

CRYSTAL CONTROLLED OSCILLATORS

3.3V LVC MOS SURFACE MOUNT 5x3.2mm CLOCK OSCILLATOR



7213, 7223,
7233

ABSOLUTE MAXIMUM RATINGS TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	

MODEL SPECIFICATIONS: TABLE 2.0

MODEL 7213						
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.8	-	160	MHz	
Frequency Tolerance:		-25	-	25	ppm	1

MODEL 7223						
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.8	-	160	MHz	
Frequency Tolerance:		-50	-	50	ppm	1

MODEL 7233						
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.8	-	160	MHz	
Frequency Tolerance:		-100	-	100	ppm	1

OPERATING SPECIFICATIONS TABLE 3.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vdd)	3.0	3.3	3.6	Vdc	
Supply Current	1.5 to 49.999 MHz	(Icc)	-	20	mA	
	50 to 79.999 MHz	(Icc)	-	30	mA	
	80 to 124.999 MHz	(Icc)	-	40	mA	
	125 to 160.999 MHz	(Icc)	-	50	mA	

INPUT CHARACTERISTICS TABLE 4.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Enable Voltage	(Vih)	70% Vdd	-	-	Vdc	2
Disable Voltage	(Vil)	-	-	30% Vdd	Vdc	
Enable Time		-	-	10	ms	
Disable Time		-	-	150	ns	
Output Disable Current	(Icc)	-	-	10	uA	

LVC MOS OUTPUT CHARACTERISTICS TABLE 5.0

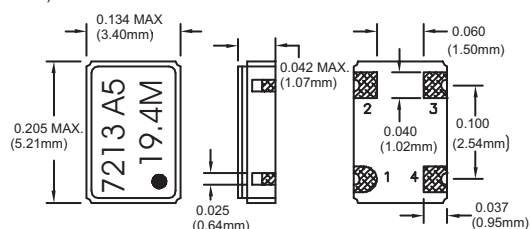
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage	(High)	(Voh)	2.70	-	Vdc	
	(Low)	(Vol)	-	0.36	Vdc	
Current	(High)	(Ioh)	-2	-	mA	
	(Low)	(Iol)	-	2	mA	
Duty Cycle	1.5 to 49.999 MHz		45	50	%	3
	50 to 160 MHz		40	50	%	3
Rise / Fall Time	1.5 to 69.999 MHz		-	3	ns	4
	70 to 160 MHz		-	1	ns	4
Start-Up Time		-	-	10	ms	
Period Jitter		-	3	5	ps RMS	
Phase Jitter (BW=12kHz to 20MHz)		-	0.5	1	ps RMS	

PACKAGE CHARACTERISTICS TABLE 6.0

Package	Hermetically sealed ceramic package and metal cover
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Note:

- Inclusive of calibration @ 25°C, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- Oscillator output is enabled with no connection on pad 1.
- Duty Cycle measured at 50% of Vcc.
- Rise and Fall times measured from 10% to 90%.



PAD	CONNECTION
1	ENABLE/DISABLE
2	GROUND
3	OUTPUT
4	Vcc

Dimensional Tolerance: ±.02" (.508mm)
±.005" (.127mm)

DESCRIPTION

The Connor-Winfield models 7213, 7223 and 7233 are 3.3V LVC MOS, Surface Mount, Fixed Frequency Crystal Oscillators (XO) designed for use in all applications requiring precision clocks. These oscillators feature low stand-by current (10uA) when output is disabled. The surface mount package is designed for high-density mounting and is optimum for mass production.

FEATURES

- 1.8 to 160 MHz
- 3.3V OPERATION
- TRI-STATE ENABLE / DISABLE FUNCTION
- OVERALL FREQUENCY TOLERANCE:
 - 7213 ±25ppm
 - 7223 ±50ppm
 - 7233 ±100ppm
- TEMPERATURE RANGE: -40 to 85°C
- POWER SAVING FUNCTION: 10uA when disabled.
- CERAMIC SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

7213 - 019.44M

CLOCK
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.
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