

### CO2520 SERIES: 2.5 x 2.0 mm CLOCK OSCILLATOR

#### ■ FEATURES

- ULTRA SMALL PACKAGE
- LOW SUPPLY VOLTAGE 1.8 AND 2.5 VDC AVAILABLE
- STANDBY FUNCTION

#### ■ APPLICATIONS

- PRINTER SCANNER
- VGA CARD
- DVD
- DSC, DVC



#### ■ ELECTRICAL SPECIFICATION

PARAMETER		VALUE			
Frequency Range		0.750 ~ 75.000 MHz			
Operating Temperature Range		-20°C to +70°C		-40°C to +85°C	
Frequency Stability <sup>1</sup> **		±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%	3.0V ±5%	3.3V ±5%
Supply Current		2.5 mA max ~29 MHz 3.0 mA max ~39 MHz 3.5 mA max ~50 MHz 4.0 mA max ~75MHz	4.5 mA max ~29 MHz 5.5 mA max ~39 MHz 6.5 mA max ~50 MHz 7.5 mA max ~75MHz	5.5 mA max ~29 MHz 6.5 mA max ~39 MHz 7.5 mA max ~50 MHz 8.5 mA max ~75MHz	2.5 mA max ~29 MHz 3.5 mA max ~39 MHz 4.5 mA max ~50 MHz 5.5 mA max ~75MHz
Output CMOS	Symmetry	40% to 60% at 50% Vdd (45% to 55% Available)			
	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)			
Start-up Time		10 ms Max			

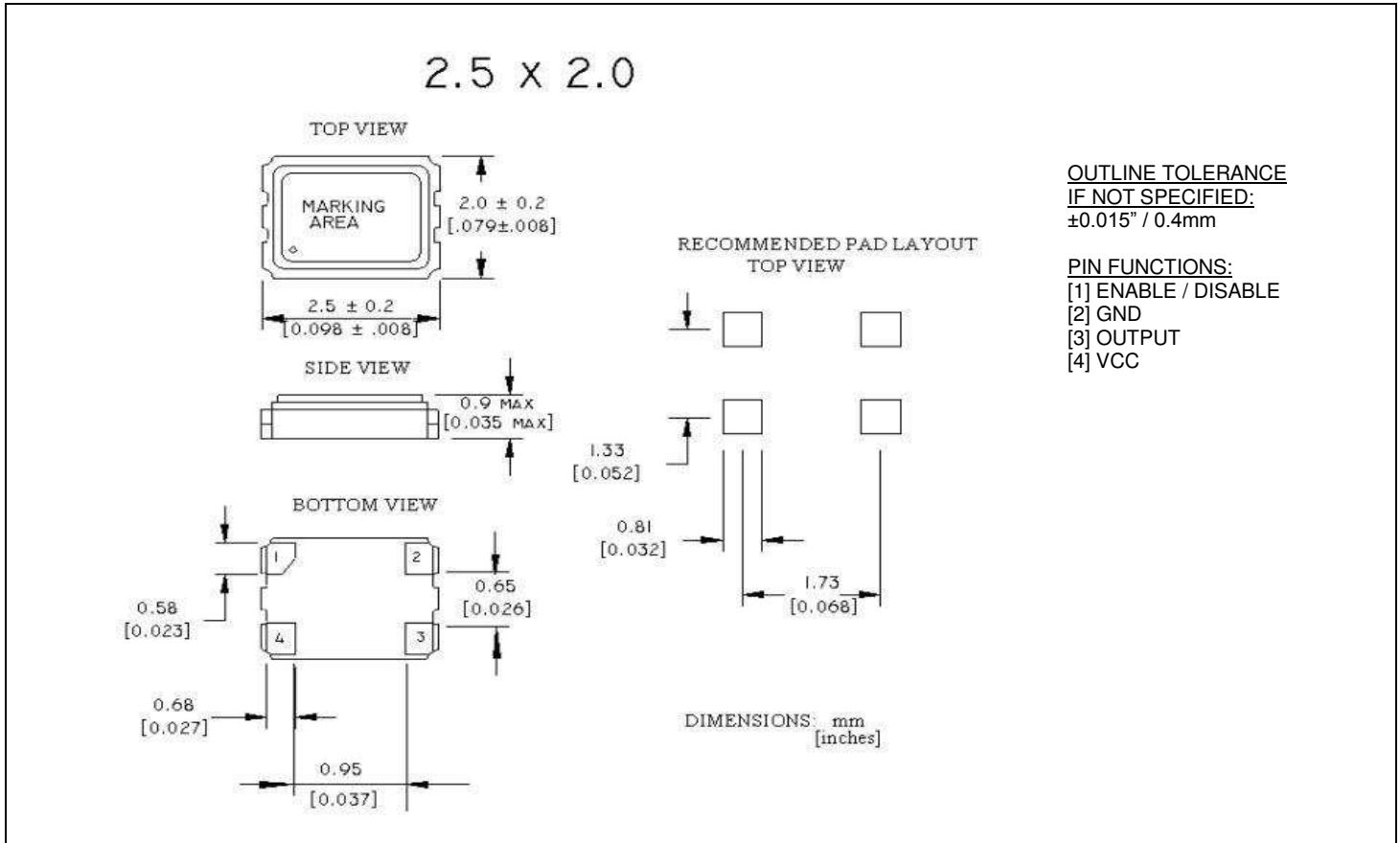
\*\* Inclusive of 25°C tolerance, operating temperature range, voltage or load changes, aging, shock and vibration, consult factory for tighter stability options.

