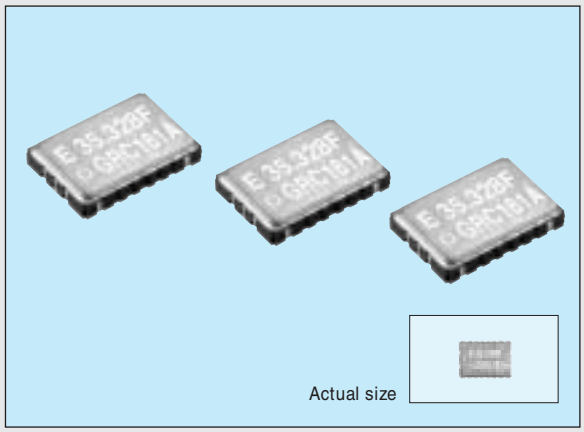
VOLTAGE-CONTROLLED CRYSTAL OSCILLATOR

VG-4231CA

Product number (please refer to page 2)

Q3614CA0xxxxx00

- High accuracy and high reliability due to trimmerless design.
- Well designed internal construction realizes as good as general - purpose ICs heat resistance performance.
- Use of CMOS IC assures low current consumption.
- Excellent shock resistance and environmental capability.
- Supply voltage: 5.0 V(DRH / GRH),3.3 V(DRC / GRC)
- Output enable function(OE) can be used for low current consumption applications.

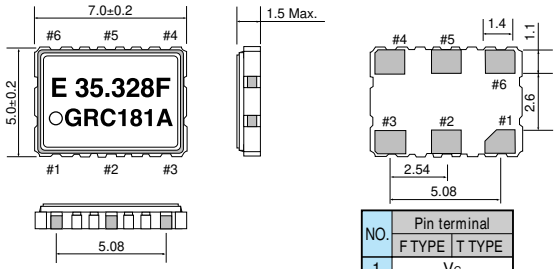


Specifications (characteristics)

Item		Symbol	Specifications		Remarks
			DRH / GRH	DRC / GRC	
Output frequency range		f_0	16.0000 MHz to 41.0000 MHz		Please contact us for inquiries about the available frequency.
Power source voltage	Max. supply voltage	V_{DD}-GND	-0.3 V to +7.0 V		
	Operating voltage	V_{DD}	H : 5.0 V ±0.5 V	C : 3.3 V ±0.3 V	
Temperature range	Storage temperature	T_{STG}	-40 °C to +125 °C		Stored as bare product after unpacking
	Operating temperature	T_{OPR}	As per below table		
Frequency stability		$\Delta f/f_0$	As per below table		VC=2.5 V(DRH / GRH) / VC=1.65 V(DRC / GRC)
Current consumption		Iop	20 mA Max.	10 mA Max.	No load condition
Output disable current		I_{OE}	15 mA Max.	7 mA Max.	OE=GND
Pull range		Δf_C	R : ±130 x 10^{-6}		VC=2.5±2.0 V(DRH / GRH) / VC=1.65±1.50 V(DRC / GRC)
Modulation Characteristics		BW	± 15 kHz Min.		± 3 dB at 1kHz
Absolute pull range		APR	D : ±80 x 10^{-6} Min		
			G : ±65 x 10^{-6} Min		
Input resistance		Z_{IN}	50 kΩ Min.		DC Level
Frequency change polarity			Positive polarity		
Duty		tw/t	40 % to 60 %		1/2V_{DD} level
Output voltage		V_{OH}	V_{DD} -0.4 V Min.		I_{OH}= -0.8 mA(DRC / GRC)/I_{OH}= -4 mA(DRH / GRH)
		V_{OL}	0.4 V Max.		I_{OL}= 3.2 mA(DRC / GRC)/I_{OL}= 4 mA(DRH / GRH)
Output load condition (fan out)		N/C_L	15 pF Max.		CMOS load
Output enable/ disable input voltage		V_{IH}	0.7 V_{DD} Min.		OE terminal
		V_{IL}	0.3 V_{DD} Max.		
Output rise time		t_{TLH}	4 ns Max.		CMOS load: 20 %→80 % V_{DD} level
Output fall time		t_{THL}	4 ns Max.		CMOS load: 80 %→20 % V_{DD} level
Oscillation start up time		t_{OSC}	10 ms Max.		Time at 0.9 V_{DD} to be 0 s
Aging		fa	±10 x 10^{-6} Max.		Ta=+25 °C, 10 year

External dimensions

(Unit: mm)



NO.	Pin terminal	
	F TYPE	T TYPE
1	V_C	
2	NC	OE
3	GND	
4	OUT	
5	OE	NC
6	V_{DD}	

Stability / Temperature range

	Stability	Temperature range
DRC / DRH	±35 x 10^{-6}	-20 °C to +70 °C
GRC / GRH	±50 x 10^{-6}	-40 °C to +85 °C

Recommended soldering pattern

(Unit: mm)