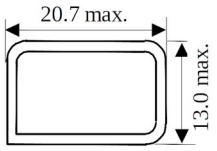
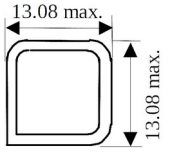
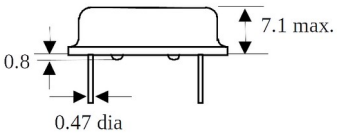
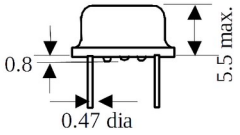
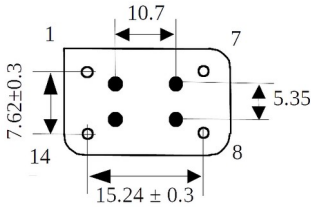
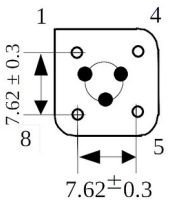
Voltage Controlled Crystal Oscillator

VCXO-1500, 1525, 1600 & 1625

Features

- All metal welded package
- Wide frequency range from 1 MHz ~ 120 MHz
- HCMOS in general application
- RoHS Compliant Standard

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		Pin Configuration for Half Size	
1	Control Voltage	1	Control Voltage
7	Ground	4	Ground
8	Output	5	Output
14	DC Input	8	DC Input

Table 1: Electrical Specifications

Parameters	CMOS Output
Series:	
VCXO-1600, VCXO-1625 (Full Size)	■
VCXO-1500, VCXO-1525 (Half Size)	■
Frequency Range:	
1 MHz ~ 120 MHz	■
Output Drive:	
50 pF (max.)	■
Logic Levels:	
'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% @ ½ Vcc	■
Output Waveform:	
Square Wave	■
Frequency Stability: with respect to (25°C ± 2°C)	
Select from Table 2	□
Operating Temperature Range (OTR):	
Select from Table 2	□
Supply Voltage (Vcc):	
Select from Table 3	
+5.0V DC (±10%)	■
+3.3V DC (±10%)	■
Input Current: For 5 Volts,	
30 mA (max.) (1 MHz ~ 24 MHz)	■
40 mA (max.) (24 MHz ~ 50 MHz)	■
50 mA (max.) (50 MHz ~ 80 MHz)	■
80 mA (max.) (80 MHz ~ 120 MHz)	■
Input Current: For 3.3 Volts,	
15 mA (max.) (1 MHz ~ 24 MHz)	■
20 mA (max.) (24 MHz ~ 50 MHz)	■
25 mA (max.) (50 MHz ~ 80 MHz)	■
40 mA (max.) (80 MHz ~ 120 MHz)	■
Nominal Control Voltage:	
2.5V DC (operating on 5V)	■
1.65V DC (operating on 3.3V)	■
Control Voltage Range:	
0 to 5.0V DC	■
0 to 3.3V DC	■
Pulling Range:	
± 100 ppm (min.)	■
Transfer Function:	
Positive	■
Settability for center frequency @ 25°C nominal:	
2V (min.) & 3V (max.) (VCXO-1600 & VCXO-1500)	■
1.25V (min.) & 2.05V (max.) (VCXO-1625 & VCXO-1525)	■
Linearity:	
10% (max.)	■
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.

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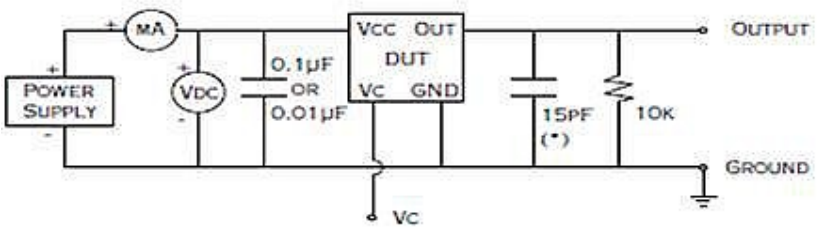
Table 2: Frequency Stability/ OTR Code

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			■	■	■	■

■ Denotes Available □ Denotes not Available

Typical Test Circuit For VCXO CMOS Logic:



(*)CL INCLUDES PROBE AND JIG CAPACITANCE

Table 3

Supply Voltage	5 V	3.3 V
Series	VCXO-1600	VCXO-1625
	VCXO-1500	VCXO-1525

Marking Details:

Example 1: VCXO1600BGN36M864000
AE VCXO 1600
36.864 MHz
BG YEARWEEK
Example 2: VCXO1525BGN36M864000
AE
VCXO 1525
36.864 MHz
BG YEARWEEK

Ordering Information

Example

VCXO 1600	B	G	N	010M000000

- VCXO 1600 → Series
- B → OTR: 0°C to +60°C
- G → Stability: ±25 ppm
- N → N: Normal
- 010M000000 → Freq. 10 MHz

Part Number: AEVCXO1600BGN010M000000

Specifications subject to change without notice

Rev. Date: 24th March 2021

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

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