

RCO2016 SERIES: 2.0 x 1.6 mm CLOCK OSCILLATOR

❖ FEATURES

- ❖ **ULTRA MINATURE PACKAGE**
- ❖ **ESSENTIAL IN HIGH DENSITY PCB**
- ❖ **LOW SUPPLY VOLTAGE 1.8 AND 2.5 VDC AVAILABLE**
- ❖ **STANDBY FUNCTION**

❖ APPLICATIONS

- ❖ **EMBEDDED COMPUTING DEVICES**
- ❖ **WEARABLE DEVICES**
- ❖ **PERSONAL DIGITAL DEVICES**
- ❖ **CAMERAS**
- ❖ **STORAGE**
- ❖ **MICROPROCESSORS**
- ❖ **HIGH DENSITY APPLICATIONS**
- ❖ **DSP CLOCKS**

❖ ELECTRICAL SPECIFICATION

PARAMETER		VALUE		
Frequency Range		1.5 ~ 50.000 MHz		
Operating Temperature Range		-10°C to +70°C		
Frequency Stability ¹ **		±25 ppm, ±30 ppm, ±50 ppm, ±100 ppm		
Storage Temperature Range		-40°C to +85°C		
Supply Voltage (Vcc)		1.8V ±5%	2.5V ±5%	3.3V ±5%
Supply Current		2.5 mA max ~24 MHz 3.5 mA max ~40 MHz 4.5 mA max ~50MHz	3.0 mA max ~24 MHz 4.5 mA max ~40 MHz 5.0 mA max ~50 MHz	2.5 mA max ~24 MHz 3.5 mA max ~40 MHz 4.5 mA max ~50 MHz
Output CMOS	Symmetry	45% to 55% at 50% Vdd		
	Rise / Fall Time	10 nsec max at 10% to 90% Vdd		
	Logic "0" Level	Vcc x 0.1 V max		
	Logic "1" Level	Vcc x 0.9 V min		
	Load	15 pF max		
Enable / Disable Function		Pin 1: High or Open >> Output enabled Pin 3 Pin 1: Low >> Output disabled (High impedance)		

** Inclusive of 25°C tolerance, operating temperature range, voltage or load changes, aging, shock and vibration, consult factory for tighter stability options.

