



VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO)

VG-4501CA

VG-4502CA

- Frequency range : 60 MHz to 125 MHz
- Supply voltage : 3.3 V
- Absolute pull range : VG-4501CA $\pm 50 \times 10^{-6}$
: VG-4502CA $\pm 100 \times 10^{-6}$
- Thickness : 1.6 mm Typ.
- Function : Output enable(OE)
- Old name : TCO-7116Z1Z4

 $\pm 50 \times 10^{-6}$ 

Product Number (please contact us)

VG-4501CA : X1G002371xxx00

VG-4502CA : X1G003751xxx00



Actual size



Specifications (characteristics)

Item	Symbol	Specifications		Remarks
		VG-4501CA	VG-4502CA	
Output frequency range	f_o	60.000 MHz to 125.000 MHz		Please contact us for inquiries regarding available frequencies.
Supply voltage	V _{cc}	3.3 V ± 0.165 V		
Storage temperature range	T _{stg}	-55 °C to +125 °C		Store as bare product after unpacking
Operating temperature range	T _{use}	As per below table.		
Frequency tolerance	f _{tol}	$\pm 50 \times 10^{-6}$ Max.		-40 °C to +85 °C
Current consumption	I _{cc}	35 mA Max.		No load condition.
Absolute pull range*1	APR	GCT : $\pm 50 \times 10^{-6}$ Min.	HCT : $\pm 100 \times 10^{-6}$ Min.	V _c = 1.65 V ± 1.65 V
Input resistance	R _{in}	80 k Ω Min.		DC level
Frequency change polarity	—	Positive slope		V _c = 0 to 3.3 V
Symmetry	SYM	45 % to 55 %		50 % V _{cc} level
High output voltage	V _{OH}	90 % V _{cc} Min.		I _{OH} = -0.8 mA
Low output voltage	V _{OL}	10 % V _{cc} Max.		I _{OL} = 3.2 mA
Output load condition (CMOS)	L _{CMOS}	15 pF Max.		
Output enable / disable input voltage	V _{IH}	70 % V _{cc} Min.		V _{IH} or OPEN : Enable
	V _{IL}	30 % V _{cc} Max.		V _{IL} or GND : Disable
Rise time / Fall time	t _r / t _f	6 ns Max.		20 % V _{cc} to 80 % V _{cc} level
Start-up time	t _{str}	10 ms Max. *2		Time at minimum supply voltage to be 0 s
Frequency aging	f _{aging}	This is included Absolute pull range		+25 °C, V _{cc} = 3.3 V, 20 years

*1 Absolute pull range = Frequency control range- (Frequency tolerance + 20 years Aging + Free fall + Vibration)

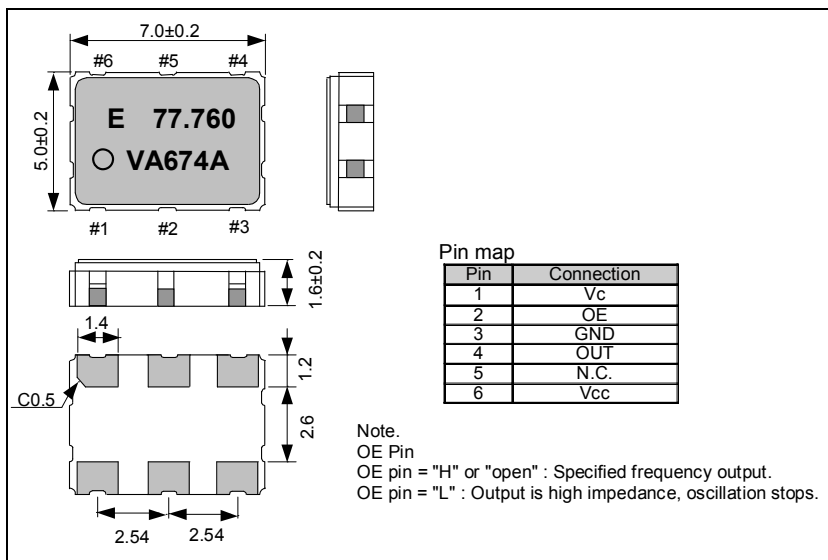
2 Rise time (or 3.15 V) of V_{cc} > 150 μ s Please keep V_c pin open or ground while powering up V_{cc}.

Operating temperature range

Operating temperature range	Absolute pull range		
	VG-4501CA	VG-4502CA	
G	-40 °C to +85 °C	$\pm 50 \times 10^{-6}$ Min.	$\pm 100 \times 10^{-6}$ Min.
J	-20 °C to +70 °C	GGCT	GHCT
K	0 °C to +70 °C	JGCT	JHCT
		KGCT	KHCT

External dimensions

(Unit : mm)



Footprint (Recommended)

(Unit : mm)

