

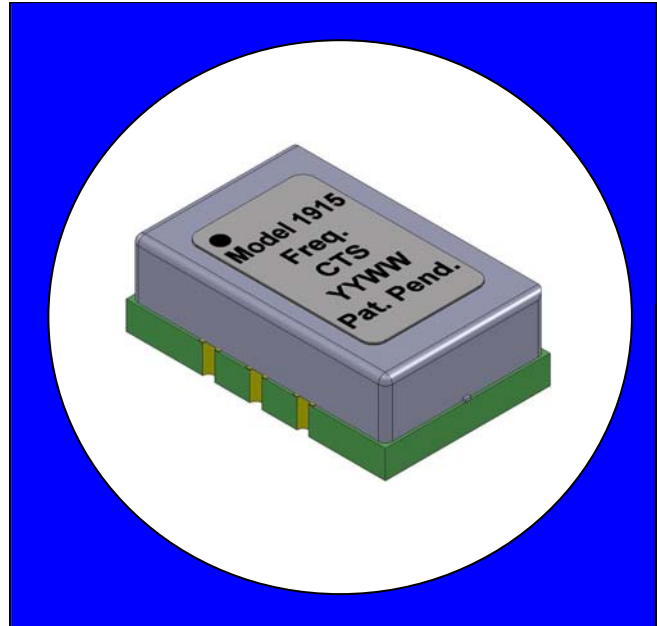
FEATURES

- Industry Standard 9x14mm SMT Footprint
- 3.3 Vdc Supply Voltage
- -5°C to 70°C Operating Temperature Range
- LVCMOS Square Wave Output
- Low Phase Noise
- Tape & Reel Packaging
- Fully compliant to RoHS Directive 2002/95/EC

DESCRIPTION

Low cost, small size, high performance SMT OCXO for use in Femto Cell applications.

Patent Pending



ELECTRICAL SPECIFICATIONS

Parameter	Conditions & Remarks	Min	Typical	Max	Unit	
Operating Conditions						
Operating Temperature Range	T _{OP} ; max. rate of change 0.5°C/minute	-5	-	+70	°C	
Storage Temperature Range	T _{ST}	-40	-	+85	°C	
Supply Voltage	V _{CC} ; ± 3%	3.201	3.300	3.399	Vdc	
Power Consumption	P _{MAX}	-	-	2.3	W	
	P _{SS} ; Steady State; T _A = 25°C; Still Air	-	0.35	0.5	W	
Output Load	± 5%	10KΩ // 10 pF				
Frequency Stability						
Nominal Frequency	f _{NOM}	-	19.2 13, 26	-	MHz	
Holdover Stability (including temperature variation, aging and 1% supply voltage variation)	T _A = +30°C to +55°C	24hrs	-	25	80	ppb pk-pk
	T _A = +5°C to +65°C		-	80	200	
	T _A = +30°C to +55°C	5 days	-	60	230	
Freq. vs Time (Aging)	5 years	-	-	±5	ppm	
Warm-Up Time	to ±250ppb of final frequency	-	1	3	minutes	
	to ±100ppb of final frequency	-	2	4	minutes	



