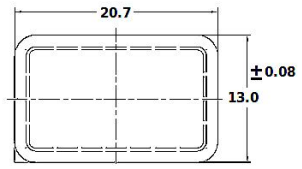
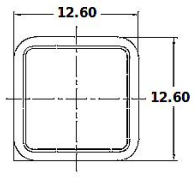
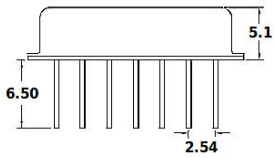
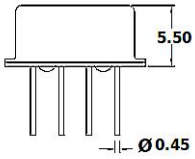
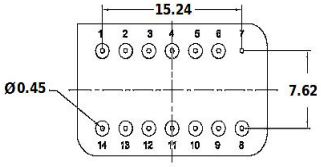
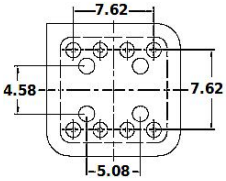
CXO-300, 400, 425, 1300, 1400 & 1425

Features

- All metal welded package
- Wide frequency range from 1 MHz ~ 70 MHz
- HCMOS/ TTL compatible in general application
- Sinusoidal Vibration, Non operating

Mechanical Specifications

	Full Size	Half Size
Top View		
Front View		
Bottom View		

▲ All dimensions are in mm. Tolerance is ± 0.1 mm, unless otherwise specified. Sharp edges indicates Pin 1.

Pin Configuration for Full Size-DIL 14		Pin Configuration for Half Size-DIL 8	
1	No Connection (or) E/ D Control (Optional)	1	No Connection (or) E/ D Control (Optional)
7	Ground	4	Ground
8	Output	5	Output
14	DC Input	8	DC Input

Marking Details:

Example 1: CXO300LMN001M000000
AE CXO 300 LM
1.000 MHz
YEAR WEEK S.No.
Example 2: CXO1400LMN001M000000
AE S.No.
CXO 1400
1.000 MHz
LM YEAR WEEK

Table 1: Electrical Specifications

Parameters	Variant HCMOS	Variant TTL
Series:		
CXO-300 (Full Size, All 14 pins)		■
CXO-400, CXO-425 (Full Size, All 14 pins)	■	
CXO-1300 (Half Size, All 8 pins)		■
CXO-1400, CXO-1425 (Half Size, All 8 Pins)	■	
Frequency Range:		
1 MHz ~ 70 MHz	■	■
Output Drive:		
50 pF (max.)	■	
10 TTL gates for ≤ 20 MHz		■
6 TTL gates > 20 MHz		■
Logic Levels:		
'0' = 0.4 V (max.) '1' = 2.4 V (min.)		■
'0' = 0.1 Vcc (max.) '1' = 0.9 Vcc (min.)	■	
Rise/ Fall Time:		
10 ns (max.) (Between Logic '0' & Logic '1' Level)	■	■
Start up Time:		
10 ms (max.)	■	■
Duty Cycle:		
40% to 60% @ 1.4 V dc		■
40% to 60% @ ½ Vcc	■	
Output Waveform:		
Square Wave	■	■
Frequency Stability: with respect to (25 ± 2°C)		
Select from Table 2	☐	☐
Operating Temperature Range (OTR):		
Select from Table 2	☐	☐
Supply Voltage, Vcc:		
Select from Table 3		
+5.0 V dc (± 10%)	■	■
+3.3 V dc (± 10%)	■	
Supply Current: For 5 Volts,		
30 mA (max.) (250 KHz ~ 24 MHz)	■	■
40 mA (max.) (24 MHz ~ 50 MHz)	■	■
50 mA (max.) (50 MHz ~ 70 MHz)	■	■
Supply Current: For 3.3 Volts,		
15 mA (max.) (250 KHz ~ 24 MHz)	■	
20 mA (max.) (24 MHz ~ 50 MHz)	■	
25 mA (max.) (50 MHz ~ 70 MHz)	■	
Tristate Function:		
Output is Enabled when Pin 1 is 2 V dc (min.). or 'Open'	■	
Output is Disabled when Pin 1 is 0.8 V dc (max.) or Ground		■
Aging @ 25°C:		
± 5 ppm (max.) for First Year	■	■
Storage Temperature Range:		
-55°C to +125°C	■	■

■ Standard, ☐ Optional – please specify required code(s) when ordering.

