ECS-300CX

DUAL OUTPUT CMOS CLOCK OSCILLATOR

- Low current consumption
- Built in divider circuit
- 8-pin DIP Package
- Pb Free/RoHS Compliant

The ECS-300CX utilizes a built in divider circuit to provide a second divided output. The CMOS based oscillator features low current consumption in a standard 8-pin DIP package.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-300CX			UNITS
		MIN	TYP	MAX	
Frequency Range	Primary Output	12.000		24.000	MHz
	Divided Output	0.048875		12.000	MHz
Frequency Stability *	All Conditions			± 100	ppm
Operating Temperature		-10		+70	°C
Storage Temperature		-55		+125	°C
Input Voltage	Vcc	+3.0	+5.0	+5.5	VDC
Input Current				20	mA
Output Symmetry	Primary Output	40/60		60/40	%
	Divided Output	48/52		52/48	%
Rise and Fall Times				15	ns
Output Voltage	VOL			Vcc x 0.1	VDC
	VOH	Vcc x 0.9			VDC
Output Load	CMOS			50	pF
Startup time				1.5	ms

POSSIBLE FREQUENCY DIVISIONS BY PART NUMBER

ECS PART NUMBER	fo CLOCK Pin 1	fo/2ⁿ (Divided Output) PIN 2							
		½ * 1	½ * 2	½ * 3	½ * 4	½ * 5	½ * 6	½ * 7	½ * 8
ECS-300CX-120	12.000 MHz	6.000 MHz	3.000 MHz	1.500 MHz	750 KHz	375 KHz	187.5 KHz	93.75 KHz	46.875 KHz
ECS-300CX-160	16.000 MHz	8.000 MHz	4.000 MHz	2.000 MHz	1.000 MHz	500 KHz	250 KHz	125 KHz	62.5 KHz
ECS-300CX-240	24.000 MHz	12.000 MHz	6.000 MHz	3.000 MHz	1.500 MHz	750 KHz	375 KHz	187.5 KHz	93.75 KHz

DIMENSIONS (mm)

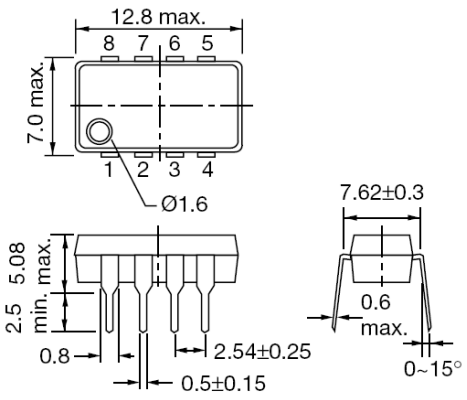

Figure 1) Top, Side and End views

Pin Connections	
#1	Output
#2	Divided Output
#3	Standby
#4	Ground
#5	A (Divider selection)
#6	B (Divider selection)
#7	C (Divider selection)
#8	Vcc

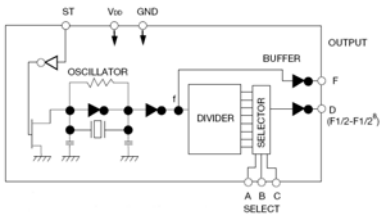

Figure 2) Block Diagram

Input				Output	
Divider Selection			ST	Pin 1 (Primary Output)	Pin 2 (Divided Output)
C	B	A			
L	L	L	H	fo clock	fo ½ * 1 clock
L	L	H	H	fo clock	fo ½ * 2 clock
L	H	L	H	fo clock	fo ½ * 3 clock
L	H	H	H	fo clock	fo ½ * 4 clock
H	L	L	H	fo clock	fo ½ * 5 clock
H	L	H	H	fo clock	fo ½ * 6 clock
H	H	L	H	fo clock	fo ½ * 7 clock
H	H	H	H	fo clock	fo ½ * clock
X	X	X	L	L	L

AVAILABLE PART NUMBERS	
ECS P/N	Primary Frequency
ECS-300CX-120	12.000 MHz
ECS-300CX-128	12.800 MHz
ECS-300CX-143	14.31818 MHz
ECS-300CX-160	16.000 MHz
ECS-300CX-163.8	16.384 MHz
ECS-300CX-184	18.432 MHz
ECS-300CX-200	20.000 MHz
ECS-300CX-240	24.000 MHz

PART NUMBERING GUIDE: Example ECS-300CX-120

ECS - Series - Frequency Abbreviation

300CX	120 = 12.000 MHz

* Note: Inclusive of 25°C tolerance, operating temperature,input voltage change, load change, shock and vibration.

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