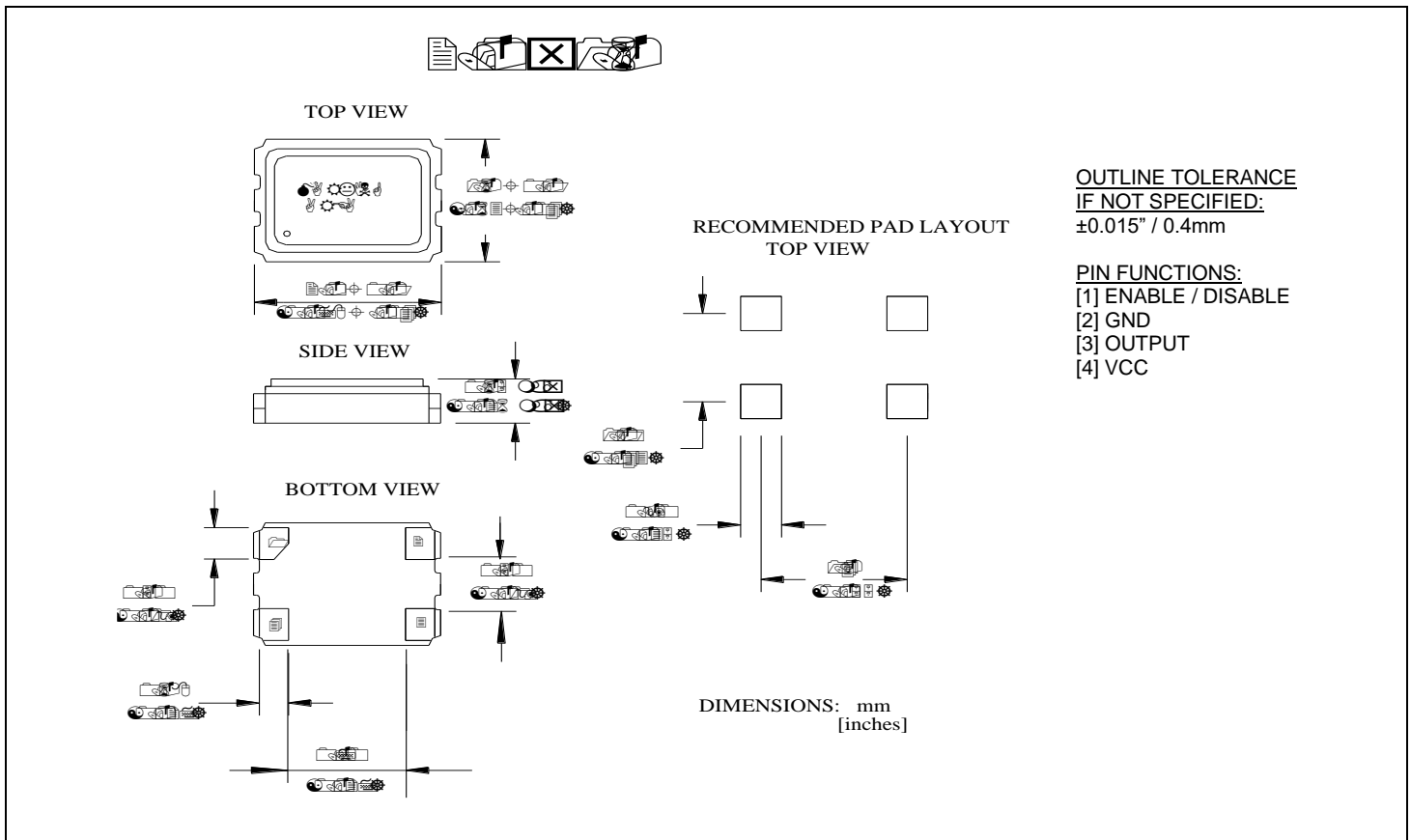
NOTES

¹ Not available at all frequencies, Contact Factory

² Check part numbering table below. For others contact factory.

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❖ **MECHANICAL SPECIFICATION (4 pin ceramic package)**



❖ **PART NUMBERING SYSTEM**

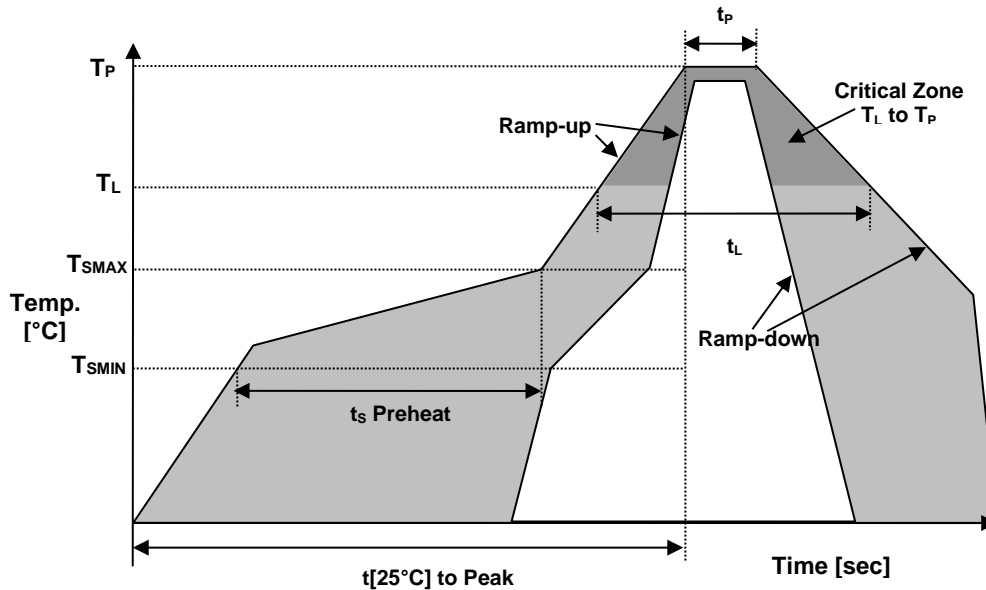
TYPE	SERIES	-	FREQUENCY (MHz)	-	SUPPLY VOLTAGE (Vcc)	-	STABILITY (PPM)	-	TAPE & REEL
Clock Oscillator	2016	-	1.5 ~ 50.000	-	1.8: Vcc=1.8	-	25: ±25 ppm	-	TR
					2.5: Vcc=2.5		30: ±30 ppm		
					3.3: Vcc=3.3		50: ±50 ppm		
							100: ±100 ppm		
RCO	2016	-	12.800	-	2.5	-	50	-	TR

EXAMPLE: RCO2016-12.800-2.5-50-TR

Surface Mount RCO2016, 2.0 x 1.6 mm, 12.800 MHz, 2.5 VDC Supply Voltage, ±50 ppm Overall Stability, from -10°C to +70°C, Symmetry 45% to 55%, Tape and Reel packaging.

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❖ **REFLOW PROFILE**



Reflow profile		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_s	60-180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-up rate	R_{UP}	3°C/sec max.
Ramp-down rate	R_{DOWN}	6°C/sec max.
Time within 5°C of Peak Temperature	t_p	10 sec.
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 sec.
Time	t_L	60-150 sec.

❖ **ENVIRONMENTAL**

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
REACH SVHC	COMPLIANT
RoHS2	COMPLIANT
TERMINATION FINISH	Au