Andhra Electronics Ltd
34 & 35, IDA,
Kakinada-533 005
Andhra Pradesh, India
URL: www.andhraelec.com

Phone: +91 884 234 2203
Fax: +91 884 234 1145
e-mail: info@andhraelec.com

Table 2: Frequency Stability/ OTR Code

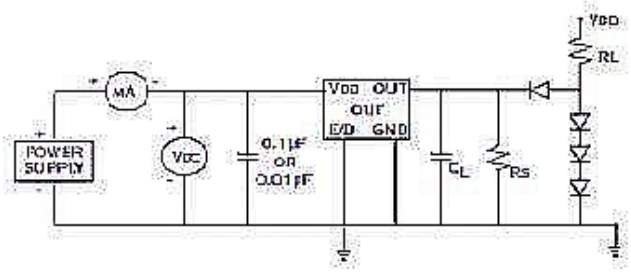
OTR Code	Stability Codes / Frequency Stability		D ± 10 ppm	E ± 15 ppm	F ± 20 ppm	G ± 25 ppm	M ± 50 ppm	K ± 100 ppm
A	Operating Temperature Range	0°C to +50°C	■	■	■	■	■	■
B		0°C to +60°C	■	■	■	■	■	■
F		0°C to +70°C	■	■	■	■	■	■
D		-10°C to +60°C	■	■	■	■	■	■
E		-10°C to +70°C	■	■	■	■	■	■
C		-20°C to +70°C	■	■	■	■	■	■
G		-30°C to +80°C			■	■	■	■
H		-30°C to +85°C			■	■	■	■
I		-40°C to +85°C			■	■	■	■
J		-40°C to +90°C				■	■	■
K		-55°C to +105°C					■	■
L		-55°C to +125°C					■	■

■ Denotes Available □ Denotes not Available

Table 3

Supply Voltage	5 V		3.3 V
Series	CXO-300	CXO-400	CXO-425
	CXO-1300	CXO-1400	CXO-1425

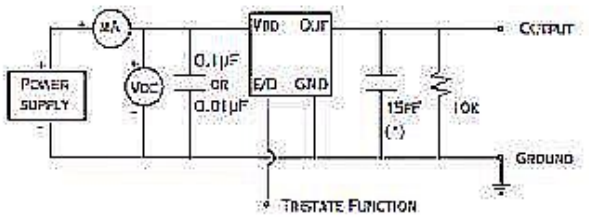
Typical Test Circuit For TTL Logic



LOAD	CL(*)	RL	RS
6 TTL	12 pF	430 Ω	10 kΩ
10 TTL	20 pF	270 Ω	6 kΩ

(*)CL INCLUDES THE LOADING EFFECT OF THE OSCILLOSCOPE PROBE

Typical Test Circuit For HCMOS Logic



(*)CL INCLUDES PROBE AND JIG CAPACITANCE

Andhra Electronics Ltd
34 & 35, IDA,
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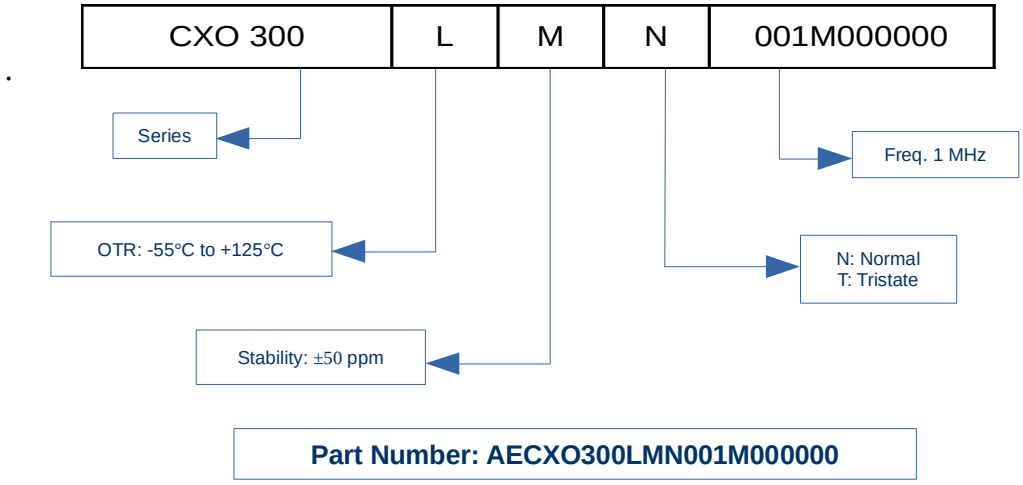
e-mail: info@andhraelec.com

CLASS 'B' SCREENING TESTS

TEST DESCRIPTION	TEST CONDITION
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Constant Acceleration	MIL-STD-883, Method 2001, Condition A, Y1 only (5000 g)
Seal test	MIL-STD-202, method 112 a. Fine leak: (1) Test condition C. b. Gross leak: Bubble Test
Electrical test:	MIL-PRF-55310E-Methods Measure all the electrical parameters as per the device specifications and shall meet the requirements (tolerance limits) as per the device specifications.
Burn-in (load)	Maximum specified operating temperature, nominal supply voltage and burn – in load, 160 hours minimum
Electrical test:	MIL-PRF-55310E-Methods Measure all the electrical parameters as per the device specifications and shall meet the requirements (tolerance limits) as per the device specifications.

Ordering Information

Example



Part Number: AECXO300LMN001M000000

Specifications subject to change without notice

Rev. Date: 19th March 2021

Note: Not all combination of options are available. Other specifications may be available upon request.

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