MODEL 1915

PRELIMINARY SPECIFICATION

9x14mm Femtocell OCXO

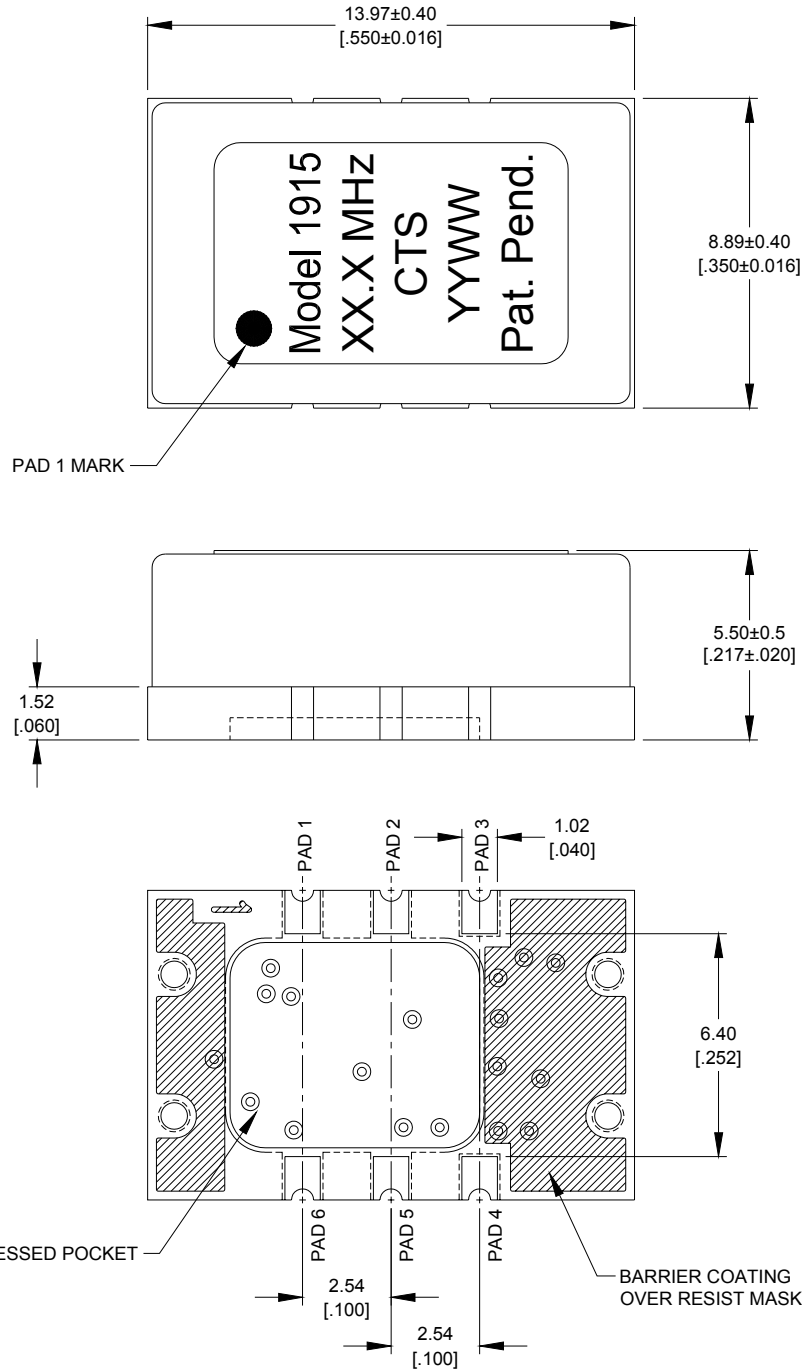
ELECTRICAL SPECIFICATIONS (Continued)

Parameter	Conditions & Remarks	Min	Typical	Max	Unit	
Electronic Frequency Control						
Input Impedance	Z_i	100	-	-	$K\Omega$	
Control Voltage Range	V_C ; positive monotonic transfer	0.3	1.65	3.0	V	
Pullability		± 7	± 15	± 18	ppm	
Sensitivity	K_V	5.2	10	13.3	ppm/V	
Linearity	deviation from best linear fit	-	± 1	± 10	%	
Output Parameters						
Output Signal		LVCMOS Square Wave				
Amplitude	Nominal Load	V_{OL}	-	0	0.4	Vdc
		V_{OH}	2.6	3.3	-	
Rise/Fall Times	0.6V <-> 2.4V ; Nominal Load	-	-	4	ns	
Duty Cycle	@ 50% of output signal	40	50	60	%	
Period Jitter	12kHz to 10MHz	-	1.2	2	ps RMS	
	10Hz to 10MHz	-	2.5	5		
Phase Noise		10Hz	-	-85	-70	dBc/Hz
		100Hz	-	-110	-105	dBc/Hz
		1kHz	-	-130	-125	dBc/Hz
		10kHz	-	-143	-140	dBc/Hz
		100kHz	-	-145	-140	dBc/Hz

