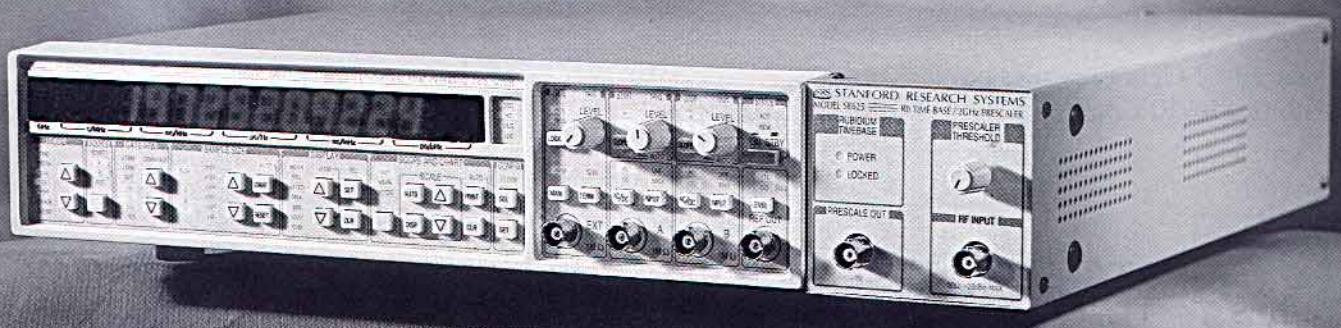
STANFORD RESEARCH SYSTEMS

SR625 Frequency Counter
with Rb Timebase for High Accuracy Measurements

- **12 digit frequency resolution**
- **Rb timebase, 5×10^{-10}/year drift**
- **2 GHz direct prescaler input**
- **10 minute warmup, portable**
- **10 MHz Rb timebase output**
- **IEEE-488, RS-232 interfaces**

The SR625 Frequency Counter makes traceable frequency measurements for calibrating base stations, transmitters and many types of communication systems. It combines a high resolution SR620 counter with the atomic accuracy of a Rubidium timebase, ensuring precise measurements of frequency and time. The prescaler input allows frequencies up to 2 GHz to be measured with twelve digits of resolution. The SR625's ten minute warmup time and compact design make it ideal for field applications. A rear panel 10 MHz output provides an additional reference signal for disciplining other test equipment (eg. synthesizers or spectrum analyzers).

The SR625's performance and traceability make it ideal for both field and laboratory calibrations.



Specifications

The SR625 has all of the measurement capabilities of the SR620 Time Interval Counter. The following technical specifications are unique to the SR625 as they relate to the Rb timebase and prescaler. For more information on the full capabilities of the SR620, please see the SR620 brochure.

Rubidium Timebase

Frequency	10 MHz
Accuracy at shipment	$\pm 5 \times 10^{-11}$
One day stability	4×10^{-11}/day
Long term drift	$\leq 5 \times 10^{-11}$/month, $\leq 5 \times 10^{-10}$/yr
Short term stability	1 Second (Allan Variance): 1×10^{-10}
	10 Second (Allan Variance): 3.16×10^{-11}
	100 Second (Allan Variance): 1×10^{-11}
Warmup time	10 minutes to meet short term stability
Power	70W (at warmup), 100/120/208/240 V
Output	10 MHz, 1 Vp-p sinusoid

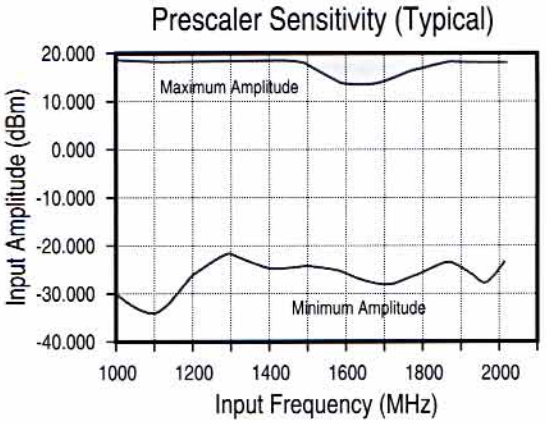
Prescaler

Input

Impedance	50 Ω
Maximum input level	+23 dBm
Frequency range	50 MHz to 2 GHz
Sensitivity	See Plot

Output

Expected load	50 Ω
Frequency	1/10 of the input frequency
Waveform	Square wave, 700 mVp-p, +500 mV DC



General

Size	3.0" H x 17" W x 14.5" D
Weight	15 lbs.

Ordering Information

SR625
Frequency Counter with Rb Timebase and
2 GHz Prescaler

Opt 625
Rb Timebase and 2 GHz Prescaler only
(for retrofitting SR620 Counters)

STANFORD RESEARCH SYSTEMS
1290-D Reamwood Avenue • Sunnyvale, CA 94089
Telephone (408)744-9040 • FAX: 4087449049

email: info@thinkSRS.com
www.thinkSRS.com