, waveguide
092 40-60 GHz remote sensor, waveguide
093 60-90 GHz remote sensor, waveguide
094 90-110 GHz remote sensor, waveguide
095 50-75 GHz remote sensor, waveguide
096 33-50 GHz remote sensor, waveguide
097 26.5-50 GHz remote sensor, coax

Power Measurement

The 545B/548B family of microwave counters offers the optional ability to simultaneously measure both the frequency and power level through the same input. This often eliminates the need for a separate microwave power meter. With the 25 MHz bandwidth of the YIG tuned preselector, power measurement is made only of the displayed signal, not of its harmonics or other signals present. Thus you can simultaneously measure and display both frequency and power of individual signals in a multi-signal environment. Easy keystroke entry of power offsets can be used to measure power deviation from a reference, or to compensate for losses in external hookups such as cable and attenuator losses.



Frequency domain analysis can be accurately and quickly performed by utilizing the counter's selective frequency and selective power measurement capabilities

* requires cable kit 590 and extended frequency Option 006
Prices and/or specifications subject to change without notice.

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