



VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR (VCXO)

VG-1201CA

- Frequency range : 1 MHz to 60 MHz
- Supply voltage : 3.3 V(**C) or 5.0 V(**H)
- Function : Output enable(OE)
- External dimensions : 7.0 x 5.0 x 1.4 t (mm) Typ.



Product Number (please contact us)
Q3603CA0xxxxx00



Actual size



Specifications (characteristics)

Item	Symbol	Specifications		Remarks
		ANH / AKH / BNH / BKH	ANC / AKC / BNC / BKC	
Output frequency range	f ₀	1.000 MHz to 60.000 MHz		
Supply voltage	V _{cc}	H:5.0 V ±0.5 V	C:3.3 V ±0.3 V	
Temperature range	Storage temperature	-40 °C to +125 °C		Store as bare product after unpacking
	Operating temperature	As per below table		
Frequency tolerance	f _{tol}	As per below table		
Current consumption	I _{cc}	30 mA Max.	25 mA Max.	No load condition
	I _{dis}	15 mA Max.	12 mA Max.	
Frequency control range	f _{cont}	As per below table		V _c =2.5 V ±2.0 V(**H) , 1.65 V ±1.50 V(**C)
Modulation characteristics	BW	20 kHz Min.		± 3 dB (at 1 kHz)
Input resistance	R _{in}	5 MΩ Min.		DC level
Frequency change polarity	—	Positive polarity		V _c =0.5 V to 4.5 V(**H) , 0.15 V to 3.15 V(**C)
Symmetry	SYM	40 % to 60 %		CMOS load:50 % V _{cc} level
High output voltage	V _{OH}	V _{cc} -0.4 V Min.		I _{OH} = -4 mA
Low output voltage	V _{OL}	0.4 V Max.		I _{OL} = 4 mA
Output load condition(CMOS)	L _{CMOS}	15 pF Max.		CMOS load
Output enable / disable input voltage	V _{IH}	70 %V _{cc} Min.		OE Terminal
	V _{IL}	30 % V _{cc} Max.		
Rise time and Fall time	t _r / t _f	4 ns Max.		CMOS load: 20 % V _{cc} to 80 % V _{cc} level
Start-up time	t _{str}	10 ms Max.		Time at 90 % V _{cc} to be 0 s
Frequency aging	f _{aging}	±10 × 10 ⁻⁶ Max. *1		+25 °C, 10 years

*1 50 MHz < f₀ ≤ 60 MHz : ±15 × 10⁻⁶ Max.
 * Please keep V_c pin open or ground while powering up V_{cc}.

Frequency tolerance / Temperature range

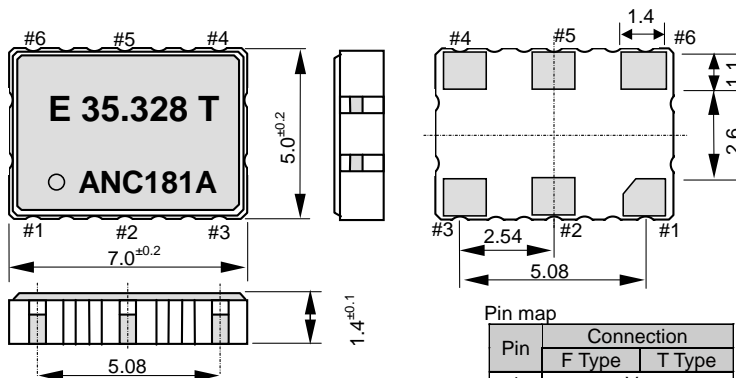
	Frequency tolerance	Temperature range
A	±20 × 10 ⁻⁶	-20 °C to +70 °C
B	±25 × 10 ⁻⁶	-40 °C to +85 °C

Frequency control range

	Frequency control range	Output frequency range
K	±75 × 10 ⁻⁶ Min.	41 MHz < f ₀ ≤ 60 MHz
N	±100 × 10 ⁻⁶ Min.	1 MHz ≤ f ₀ ≤ 41 MHz

External dimensions

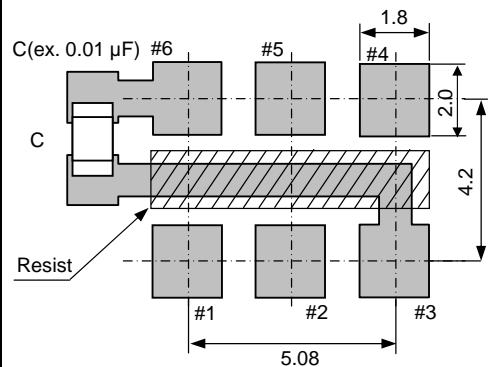
(Unit:mm)



Note.
 OE Pin
 OE pin = "H" or "open" : Specified frequency output.
 OE pin = "L" : Output is high impedance.

Footprint (Recommended)

(Unit:mm)



To maintain stable operation, provide by-pass capacitor with more than 0.1 µF at a location as near as possible to the power source terminal of the crystal products (between V_{cc} - GND).