

Surface-Mount Oscillator



The XO-23L series is an ultra miniature package clock oscillator with dimensions 3.2 mm x 2.5 mm x 1.2 mm. It is specifically developed for telecommunications and network applications like OC-48 and OC-192.

FEATURES

- Size: 3.2 x 2.5 x 1.2 (mm)
- Ultra small package
- Tri-state enable / disable
- LVDS compatible
- Tape and reel packaging
- I_R re-flow
- 2.5 V and 3.3 V input voltage
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



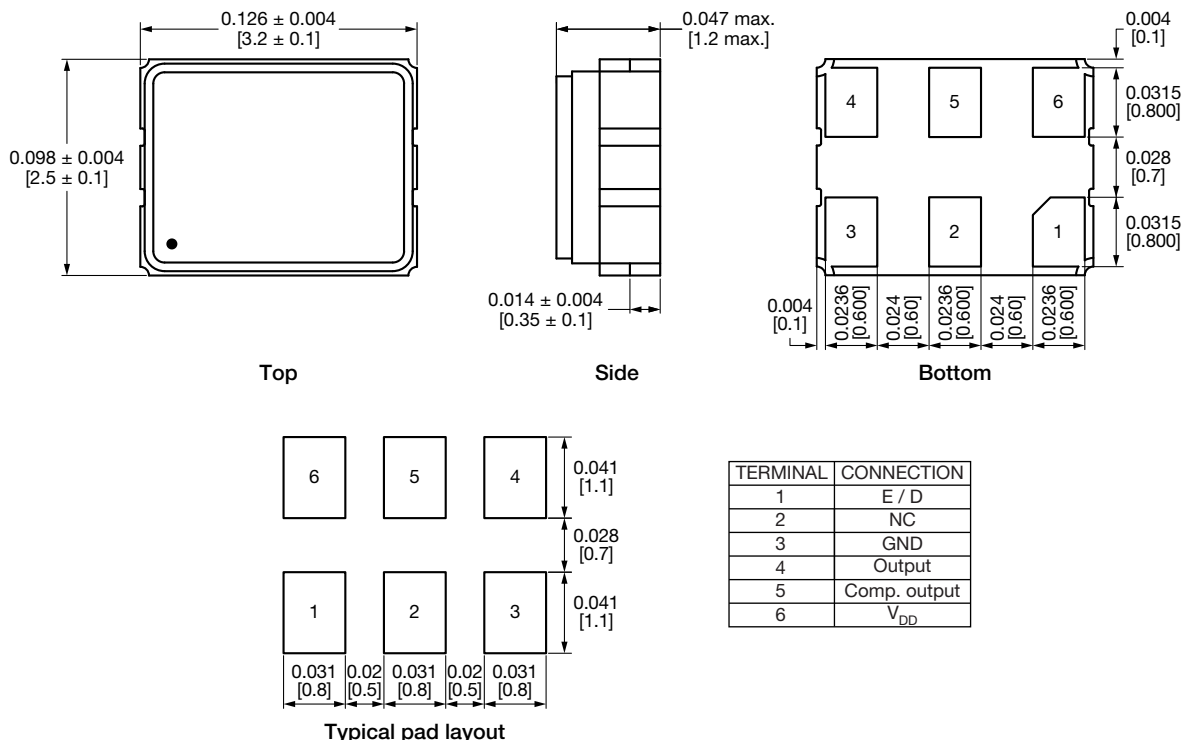
RoHS
COMPLIANT
HALOGEN
FREE

STANDARD ELECTRICAL SPECIFICATIONS			
PARAMETER	SYMBOL	CONDITION	VALUE
Frequency range ⁽¹⁾	F _O	-	77.76 MHz to 300.00 MHz
Frequency stability ⁽²⁾		All conditions	± 25 ppm, ± 50 ppm, ± 100 ppm
Operating temperature range	T _{OPR}	-	0 °C to 70 °C
			-40 °C to +85 °C (option)
Storage temperature range	T _{STG}	-	-55 °C to +125 °C
Power supply voltage	V _{DD}	Select desired voltage	2.5 V ± 10 %
	V _{DD}		3.3 V ± 10 %
Aging (first year)		25 °C ± 3 °C	± 3 ppm
Supply current	I _{DD}	-	80 mA max.
Output symmetry	Sym	At ½ V _{DD}	45 % / 55 %
Rise time	t _r	10 % V _{DD} to 90 % V _{DD}	1 ns max.
Rise/fall time	t _f	90 % V _{DD} to 10 % V _{DD}	1 ns max.
Output voltage	V _{OH}	-	1.4 V typ.
	V _{OL}	-	1.1 V typ.
Output voltage swing	V _{OD}	-	350 mV typ.
Output load	LVDS	-	100 Ω between output and complimentary output
Start-up time	t _s	-	10 ms max.
Phase jitter	J	12 kHz to 20 MHz	< 1.0 pS _{RMS}
Pin 1, tri-state function		-	Pin 1 = H or open (output active at pin 4) Pin 1 = L (high impedance at pin 4)

Notes

⁽¹⁾ 300.00 MHz is only available in 3.3 V operating voltage

⁽²⁾ Include: 25 °C tolerance, operating temperature range, input voltage change, aging, load change, shock and vibration

DIMENSIONS in inches [millimeters]

Note

- A 0.01 μ F bypass capacitor should be placed between V_{DD} (pin 4) and GND (pin 2) to minimize power supply line noise

PART NUMBER CONFIGURATIONS (to be used on all New Designs)

X	O	2	3	L	3	D	R	E	H	T	1	6	M	1	2	8
Oscillator		Package / Size		Logic	Voltage	Stability	Temp.	Tri-State	Package	Options	Frequency					
		2	3	L = LVDS	3 = 3.3 V 2 = 2.5 V	C = $\pm$ 100 ppm D = $\pm$ 50 ppm F = $\pm$ 35 ppm G = $\pm$ 30 ppm E = $\pm$ 25 ppm	S = -10 °C to +70 °C R = -40 °C to +85 °C	N = no connect E = Tri-State	H = tape and reel	X = no options T = 45/55 Contact factory for available options	Use "M" as decimal place holder Frequency must be six digits - complete with "0" at the end					

PART MARKING

Line 1: V25.00 (frequency)

Line 2: YWWA (date code / factory)



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