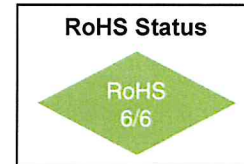


VFXO401
XO 2.5V, 3.3V
5x7mm SMD, LVPECL / LVDS



Features

- 10MHz to 320MHz frequency range
- 2.5V, 3.3V supply voltage
- Tight duty cycle
- <1 ps RMS jitter over 12kHz ~ 20MHz (frequency dependent)



Applications

- Optical Networking, SONET / SDH
- 10 Gigabit Ethernet
- Broadband Access

NOT RECOMMENDED FOR NEW DESIGNS
 Use CTS Model 637

Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F	LVPECL Output Logic LVDS Output Logic	10 80		320 300	MHz	
Frequency Stability	$\Delta F/F$	Over all conditions of :- Operating Temperature; Supply Voltage; 10 Years Aging; shock & vibration			± 100 ± 50 ± 25 ± 20	ppm	Order Code A Order Code B Order Code C Order Code D
Operating Temperature	T		0° -40°		+70° +85°	°C	Order Code B Order Code G
Output			LVPECL LVDS				Order Code L Order Code D
Supply Voltage	V _{CC}		3.15 2.38	3.30 2.50	3.45 2.63	V	Order Code G Order Code E
Input Current	I _{CC}	LVPECL LVDS		58 45	88 66	mA	
Output Load	50 Ohms to V _{CC} -2V or Thevenin Equivalent Bias Required						LVPECL
	100 Ohms (1.2V offset typical)						LVDS
Duty Cycle			45 47.5	50 50	55 52.5	%	Order Code B Order Code C

VFXO401
XO 2.5V, 3.3V
5x7mm SMD, LVPECL / LVDS



Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Rise / Fall Time	Tr/Tf	20% to 80%		0.5	0.8	ns	
HIGH Level Output Voltage	V _{OH}	3.3V LVPECL	2.275 2.215	2.350 2.295	2.42 2.42	V	0°C to +85°C -40°C to 0°C
		2.5V LVPECL	1.475 1.415	1.550 1.495	1.76 1.62	V	0°C to +85°C -40°C to 0°C
		LVDS	-	1.43	1.60	V	
LOW Level Output Voltage	V _{OL}	3.3V LVPECL	1.49 1.47	1.600 1.605	1.680 1.745	V	0°C to +85°C -40°C to 0°C
		2.5V LVPECL	0.69 0.67	0.800 0.805	1.095 1.195	V	0°C to +85°C -40°C to 0°C
		LVDS	0.90	1.10	-	V	
Enable Function "1"	V _{IH}		0.7V _{CC}		-	V	
Disable Function "0"	V _{IL}		-		0.3V _{CC}	V	
Start Up Time				2	10	ms	
RMS Jitter 12kHz~20MHz	1σ				0.7	ps	@ 156.25MHz

Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	V _{CC}		-0.5		4.6	V	
Storage Temperature	T _s		-55		+125°	°C	
Junction Temperature	T _J				+125°	°C	

Environmental and Mechanical Conditions

Parameter	Conditions
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-883, Method 2007, Condition A
Soldering Conditions	260°C for 10s max
Hermetic Seal	Leak rate less than 5x10 ⁻⁸ atm.cc/s of helium
Terminal Finish	Gold (Au) 0.30 - 1.00 μm Nickel (Ni) 1.3 - 8.9 μm
Marking	Epoxy ink or laser engraved

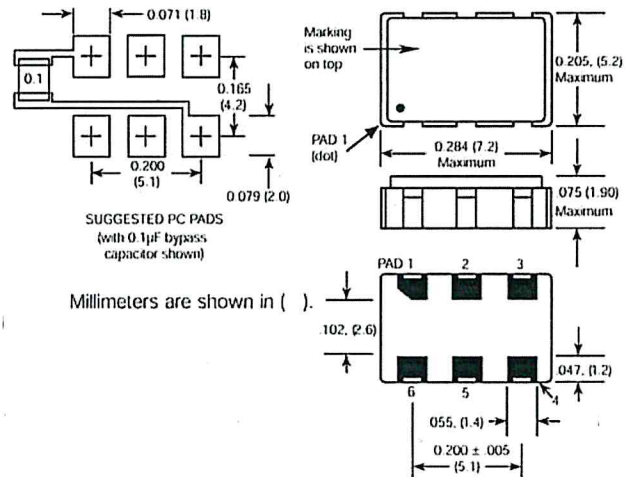
VFXO401
XO 2.5V, 3.3V
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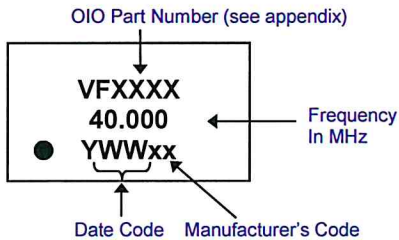
Pin Assignments

Pin #	Connection
1	N/C or Tristate
2	N/C
3	Case GND
4	Output
5	Output
6	V _{CC}

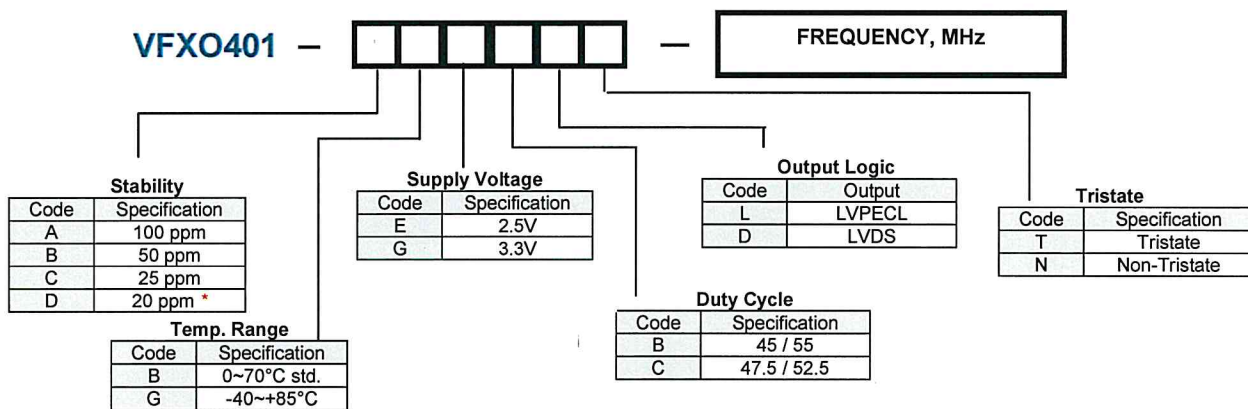
Mechanical Outline



Marking Specification



How to Order



*: ± 20 ppm over -40 to +85C does not include Aging.

Not all performance combinations and frequencies may be available.
 Contact your local CTS Representative or CTS Customer Service for availability.

CTS
ELECTRONIC COMPONENTS

4 Digit part numbers are used for marking.

[illegible]