CARDINAL COMPONENTS

Rev B

FASTXO SMD XO Frequency up to 200MHz

Series:CPPY

Features

- Field Programmable
- CMOS Output (will interface with TTL devices)
- Enable/Disable Function includes low standby power
- Low Jitter
- 1.8V, 2.5V, or 3.3V nominal Supply Voltage
- 1-200 MHz Frequency Range (1-125MHz at 1.8V)
- Fundamental crystals

Applications

Driving A/Ds, D/As, FPGAs
Digital Video
Ethernet, GbE
Medical
Storage Area Networking
COTS
Broad Band Access
SONET/ SDH/ DWDM
Test & Measurement

Pb lead-free RoHS

MSL: 1

Part Numbering Example:

CPPY	C	5	L	Z	A5	B6	xxx.xxxx	TS
SERIES	OUTPUT	PACKAGE STYLE	VOLTAGE	ADDED FEATURES	OPERATING TEMP.	STABILITY	FREQUENCY	TRI-STATE
CPPY	C=CMOS	2=2X1.6 Ceramic	L=3.3V	Blank=Bulk	Blank=0°C ~ +70°C	B6=±100ppm	1.000~200.000MHz	TS=Tri-State
		3=3.2X2.5 Ceramic	J=2.5V	Z=Tape and Reel	A5=-20°C ~ +70°C	BP=±50ppm		PD=PowerDwn
		5=5X3.2 Ceramic	K=1.8V		A7=-40°C ~ +85°C	BR=±25ppm		
		7=5X7 Ceramic			AJ=-40°C ~ +105°C	BD=±20ppm		
		25=2.5X2.0 Ceramic						

ELECTRICAL SPECIFICATION

Parameter		3.3V		2.5V		1.8V		Unit
		Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation		V_{DD}-10%	V_{DD}+10%	V_{DD}-10%	V_{DD}+10%	V_{DD}-10%	V_{DD}+10%	V
Frequency Range		1	200	1	200	1	125	MHz
Supply Current (@15pf Loading)		-	30	-	28	-	20	mA
Output Level	Output High	90%V_{DD}	-	90%V_{DD}	-	90%V_{DD}	-	V
	Output Low	-	10%V_{DD}	-	10%V_{DD}	-	10%V_{DD}	V
Transition Time	Rise Time / Fall Time	-	2	-	2	-	3	nSec
Duty Cycle		45	55	45	55	45	55	%
Startup Time		-	5	-	5	-	5	mSec
Tri-State	Output Enable	0.7 x V_{DD}	-	0.7 x V_{DD}	-	0.7 x V_{DD}	-	V
	Output Disable	-	0.3 x V_{DD}	-	0.3 x V_{DD}	-	0.3 x V_{DD}	V
Stand by Current (@PD Mode)		-	400	-	400	-	400	uA
Stand by Current (@OE Mode)		-	20	-	20	-	20	mA
Output Loading		15		15		15		pf
RMS Phase Jitter (12KHz to 20MHz) @3.3V		-	1	-	1	-	1.5	pSec
Aging (@ 25℃, First Year)		-	±3	-	±3	-	±3	ppm
Storage Temp. Range		-50	+125	-50	+125	-50	+125	℃

FREQ. STABILITY vs. TEMP.RANGE

℃ \ ppm	±15	±20	±25	±50
-20~+70	O	O	O	O
-40~+85	X	Δ	O	O
-40~+105	X	X	Δ	O

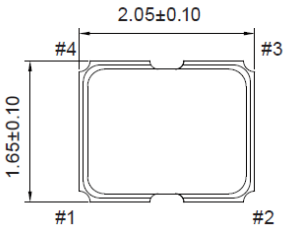
*O:Available Δ:Conditional X: Not available

*Inclusive of calibration @ 25°C, operating temperature range, input Voltage variation, load variation, aging(1st year), shock, and vibration

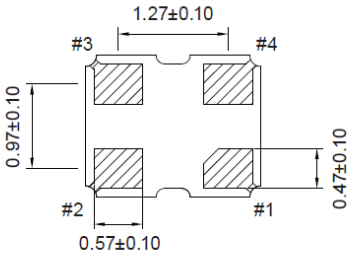
TEL: (973)785-1333
E-MAIL: sales@cardinalxtal.com
WEB: http://www.cardinalxtal.com

Typical 2.05 x 1.65 x 0.75 mm ceramic SMD package

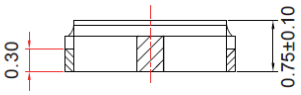
[TOP VIEW]



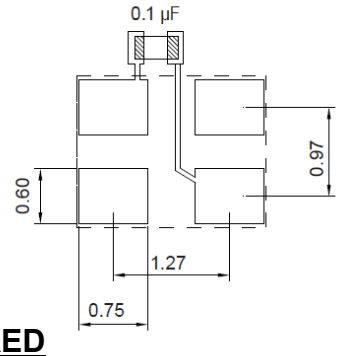
[BOTTOM VIEW]