#### NOTES

- <sup>1</sup> Not available at all frequencies, Contact Factory
- <sup>2</sup> Check part numbering table below. For others contact factory.

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#### MECHANICAL SPECIFICATION (4 pin ceramic package)



#### PART NUMBERING SYSTEM

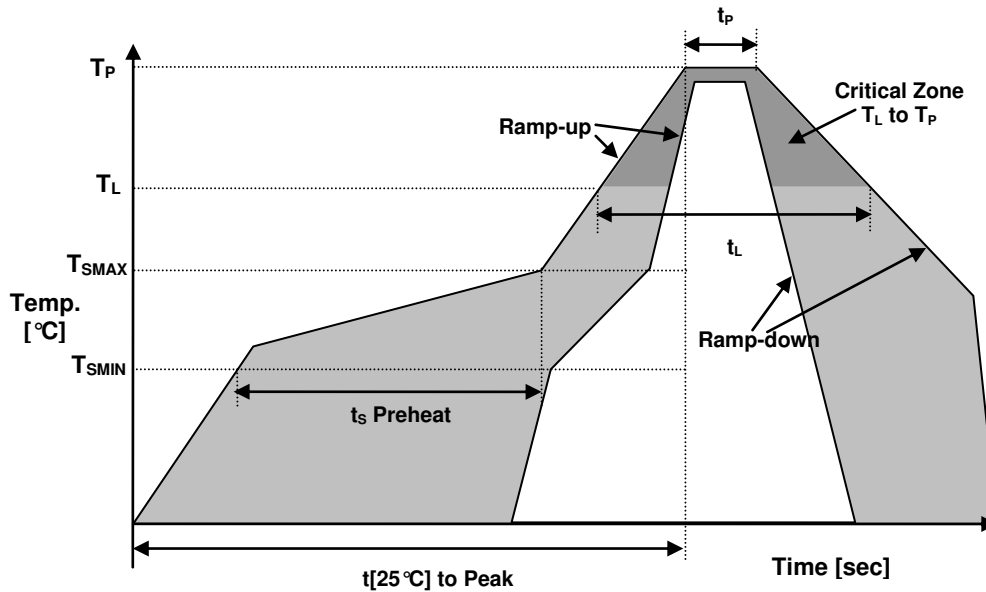
TYPE	SERIES	FREQUENCY (MHz)	SUPPLY VOLTAGE (Vcc)	STABILITY (PPM)	TEMPERATURE RANGE	SYMMETRY (Duty Cycle)	TAPE & REEL
Clock Oscillator	2520	0.750 ~ 75.000	18: Vcc=1.8 25: Vcc=2.5 30: Vcc=3.0 33: Vcc=3.3	25: ±25 ppm 30: ±30 ppm 50: ±50 ppm 100: ±100 ppm	blank: -20°C to +70°C X: -40°C to +85°C	blank: 40 to 60% T: 45 to 55%	TR
CO	2520	12.800	25	50			TR

#### EXAMPLE: CO2520-12.800-25-50-TR

Surface Mount CO2520, 2.5 x 2.0 mm, 12.800 MHz, 2.5 VDC Supply Voltage, ±50 ppm Overall Stability, from -20°C to +70°C, Symmetry 40% to 60%, 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
RoHS	6/6 LEAD FREE
TERMINATION FINISH	Au

