



Low Noise Crystal Oscillators > Sprinter Plus

Features:

- Frequency: 50 MHz to 500 MHz, fixed
- Integrated Multiplier (x2, x3, x4 or x5)
- Low Phase Noise
- Good Temperature Stability
- PCB Mount and SMA Packages
- Internal Voltage Regulator

Applications:

- General Purpose Reference
- Portable Transceivers
- Synthesizers
- Test Equipment
- Base Stations



Electrical Specifications	
Output Frequency (fixed; specify within range)	50 MHz to 500 MHz
Output Level	+13 dBm ±2 dB into 50 ohms
Aging	
Per day after 30 days operating, typical	5×10^{-9}
Second year, typical	5×10^{-7}
Per year thereafter, typical	3×10^{-7}
Temperature Stability (consult factory for other ranges)	
Range E: 0 to +50°C (Ref: +25°C)	$\leq \pm 2 \times 10^{-7}$
Range F: -20 to +70°C (Ref: +25°C)	$\leq \pm 5 \times 10^{-7}$
Range G: -55 to +85°C (Ref: +25°C)	$\leq \pm 2 \times 10^{-6}$
Phase Noise	(Frequency Dependent: See Standard Specifications and Part Numbers table below for details)
Harmonics	≤ -30 dBc
Sub-Harmonics	≤ -50 dBc
Spurious	≤ -80 dBc
Tuning	(MT and ET ranges can be reversed upon request)
- Mechanical Tuning	$\geq \pm 4 \times 10^{-6}$, typical
- Electrical Tuning	
Tuning A: 0 to +10 VDC	$\geq \pm 5 \times 10^{-7}$, typical
Tuning B: ±5 VDC	$\geq \pm 5 \times 10^{-7}$, typical
Slope: Negative	(Positive Slope available on some ET only models)
Supply Voltage	+15 VDC or +12 VDC (±5%)
Warm-up	≤ 6 Watts for 5 minutes at +25°C
Total	≤ 4 Watts at +25°C
Crystal Type	SC-cut
Mechanical	
Packaging	Solder sealed steel can
Dimensions	2" x 2" x 0.75"
Connectors / Mounting	
- Package A	SMA(f) and solder pins on side Threaded Inserts, #4-40, 2 places
- Package B	Solder pins on base Thru Hole PCB mount

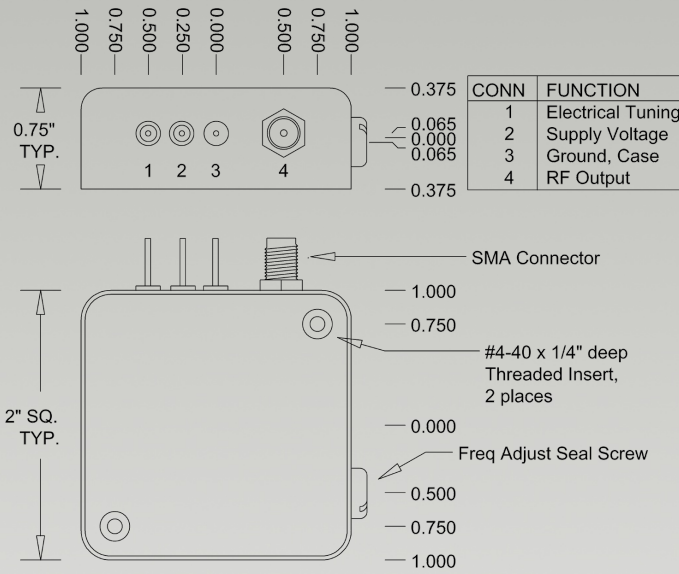
Description:

The Sprinter Plus oscillators are general purpose OCXOs with a fixed output frequency between 50 MHz and 500 MHz, which offer excellent overall performance at a modest cost. The Sprinter Plus is comprised of a Sprinter crystal oscillator which is integrated with a multiplier (x2, x3, x4 or x5). These oscillators provide good frequency stability over temperature and low phase noise performance. Connector options include PCB mount with solder pins on the base or SMA(f) connector and solder pins on the side. A low noise voltage regulator is included to minimize power supply line related spurious signals. Please contact technical staff to discuss custom requirements.



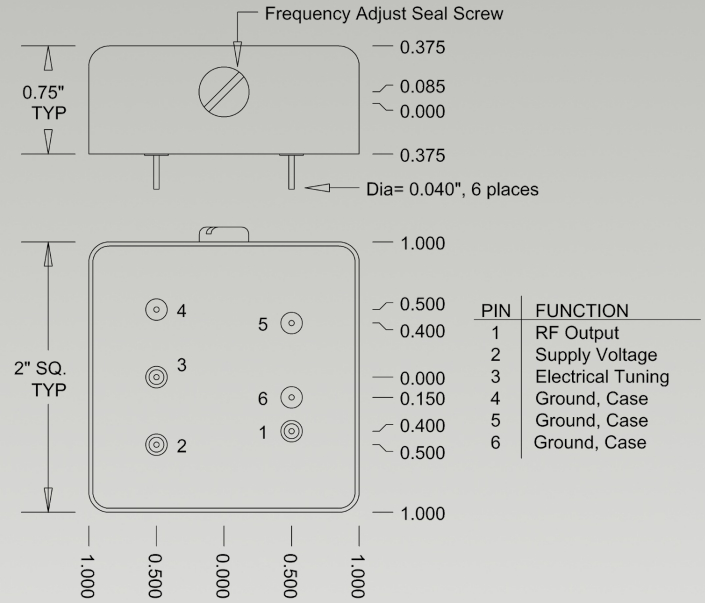
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Package A



Connector numbers are for reference only, they are not marked on unit.

Package B



Connector numbers are for reference only, they are not marked on unit.

Standard Specifications and Part Numbers **

Part Number	Output Frequency * (MHz)	Typical Phase Noise (dBc/Hz), Static *					Output Level * (dBm) into 50 ohms	Temperature Stability * (Ref: +25°C)	Supply Voltage (VDC)	Package / Connectors	Package Size (inches)
		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz					
501-27515-01	200	-83	-113	-143	-158	-158	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27515-04	200	-83	-113	-143	-158	-158	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27515-11	200	-93	-123	-148	-158	-160	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27515-14	200	-93	-123	-148	-158	-160	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27582-01	300	-80	-110	-140	-155	-155	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27582-04	300	-80	-110	-140	-155	-155	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27582-11	300	-90	-120	-145	-155	-157	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27582-14	300	-90	-120	-145	-155	-157	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27583-01	400	-77	-107	-137	-152	-152	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27583-04	400	-77	-107	-137	-152	-152	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27583-11	400	-87	-117	-142	-152	-154	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27583-14	400	-87	-117	-142	-152	-154	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27584-01	500	-75	-105	-135	-150	-150	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27584-04	500	-75	-105	-135	-150	-150	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75
501-27584-11	500	-85	-115	-140	-150	-152	+13 ±2	±2E-7, 0° to +50°C	+15	SMA(f) & Pins on Side	2 x 2 x 0.75
501-27584-14	500	-85	-115	-140	-150	-152	+13 ±2	±2E-7, 0° to +50°C	+15	Solder Pins on Base	2 x 2 x 0.75

* Consult factory for custom frequency, phase noise performance, output level and temperature stability options.

** See website for additional Standard Specifications and Part Numbers.