



- ◆ Frequency Stability to Stratum 3 of GR-1244
- ◆ Patented Voltage Tuned Thermistor Network
- ◆ Very Low Phase Jitter: < 1 pSec
- ◆ +3.3Vdc or +5.0Vdc Operation
- ◆ Precision Low Aging "AT" Cut Crystal
- ◆ Compatible with Semtech SETS Chipsets
- ◆ Surface Mount Pkg. – Matches Vectron Z5

Model 546
"VTTNä" Series
Stratum 3 TCXO

Electrical Characteristics

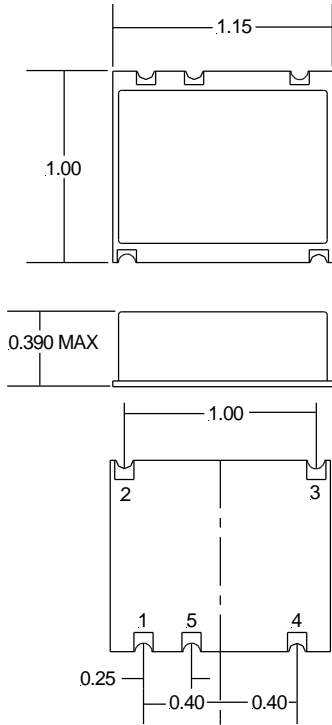
Parameter	Sym	Conditions	Min	Typical	Max	Unit
Power Requirements						
Power Supply	Vcc	± 5% 546L ±5% 546S	3.135 4.75	3.30 5.0	3.465 5.25	Vdc Vdc
Supply Current	Icc	Vcc=Max. (3.3Vdc) Std. Load (5.0Vdc)		12 15	Note 1	mA mA
Frequency Stabilities						
Center Frequency	f _{nom}		1.25	38.88 20 19.44 12.8 10	38.88	MHz
Initial Tolerance	f _{cal}	Ta=+25°C		±0.75		ppm
Freq. vs. Temp.	Δf/ΔTemp			±0.25		ppm
Freq. vs. Voltage	Δf/ΔVcc	Vcc ±5%		± 0.1		ppm
Freq. vs Time (Aging)	Δf/ΔTime	20 years		±2.5		ppm
24 Hour Holdover Stability	Δf/24Hr	Inclusive of Temp., Supply Variation and 24Hrs. Aging		±0.30	±0.37	ppm
Total Free-Running Accuracy	Δf/Life	All Cond. for 20 Yrs. (Ref. to f _{nom})			±4.6	ppm
Waveform: CMOS Output						
Symmetry	Sym	@ 50% Level	40	50	60	%
Amplitude	Vo	Logic "1" Logic "0"	0.8Vcc		0.3	V V
Rise/Fall Times	tr, tf	20% to 80%			6	nSec
Load	RL	Output to Ground		10KΩ 15pF		
Phase Noise	Pn	Offset = 100HZ		-115		dBc/Hz
		1KHz		-130		dBc/Hz
		10KHz		-140		dBc/Hz
		100KHz		-150		dBc/Hz
Phase Jitter		12KHz to 20MHz Bandwidth			1.0	pSec RMS

Note 1: Maximum Current will vary with Frequency

Preliminary Specification



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Pin #	Function
1	RF Output
2	Supply Voltage
3	Ground
4	No Connect
5	Ground

Environmental / Mechanical Specifications

Storage Temperature:	-55° to +125°C
Reflow Soldering:	30 Sec. > 200°C, 240°C Peak Max.
Shock:	50 G's, 11 mSec. Pulse (3 Shocks/Axis)
Vibration:	10 G's peak, 10 to 500 Hz
Case:	High-Temp FR-4 Base, Nickel/Silver Cover
Seal:	Non-Hermetic

Ordering Information

Model 546 _____ Example: 546SA-19.440

<u>Supply Voltage</u> L = +3.3Vdc S = +5.0Vdc	<u>Oper. Temp. Range</u> A = -5° to +50°C B = 0° to +70°C	<u>Frequency in MHz</u>
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