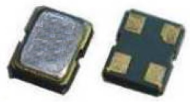


[SIDE VIEW]



Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD



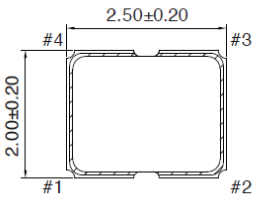


REQUIRED

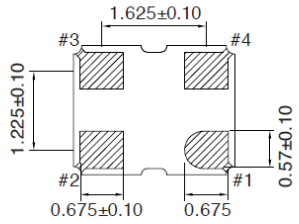
To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

Typical 2.5 x 2. 0 x 0.81 mm ceramic SMD package

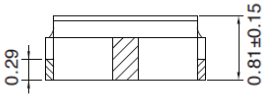
[TOP VIEW]



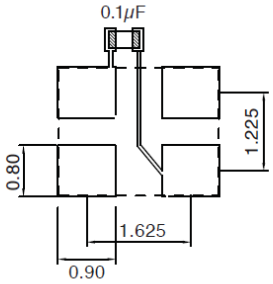
[BOTTOM VIEW]

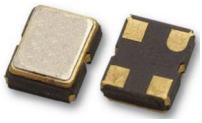


[SIDE VIEW]



Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD



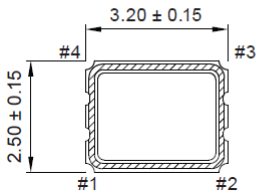


REQUIRED

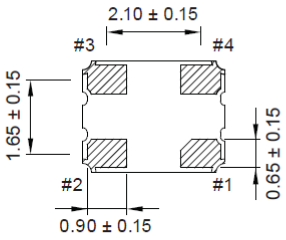
To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

Typical 3.2 x 2.5 x 0.95 mm ceramic SMD package

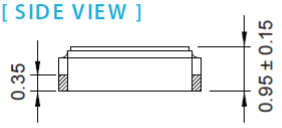
[TOP VIEW]



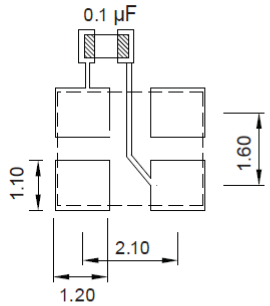
[BOTTOM VIEW]

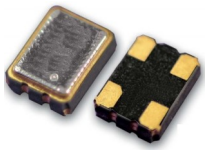


[SIDE VIEW]



Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD





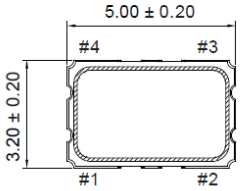
REQUIRED

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

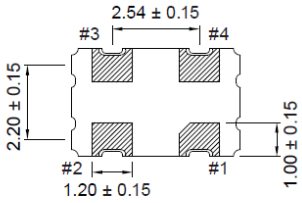
TEL: (973)785-1333
E-MAIL: sales@cardinalxtal.com
WEB: http://www.cardinalxtal.com

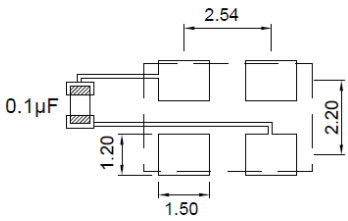
Typical 5.0 x 3.2 x 1.2 mm ceramic SMD package

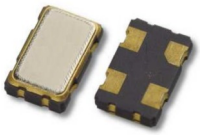
[TOP VIEW]



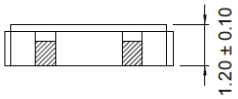
[BOTTOM VIEW]







[SIDE VIEW]



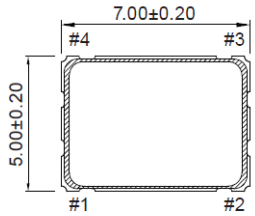
Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD

REQUIRED

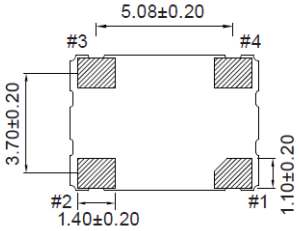
To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

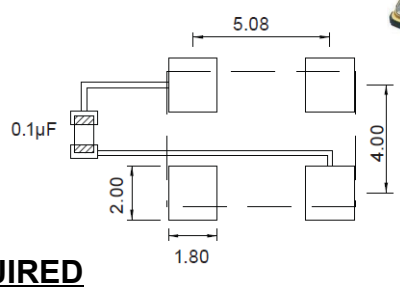
Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package

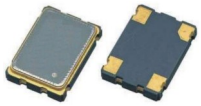
[TOP VIEW]



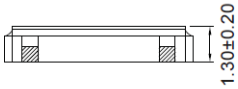
[BOTTOM VIEW]







[SIDE VIEW]



Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD

REQUIRED

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

TEL: (973)785-1333
E-MAIL: sales@cardinalxtal.com
WEB: http://www.cardinalxtal.com