



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



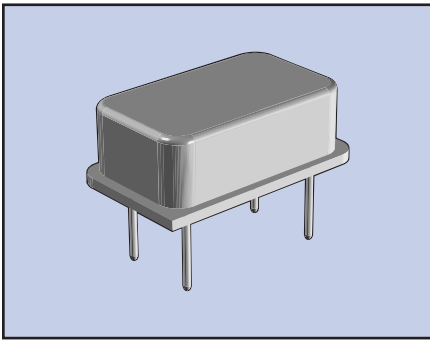
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The ECS-P143 (3.3V) and ECS-P145 (5V) 14 pin dip DIP is a twice programmable crystal controlled oscillator. The standard 14 pin DIP footprint is ideal for existing PC boards.

## FEATURES

- Programmable (1 time)
- 3.3V & 5V options
- PLL technology
- 14 pin DIP footprint
- Extended temp range

## PART NUMBERING GUIDE "EXAMPLE"

PART NUMBER	SERIES	FREQUENCY (MHz)	STABILITY	EXTENDED TEMP (OPTION)
ECS	P143	- 16.312 -	A	- N

Sample Part Number: ECS-P143-16.312-AN

## OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-P143 (3.3V)			ECS-P145 (5V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
FREQUENCY RANGE		1.000		125.000	1.000		150.000	MHz
FREQUENCY STABILITY*	Option A			±100			±100	PPM
	Option B			±50			±50	PPM
OPERATING TEMPERATURE	Standard	0		+70	0		+70	°C
	Extended (Option N)	-40		+85	-40		+85	°C
STORAGE TEMPERATURE		-55		+125	-55		+125	°C
INPUT VOLTAGE (Vcc)		+2.97	+3.3	+3.63	+4.5	+5.0	+5.5	VDC
INPUT CURRENT				28			45	mA
OUTPUT SYMMETRY	at 1/2 Vcc LEVEL	40/60		60/40	40/60		60/40	%
RISE AND FALL TIMES	20% Vcc to 80% Vcc			4			4	ns
JITTER	1.0 ~ 33.0 MHz		±100	±250	±100		±250	pS
	> 33.1 MHz		±50	±100	±50		±100	pS
"0" LEVEL				0.4			0.4	VDC
"1" LEVEL		2.7			Vcc - 0.5			VDC
LOAD (HCMOS)	1.0 ~ 50.0 MHz			30			50	pF
	> 50.1 MHz			15			15	pF
ENABLE/DISABLE TIME				150			100	ns
START-UP TIME				10			10	ms

\* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change aging, shock and vibration.

## PACKAGE DIMENSIONS (mm)

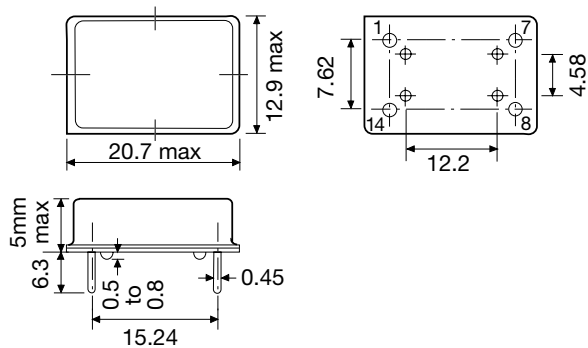


Figure 1) Top, Bottom and Side views

ECS-P143 (3.3V) TRI-STATE CONTROL VOLTAGE	
PIN #1 = OPEN	#3 = OUTPUT
PIN #1 = +0.7V MIN	#3 = OUTPUT
PIN #1 = +0.2V MAX	#3 = HIGH IMPEDANCE

ECS-P145 (5V) TRI-STATE CONTROL VOLTAGE	
PIN #1 = OPEN	#3 = OUTPUT
PIN #1 = +2.0V MIN	#3 = OUTPUT
PIN #1 = +0.8V MAX	#3 = HIGH IMPEDANCE

PIN CONNECTIONS	
#1	TRI-STATE
#7	GND
#8	OUTPUT
#14	VCC