

# HALF SIZE DIP LOW VOLTAGE 3.3VHCMOS/TTL COMPATIBLE CRYSTAL CLOCK OSCILLATOR



13.2 x 13.2 x 5.5mm

ACHL Series



RoHS Compliant

## FEATURES:

- Tri-state Enable/Disable option
- Low supply voltage 3.3V
- HCMOS and TTL compatible
- Tight symmetry option 50% +/-5%

## APPLICATIONS:

- Clock signal sources for digital chips and microprocessors
- Low power applications

## STANDARD SPECIFICATIONS:

Parameters		Minimum	Typical	Maximum	Units	Notes
Frequency Range		0.400	----	160.000	MHz	
Operating Temperature		0	----	+70	°C	See options
Storage Temperature		-55	----	+125	°C	
Overall Frequency Stability		-100	----	+100	ppm	See options
Supply Voltage (Vdd)		2.97	3.3	3.63	V	
Input Current	0.400MHz ~ 24.999MHz	----	----	20	mA	
	25.000MHz ~ 99.999MHz	----	----	40		
	100.000MHz ~ 16000MHz	----	----	80		
Symmetry (@ 1/2Vdd)		40	50	60	%	See options
Rise and Fall Time (Tr/Tf)	0.400MHz ~ 24.999MHz	----	----	10	ns	
	25.000MHz ~ 99.999MHz	----	----	5		
	100.000MHz ~ 16000MHz	----	----	4		
Output Load		----	----	15	pF	See options
		----	----	5	TTL	
Output Voltage	VOH	0.9*Vdd	----	----	V	
	VOL	----	----	0.1*Vdd	V	
Tri-state Function	VIH	2.2	----	----	V	"1" or Open: Oscillation
	VIL	----	----	0.8	V	"0": Output disable (Hi Z)
Disable/Enable time				100	ns	For option A only
Start-up Time		----	1	10	ms	
Phase Jitter RMS (12~20MHz)		----	----	1	ps	Reference only. Please contact Abracon for specific frequencies
Aging		-5.0	----	+5.0	ppm	@+25°C First year

\* Overall frequency stability includes initial tolerance, temperature stability, and aging.

## OPTIONS & PART IDENTIFICATION:

(Left blank if standard)

ACHL -  MHz -  -  -  -  -

Frequency in MHz
e.g. 24.576MHz
14.31818MHz
26.000MHz

Operating Temp.
I: 0°C ~ +50°C
D: -10°C ~ +60°C
E: -20°C ~ +70°C
F: -30°C ~ +70°C
N: -30°C ~ +85°C
L: -40°C ~ +85°C

Freq. Stability
J: ± 20 ppm(*)
R: ± 25 ppm
K: ± 30 ppm
H: ± 35 ppm
C: ± 50 ppm

Symmetry
Blank: 40/60% @1/2Vdd
S: 45/55% @1/2Vdd

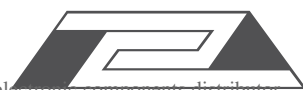
(\*) Temp option I, D, E and 0°C ~ +70°C only.

Tri-state
Blank: No Tri-state
A: Tri-state on pin 1

Output Load
Blank: 15pF
30: 30pF
50: 50pF

Pin form
G: Gull Wing
G3: Gull Wing
Q30: 0.30" (7.62)
Q25: 0.25" (6.35)
Q20: 0.20" (5.08)
Q15: 0.15" (3.81)
Q10: 0.10" (2.54)

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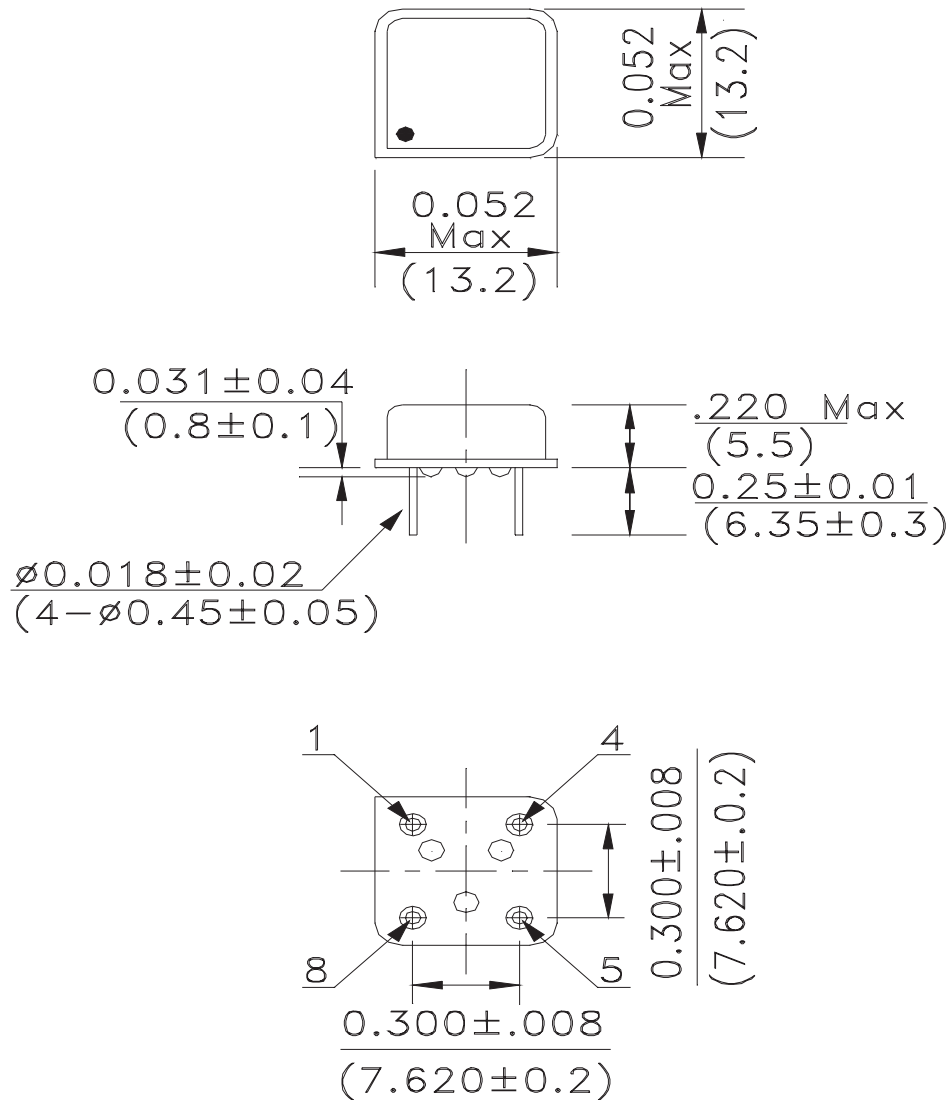


RoHS  
Compliant



13.2 x 13.2 x 5.5mm

## OUTLINE DIMENSIONS:



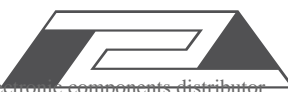
PIN	FUNCTION
1	NC or Tristate Enable/ Disable
4	GND
5	Output
8	VDD

Note: Recommended using an approximately 0.01uF bypass capacitor between PIN 4 and 8.

Dimensions: inches (mm)

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