TTL / CMOS • FULL-SIZE DIP • 5 Vdc or 3.3 Vdc

VOLTAGE-CONTROLLED CRYSTAL OSCILLATORS

ACVX1222 and ACVX1222L

FEATURES:

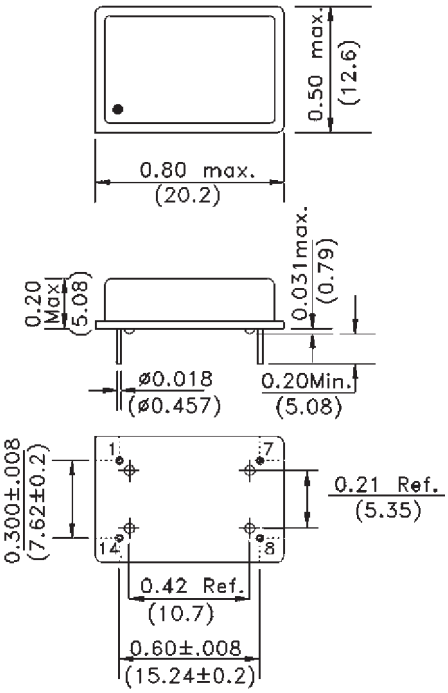
- 14-Pin DIP 5 Vdc or 3.3 Vdc / 5mm Height.
- Tight Symmetry (45/55%) Available.
- Large Frequency Deviation Available.
- Good Linearity (10%).

APPLICATIONS:

- Phase Locked Loops (PLLs).
- Reference Signal Tracking.
- Clock Recovery.
- Synthesizers.

STANDARD SPECIFICATIONS

PARAMETERS	ACVX1222	ACVX1222L
Frequency Range (F_O)	**1 MHz - 200 MHz**	
Operating Temperature (T_{OPR})	0°C to + 70°C *(See Options)*	
Storage Temperature (T_{STO})	-40°C to +85°C	
Frequency Stability -vs- Temp. -vs- Aging -vs- Vdd	± 100 ppm max. *(See Options)* ± 5 ppm / year max. ± 5 ppm max.	
Supply Voltage (V_{dd})	5 Vdc ± 5%	3.3 Vdc ± 5%
Input Current (I_{dd})	25 mA max. for F ≤ 26 MHz 60 mA max. for F ≤ 70 MHz 30 mA max. for F ≤ 45 MHz 90 mA max. for F ≤ 200 MHz	
Duty Cycle or Symmetry	40 / 60% max. @ 1/2 V_{dd} *(See Options)*	
Rise and Fall Times (T_R / T_F)	10 ns max.	
Output Load	TTL / CMOS (15 pF or 10 TTL gate)	
Output Voltage (V_{OH}) (V_{OL})	0.9 * Vdd min. 0.4 V_{dc} max.	
Transfer Function	Positive	
Voltage Control (Vc)	0.5 Vdc to 4.5 Vdc	0.3 Vdc to 3 Vdc
Center Voltage	2.5 Vdc ± 0.5 Vdc	1.5 Vdc ± 0.25 V
Frequency Deviation	± 100 ppm min. *(See Options)*	
Linearity	± 10% max.	
Start-up Time (T_{OSC})	10 ms max.	



Please Inquire factory for higher frequencies, other pulling specs., control voltage range or linearity.
For test circuit, waveforms, please see page 67.
Environmental and mechanical specifications on page 68, Group 1. Marking, see page 79.

TYPICAL PHASE NOISE

OFFSET FREQUENCY (Hz)	PHASE NOISE (dBc/Hz)
10	-70
100	-100
1 kHz	-125
10 kHz	-150
100 kHz	-160

ORDERING OPTIONS

ACVX1222 X - Frequency - Temperature - Stability - Duty Cycle - Pulling - Value Added

- X: Blank or L
- Frequency: XX.XXXXX MHz
- Temperature:
  - -D for -10°C to +60°C
  - -E for -20°C to +70°C
  - -F for -30°C to +70°C
  - -N for -30°C to +85°C
  - -L for -40°C to +85°C
- Stability:
  - -J for ± 20 ppm max
  - -R for ± 25 ppm max
  - -K for ± 30 ppm max
  - -H for ± 35 ppm max
  - -C for ± 50 ppm max
- Duty Cycle:
  - -S for 45/55% @ 1/2 Vdd
  - -S1 for 45/55% @ 1.4 Vdc
- Pulling:
  - -N15 ± 150 ppm min
  - -N20 ± 200 ppm min (**)
  - -N25 ± 250 ppm min (**)
  - -N30 ± 300 ppm min (**)

  (**) ACVX1222 only
- Value Added:
  - -G Gull Wing*
  - -QXX (Trimmed Leads) *

  ** Found on Page 73.*

PIN No.	FUNCTION
1	Voltage Control Vc
7	GND / Case
8	Output
14	Vdd

ABRACON CORPORATION

NOTE: Left blank if standard • All specifications and markings subject to change without notice

29 Journey • Aliso Viejo, CA 92656 • USA
(949) 448-7070 • FAX: (949) 448-8484
E-MAIL: abinfo@abracon.com • INTERNET ADDRESS: www.abracon.com

ABRACON IS ISO 9001 / QS 9000 CERTIFIED