MECHANICAL SPECIFICATIONS

PACKAGE DRAWING

PAD	CONNECTION
1	CONTROL VOLTAGE - Vc
2	N/C
3	GROUND/CASE
4	OUTPUT
5	N/C
6	SUPPLY VOLTAGE - Vcc



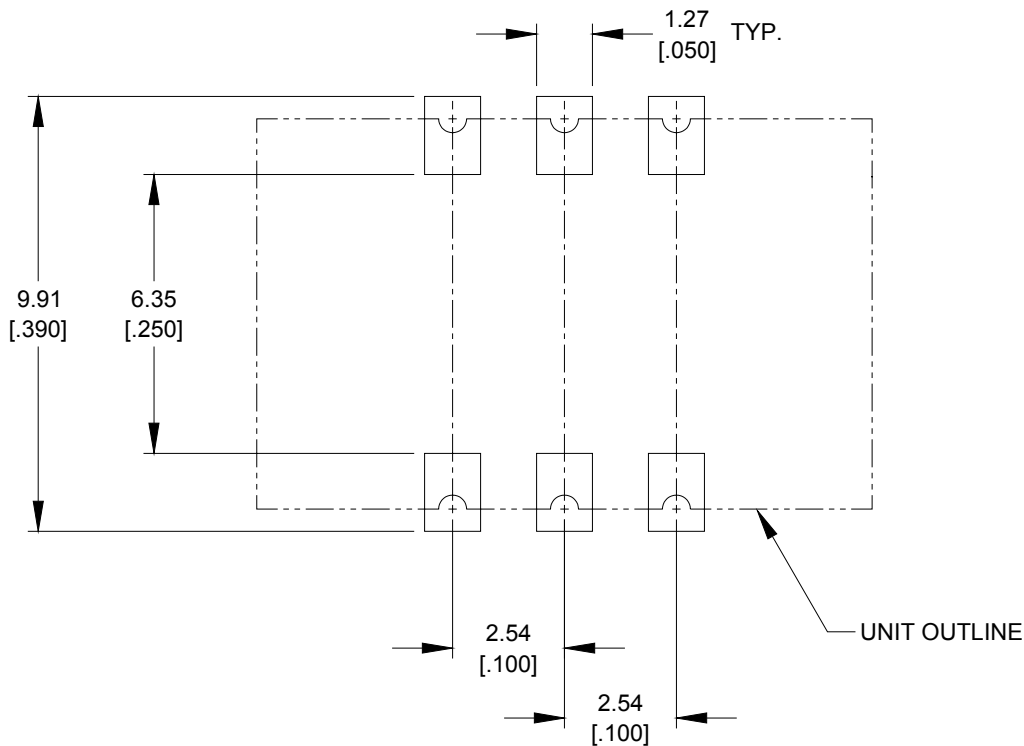
ALL DIMENSIONS ARE IN MM [INCHES].

ALL DIMENSIONS ARE NOMINAL UNLESS OTHERWISE SPECIFIED.

LEAD TERMINATION FINISH: GOLD FLASH, <10 MICRO INCH, OVER Ni PLATED Cu.

MECHANICAL SPECIFICATIONS (Continued)

SUGGESTED SOLDER PAD GEOMETRY



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ALL DIMENSIONS ARE NOMINAL.

MAXIMUM SOLDERING PROFILE

Temperature	>217°C	260°C (Absolute max temperature)
Time	2.5min	10 sec max.

Note: Part is not designed to be reflowed in an inverted position.

- ◆ Fully compliant to RoHS Directive 2002/95/EC
- ◆ Co-Planarity (from seating plane): max. 0.1mm
- ◆ MSL: level 1
- ◆ Device quantity is 500 pcs maximum per 330 mm reel