



**Phase Matrix, Inc.**<sup>TM</sup>  
Instruments You Can Count On

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### Phase Matrix / EIP 585C/588C

Full Function Pulse/CW Counters with an optional Internal Delaying Pulse Generator

#### 585C and 588C Pulse/CW Frequency Counters 100 Hz to 20 GHz/100 Hz to 26 GHz

The 585C/588C Pulse/CW counters are Phase Matrix's highest performance counters. They are capable of measuring the frequency of repetitive pulses as narrow as **50 ns**. A 3.5" full rack sized instrument, the 58XC series offer Phase Matrix's **YIG filtered front end** and optional frequency extension to **170 GHz** (on the 588C). Standard features include frequency selectivity (high and low frequency limits), GPIB, simultaneous display of frequency and pulse width or pulse repetition interval. Optional features include an **internal delaying pulse generator for automatic frequency profiling**.

#### Frequency Range

Band 0: 100 Hz to 250 MHz (CW only)  
Band 1: 250 MHz to 1 GHz  
Band 2: 0.95 GHz to 20 GHz (585C) or 26 GHz (588C)

#### Sensitivity

Band 0: -20 dBm  
Band 1: -20 dBm  
Band 2: -20 dBm to 2 GHz,  
-25 dBm 2 to 12.4 GHz,  
-20 dBm to 20 GHz,  
-15 dBm to 26.5 (588C)

#### Pulse Parameters

50 nS minimum pulse width  
10 nS minimum profile window  
1 Hz to 4 MHz PRF  
Pulse Width Measurement 50 nS to 1 sec  
FM Tolerance 20 MHz p-p

#### Standard Time Base

10 MHz TCXO  
Stability:  
Aging Rate <1x10<sup>-7</sup>/mo.  
Short Tern <1x10<sup>-9</sup> RMS 1s ave.  
Temp <1x10<sup>-6</sup> 0 to 50C  
Warm up time: 30 min

#### Optional High Stability Time Base

10 MHz OCXO  
Stability:  
Aging Rate <5x10<sup>-10</sup>/day (after 24hrs warm up.)  
Short Tern <2x10<sup>-10</sup> RMS 1s ave.  
Temp <3x10<sup>-9</sup> (0 to 50C)  
10% line voltage change <2x10<sup>-10</sup>

#### Options:

14 Two Year Warranty Extension (Total 3 years)  
15 MIL-STD 45662 (ANSI Z540-1:94)  
5803 Rear Panel Inputs  
5804 Extended Freq. Capability (588B only)  
5809 <5x10<sup>-10</sup>/day high stability ovenized time base  
5810 Internal Delaying Pulse Generator

#### Accessories:

010 Transit Case  
021 Rack Mount Kit with Handles  
022 Rack Mount Kit without Handles  
031 Extra Operations Manual  
032 Maintenance and Service Manual (includes operational info)  
043 Service Kit  
050 Soft Pac carry case  
101 Chassis slide with handles (includes OPT 021)  
102 Chassis slide without handles (includes OPT 022)

#### Frequency Extension Accessories for 588B\*

890 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  
098 110-170 GHz remote sensor, waveguide  
\* requires cable kit 890 and extended frequency Option 5804

Prices and/or specifications subject to change without notice.



Download the datasheet for the [Phase Matrix EIP 585C/588C](#)  
Download the Pulse Calculator [Pulse.Exe](#)

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