



Low Noise Crystal Oscillators > Small Fry

Features:

- Frequencies: 5 MHz to 25 MHz
- Low Phase Noise
- Excellent Temperature Stability
- Low Aging Rate
- Good Short Term Stability

Applications:

- GPS Receivers
- Synthesizers
- Instruments



Electrical Specifications	
Output Frequency (fixed; specify within range)	5 MHz to 25 MHz
Output Level	+13 dBm ±2 dB into 50 ohms
Aging	(5 MHz model, typical)
Per day after 30 days operating, typical	1×10^{-10}
Second year, typical	3×10^{-8}
Per year thereafter, typical	2×10^{-8}
Temperature Stability (consult factory for other ranges)	(5 MHz model, typical)
Range E: 0 to +50°C (Ref: +25°C)	$\leq \pm 1 \times 10^{-9}$
Range F: -20 to +70°C (Ref: +25°C)	$\leq \pm 2 \times 10^{-9}$
Range G: -55 to +85°C (Ref: +25°C)	$\leq \pm 5 \times 10^{-9}$
Phase Noise	(Frequency Dependent: See Standard Specifications and Part Numbers table below for details)
Harmonics	≤ -30 dBc
Spurious	≤ -80 dBc
Tuning	(MT and ET ranges can be reversed upon request)
- Mechanical Tuning	$\geq \pm 1 \times 10^{-6}$, typical
- Electrical Tuning	$\geq \pm 2 \times 10^{-7}$, typical
Tuning A: 0 to +10 VDC	$\geq \pm 2 \times 10^{-7}$, typical
Tuning B: ±5 VDC	$\geq \pm 2 \times 10^{-7}$, typical
Slope: Negative	(Positive Slope available on some ET only models)
Supply Voltage	+15 VDC or +12 VDC (±5%)
Warm-up	≤ 4 Watts for 5 minutes at +25°C
Total	≤ 1.5 Watts at +25°C
Crystal Type	SC-cut
Mechanical	
Packaging	Solder sealed steel can
Dimensions	1.5" x 1.5" x 3"
Connectors / Mounting	- Package A: SMA(f) and solder eyelets on side 0.144 Thru Hole Mounting, 4 places
	- Package B: SMA(f) and solder eyelets on side #6-32 x 0.5" mounting studs, 4 places

Description:

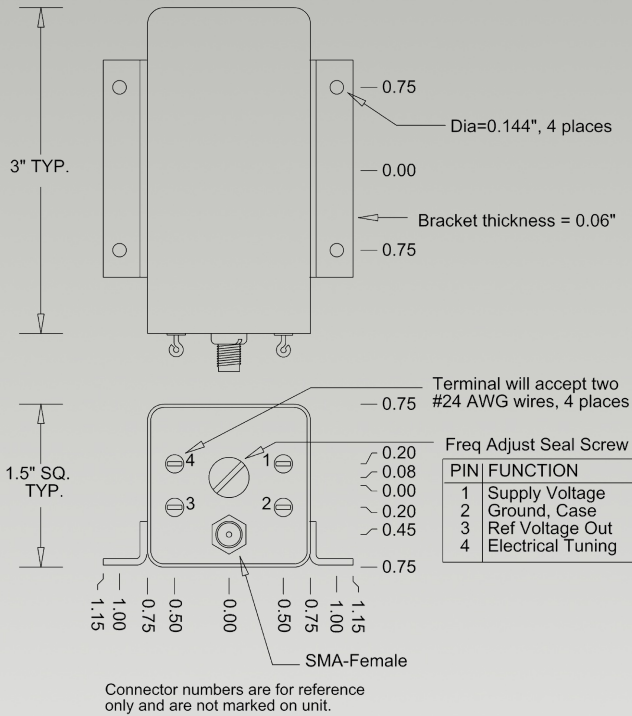
The Small Fry is a 5 MHz to 25 MHz fixed frequency OCXO featuring a vacuum flask insulator which minimizes the effects of short term temperature changes resulting in temperature stabilities as low as ±1E-9, making this model one of the most stable crystal based references available. With good stability and phase noise floors as low as -168 dBc/Hz, this model is an excellent reference oscillator for many instrument applications. An internal voltage regulator is provided for excellent power supply line rejection. Please consult the factory if you need any specifications to be modified to better suit your application.



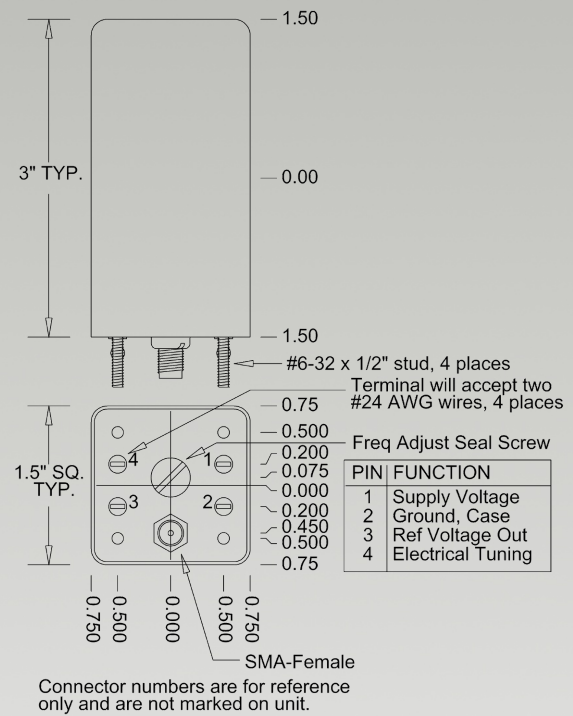


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Package A



Package B



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					
501-27518-01	5	-140	-158	-165	-165	-165	+13 ±2	±1E-9, 0° to +50°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-02	5	-140	-158	-165	-165	-165	+13 ±2	±2E-9, -20° to +70°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-11	5	-150	-165	-167	-170	-170	+13 ±2	±1E-9, 0° to +50°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-12	5	-150	-165	-167	-170	-170	+13 ±2	±2E-9, -20° to +70°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-21	5	-140	-158	-165	-165	-165	+13 ±2	±1E-9, 0° to +50°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-22	5	-140	-158	-165	-165	-165	+13 ±2	±2E-9, -20° to +70°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-31	5	-150	-165	-167	-170	-170	+13 ±2	±1E-9, 0° to +50°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27518-32	5	-150	-165	-167	-170	-170	+13 ±2	±2E-9, -20° to +70°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-01	10	-130	-155	-165	-165	-165	+13 ±2	±1E-9, 0° to +50°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-02	10	-130	-155	-165	-165	-165	+13 ±2	±2E-9, -20° to +70°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-11	10	-140	-160	-167	-170	-170	+13 ±2	±1E-9, 0° to +50°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-12	10	-140	-160	-167	-170	-170	+13 ±2	±2E-9, -20° to +70°C	+15	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-21	10	-130	-155	-165	-165	-165	+13 ±2	±1E-9, 0° to +50°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-22	10	-130	-155	-165	-165	-165	+13 ±2	±2E-9, -20° to +70°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-31	10	-140	-160	-167	-170	-170	+13 ±2	±1E-9, 0° to +50°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3
501-27519-32	10	-140	-160	-167	-170	-170	+13 ±2	±2E-9, -20° to +70°C	+12	SMA(f) & eyelets/bracket	1.5 X 1.5 X 3

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

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

