

VCXO

VG-4231CE

SEIKO EPSON CORPORATION

Product name VG-4231CE 27.000000 MHz PSC-M

Product code / Ordering code Q3614CE000011xx

Please refer to the 8.Packing information about xx (last 2 digits)

Output waveform CMOS

Pb free / Complies with EU RoHS directive

Reference weight Typ.26 mg

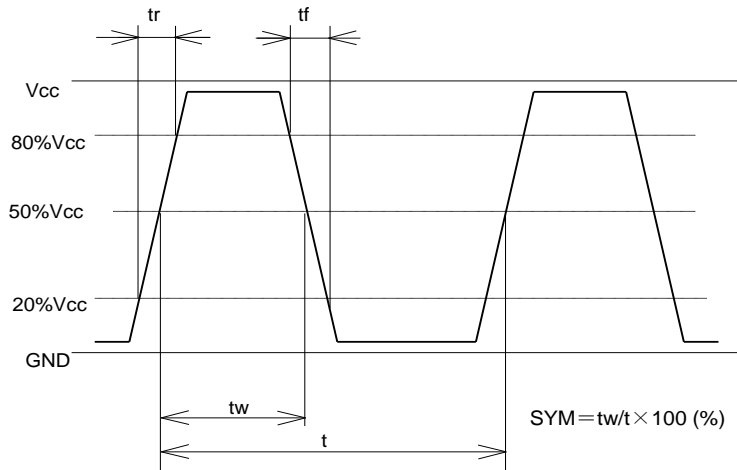
1.Absolute maximum ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions / Remarks
Maximum supply voltage	V _{cc-GND}	-0.3	-	+7	V	-
Storage temperature	T _{stg}	-40	-	+125	°C	Storage as single product after unpacking.
Input voltage	V _{in}	-0.3	-	V _{cc} +0.3	V	V _c traminl

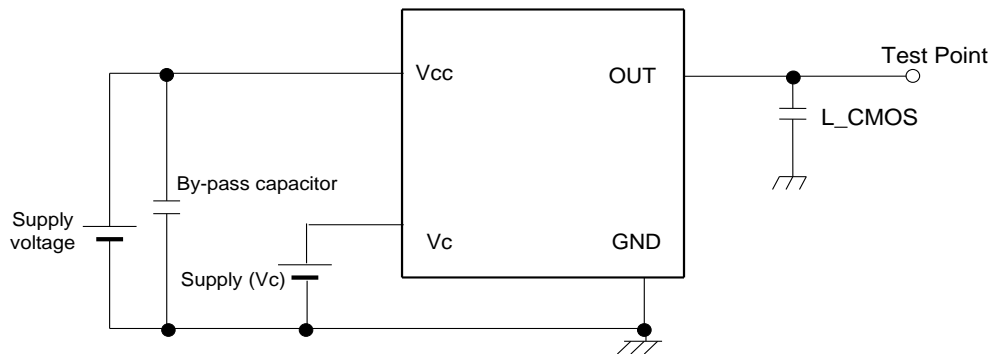
2.Specifications(characteristics)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions / Remarks
Output frequency	f _o		27.0000		MHz	
Supply voltage	V _{cc}	3	3.3	3.6	V	-
Control voltage	V _c	0	1.65	3.3	V	V _c =1.65V+/-1.65V
Operating temperature	T _{use}	-40	-	+85	°C	-
Frequency tolerance	f _{tol}	-37	-	+37	x10 ⁻⁶	T _{use}
Current consumption	I _{cc}	-	-	2.5	mA	No load
Frequency control range	f _{cont}	+/-140	-	-	x10 ⁻⁶	-
Absolute pull range	APR	+/-95	-	-	x10 ⁻⁶	-
Modulation characteristics	BW	15	-	-	kHz	+/-3dB
Input resistance	R _{in}	5	-	-	MΩ	-
Linearity	F _{LIN}	-	-	+/-10	%	-
Frequency change polarity	-	Positive			-	-
Symmetry	SYM	40	-	60	%	50% V _{cc} level
Output voltage	V _{OH}	90 % V _{cc}	-	-	V	I _{OH} = -3.0 mA
	V _{OL}	-	-	10 % V _{cc}	V	I _{OL} = 3.0 mA
Output load condition	L _{CMOS}	-	-	15	pF	-
Rise time	t _r	-	-	4	ns	20%V _{cc} to 80%V _{cc} level
Fall time	t _f	-	-	4	ns	80%V _{cc} to 20%V _{cc} level
Start-up time	t _{str}	-	-	5	ms	t=0 at 90 %V _{cc}
Frequency aging	f _{aging}	-5	-	5	x10 ⁻⁶	25°C, 5years

