Crystal Oscillator

Series CPWS

- Factory Programmable
- Standard Package Options
- Also available in 1.8V

Instrument Part Number: CPWSC3LZ-A5B6-XX.XXXX TS

CPWS	C	3	L	Z	A7	B6	XX.XXXX	TS
SERIES	OUTPUT	PACKAGE STYLE	VOLTAGE	ADDED FEATURE	OPERATING TEMP	STABILITY	FREQUENCY	TRI-STATE
CPWS	C = CMOS	3 = 3.2 x 2.5 Ceramic 2 = 2.5 x 2.0 Ceramic	L = 3.3V R = 2.5V Q = 1.8V	Blank = Bulk Z = Tape and Reel	Blank = 0°C~+70°C A5 = -20°C~+70°C A7 = -40°C~+85°C	B6 = ±100PPM B9 = ±50PPM BR = ±25PPM	2.048 ~ 200.000	TS = Tri-State PD = Power Down

Specifications:

Description		Min	Typ	Max	Unit
Frequency Range: Programmable to any discrete frequency		2.048		200	V
Available Stability Options:		-50 -25		+50 +25	pF
Programmable Supply Voltage:	(1-200MHz) (1-166MHz) (1-110MHz)	3.0 2.2 1.6	3.3 2.5 1.8	3.6 2.8 2.0	PPM PPM PPM
Operating Temperature Range:		-40		+85	
Storage Temperature:		-55		+125	
Aging: Ta=°25C,Vdd=3.3V				±5	PPM/Year

Operating Conditions:

Description		Min	Max	Unit
V_{DD}	Supply Voltage	1.6	3.6	V
C_{CMOS}	Max capacitive load on all outputs for CMOS levels		15	pF

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Email: sales@cardinalxtal.com
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Output Clock Switching Characteristics:

Description	Test Conditions	Min	Typ	Max	Unit
Duty Cycle:		45	-	55	%
Rise/Fall:	15pF	2	-	5	ns
Start Up Time	From Power On	-	-	2	ms
Peak to Peak*		-	80	-	Ps

*** Jitter Tested at > 1,000,000 samples, exceeding JEDEC std JESD65**

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Electrical Characteristics:

Description	Test Conditions	Min	Typ	Max	Unit
Input Characteristics (Pin 1):					
V_{IL}, Low-Level Input Voltage (To Tri-State or Power Down)	V_{DD} = 3.3V	-	-	0.99	V
V_{IH}, High-Level Input Voltage (To Enable Output or Open)	V_{DD} = 3.3V	2	-	5	pF
I_{IL}, Input Low Current	V_{IN} = 0V	-	-	10	µA
I_{IH}, Input High Current	V_{IN} = V_{DD}	-	-	10	µA
Output Characteristics:					
V_{OL}, Low-Level Output Voltage	V_{DD} = 3.3V V_{DD} = 2.5V V_{DD} = 1.8V	- - -	- - -	0.33 0.25 0.18	V V V
V_{IHCMOS}, High-Level Output Voltage	V_{DD} = 3.3V V_{DD} = 2.5V V_{DD} = 1.8V	2.97 2.25 1.62	- - -	- - -	V V V
Power Supply Current: (Unloaded)	2.048 MHz ≤ F_O < 30 MHz 30 MHz ≤ F_O < 75 MHz 75 MHz ≤ F_O < 133 MHz 133 MHz ≤ F_O < 166 MHz 166 MHz ≤ F_O < 200 MHz	6 8 12 15 -	- - - - -	15 15 20 22 25	mA mA mA mA mA
Standby Current:		-	10	15	µA
Tri-State Leakage Current	V_{DD} = 3.3V	-	-	50	µA
Output Enable Mode:	Output is Tri-Stated				
Power Down Mode:	Output is Tri-Stated				

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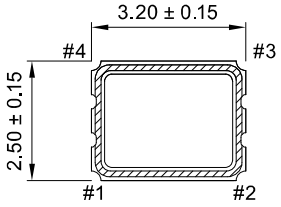
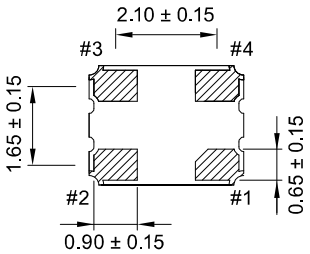
***Note: Bypass V_{DD} to GND with a 0.1pF capacitor**

Style 3 3.2 x 2.5 Ceramic SMD

[TOP VIEW]

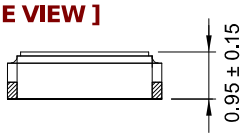


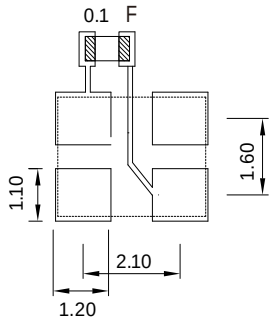
[BOTTOM VIEW]



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

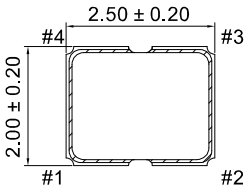
[SIDE VIEW]





Style 2 2.5 x 2.0 Ceramic SMD

[TOP VIEW]



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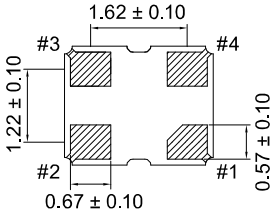
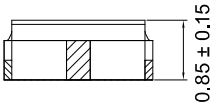
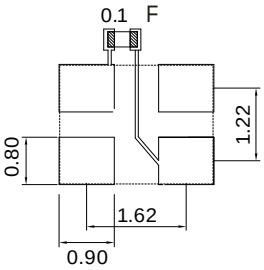


Pin#	Function
1	Tri-state
2	GND
3	Output
4	VDD

[SIDE VIEW]





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