

PRODUKT-INFO

VXO-S1 • VXO-S3

Surface Mount Voltage Controlled Crystal Oscillators

FEATURES

1. Miniature package.
2. Industry standard.
3. TTL / HCMOS output compatible.
4. Tri-State Enable.
5. Tape and Reel.
6. 5.0V and 3.3V available.

APPLICATION

Phase locked loops, phase shift keying, in telecommunication applications as ADSL, cable modem etc.



Actual Size



ELECTRICAL SPECIFICATIONS			
Model	Condition	VXO-S1	VXO-S3
Frequency Range*		1.750 MHz ~ 45.0 MHz	
Frequency Stability	at +25°C	±15 ppm	
Temperature Stability	over T _{OPR}	±15 ppm / ±25 ppm / ±50 ppm	
Stability vs Power Change	V _{DD} ±5%	±5 ppm	
Stability vs Load Change	15 pF ±10%	±3 ppm	
Pullability	Over Control Voltage Range	±50, ±100, ±200 ppm	±50, ±100, ±150 ppm
Control Voltage Range		0.5V ~ 4.5V	0V ~ 3.3V
Operating Temp. Range		0°C to +70°C, -40°C to +85°C option	
Storage Temp. Range		-55°C to +125°C	
Power Supply Voltage		5.0V±5%	3.3V±5%
Supply Current		30 mA max.	
Output Symmetry	at 1/2 V _{DD}	40% ~ 60%, 45% ~ 55% option	
Rise Time	20% V _{DD} ~ 80% V _{DD}	8 ns max.	10 ns max.
Fall Time	80% V _{DD} ~ 20% V _{DD}	8 ns max.	10 ns max.
Output Voltage	V _{OH} V _{OL}	90% V _{DD} min. 10% V _{DD} max.	
Output Load		15pF max.	
Start Time		10 ms max.	
Aging first year	at +25°C ±3°C	±5 ppm / year max.	

OPTIONS: A 0.01 uF bypass capacitor should be placed between V_{DD} (Pin6) and GND (Pin3) to minimize power supply line noise. For frequency over 40.0 MHz, please consult us.

Dimensions (Units: mm)

7.0 ± 0.15
5.0 ± 0.15
1.8 Max

7.0 x 5.0 x 1.8

Top View

5.08
2.46
3.80
2.27
2.54
1.4

Recommended Solder Pattern

1.8 3.28 1.8
2.0
2.0
2.54

Test Circuit

V_{DD} V V 0.01µF #6 #4 Test Point #1 #3 #5 #2 **CL=15pF

V_{control} 777

** Includes stray and probe capacitance

Output Waveform

V_{DD} V_{DD} V_{DD}
80% V_{DD}
50% V_{DD}
20% V_{DD}
GND

T₁ T₂
T₀ = 1/F₀ Symmetry = $\frac{T_1 - T_2}{T_0} \times 100\%$

Terminal	Connection
#1	V control
#2	E/D
#3	GND
#4	OUTPUT
#5	N.C.
#6	V _{DD}

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All specifications subject to change without notice.