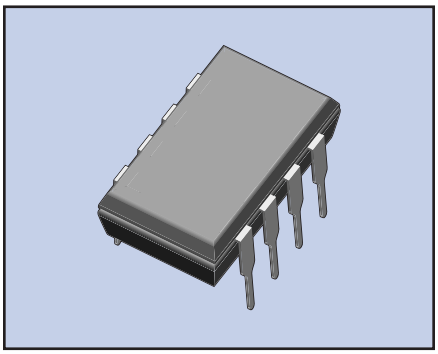
ECS-300 SERIES DUAL OUTPUT CMOS CLOCK OSCILLATOR



Owing to its conformance to 8-pin DIP packaging, this oscillator requires low current consumption and a wide supply voltage of 3V-6V. Startup time of less than 1.5msec and a stand-by function make this oscillator suitable for all applications. This oscillator is available with ±100ppm tolerance over a temperature range of -10 ~ +70°C.

The housing for this oscillator is made from the same thermo plastic material that is standard for integrated circuits.

FEATURES

- **Low current consumption**
- **1.5 millisecond start-up**
- **Thermo plastic housing**

PART NUMBERING GUIDE

PART NUMBER*	–	SERIES	–	FREQUENCY
ECS	–	300	–	120

** Complete part number to include frequency i.e. ECS-300-120 (120 = 12MHz).*

OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

Standard Frequency MHz (25 fundamental oscillation wave length) for Dual Output CMOS Oscillators

to (Fund. frequency)	fo/2^n (Dividing frequency)								
1/2^0	1/2^1	1/2^2	1/2^3	1/2^4	1/2^5	1/2^6	1/2^7	1/2^8
12 MHz	6 MHz	3 MHz	1.5 MHz	750 kHz	375 kHz	187.5 kHz	93.75 kHz	46.875 kHz
12.288	6.144	3.072	1.536	768	384	192	96	48
12.8	6.4	3.2	1.6	800	400	200	100	50
14.31818	7.15909	3.579545	1.789722	894.88	447.44	223.72	111.860	55.930
14.7456	7.3728	3.68764	1.8432	921.6	460.8	230.4	115.02	57.6
15.9744	7.9872	3.9936	1.9968	998.4	499.2	249.6	124.8	62.4
16	8	4	2	1000	500	250	125	62.5
16.384	8.192	4.096	2.048	1024	512	256	128	64
17.734476	8.867238	4.433619	2.216809	1108.4	554.2	277.1	138.55	69.275
18.432	9.216	4.608	2.304	1152	576	288	144	72
19.6608	9.8304	4.9152	2.4576	1228.8	614.4	307.2	153.6	76.8
20	10	5	2.5	1250	625	312.5	156.25	78.125
24	12	6	3	1500	750	375	187.5	93.75

DIMENSIONS (mm)

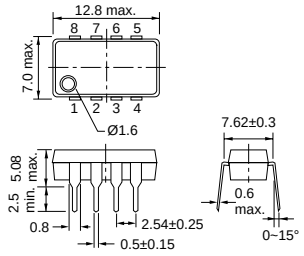


Figure 1) ECS-300 Top and Side views

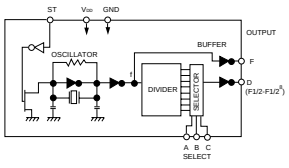


Figure 2) ECS-300 Measurement Circuit

Input				Output	
Select			ST	F (Original Freq.)	D (Divided Waveform)
C	B	A			
X	X	X	L	L	L
L	L	L	H	fo clock	fo 2 clock
L	L	H	H	fo clock	fo 1/2^2 clock
L	H	L	H	fo clock	fo 1/2^3 clock
L	H	H	H	fo clock	fo 1/2^4 clock
H	L	L	H	fo clock	fo 1/2^5 clock
H	L	H	H	fo clock	fo 1/2^6 clock
H	H	L	H	fo clock	fo 1/2^7 clock
H	H	H	H	fo clock	fo 1/2^8 clock

Figure 3) Setting of Dividing Output

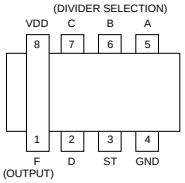


Figure 4) ECS-300 Pin Connection Diagram

CURRENT CONSUMPTION ±1 miliamp max.
SUPPLY CURRENT 20miliamps max at 25°C.
RISE AND FALL TIME 10 nsec typ./15nsec max.
DELAY between buffered output and divided output is non existent because frequencies are generated by separate output pins.
STORAGE TEMPERATURE -55° ~ +125°C.
SYMMETRY 50±10%.
INPUT CURRENT 35mA max.
OUTPUT LOAD 15 pf or LS-TTL.
START UP 1.5 msec.
FREQUENCY STABILITY ±100 ppm.

PIN CONNECTIONS	
#1	OUTPUT
#2	DIVIDING RATIO
#3	STANDBY
#4	GND
#5	A (Programming)
#6	B (Programming)
#7	C (Programming)
#8	VDD (5V)

Figure 5) Pin Connections

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