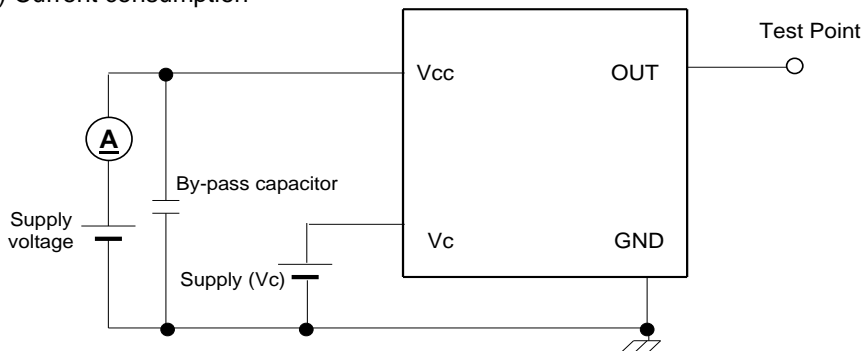
3. Timing chart



4. Test circuit

1) C-MOS load $CL=15\text{ pF}$ 

2) Current consumption



3) Condition

1. Oscilloscope

Impossible to measure both frequency and wave form at the same time.

(In case of using oscilloscope's amplifier output, possible to measure both at the same time.)

2. L_CMOS includes probe capacitance.

3. By-pass capacitor (0.01 μF to 0.1 μF) is placed closely between Vcc and GND.

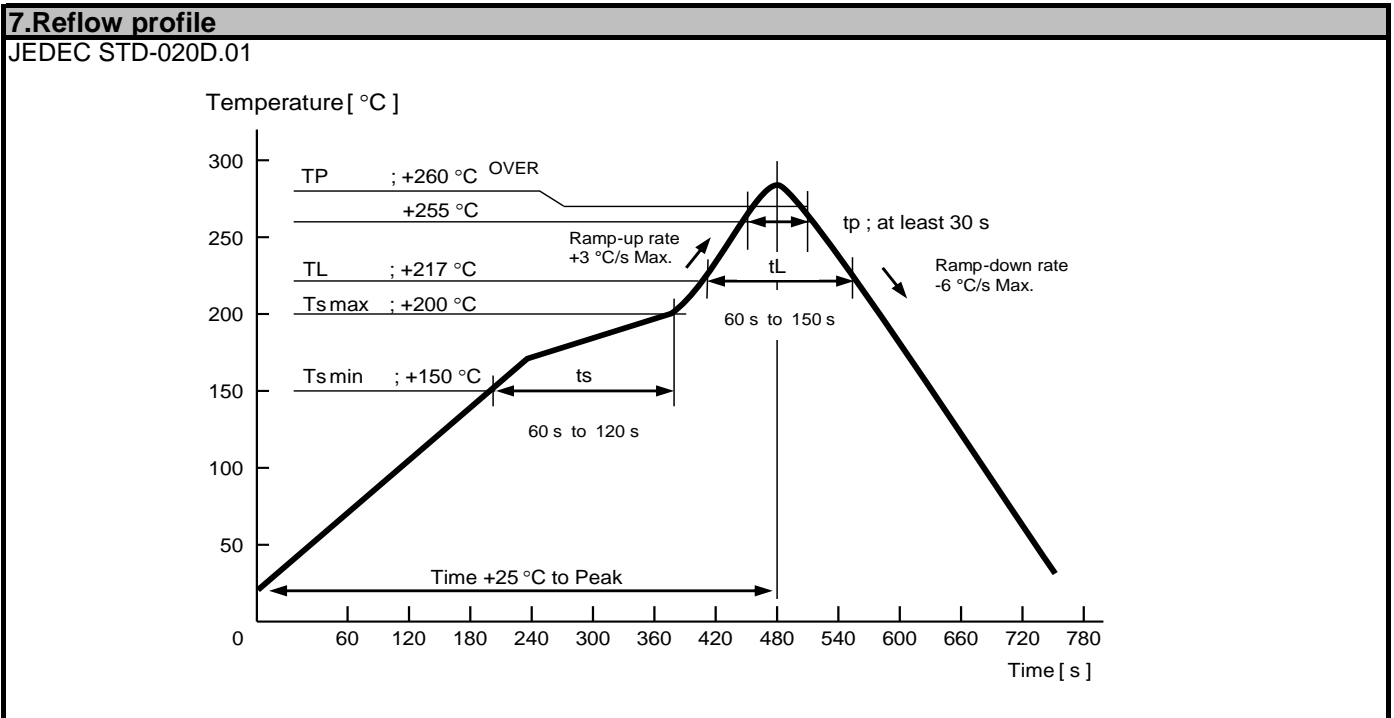
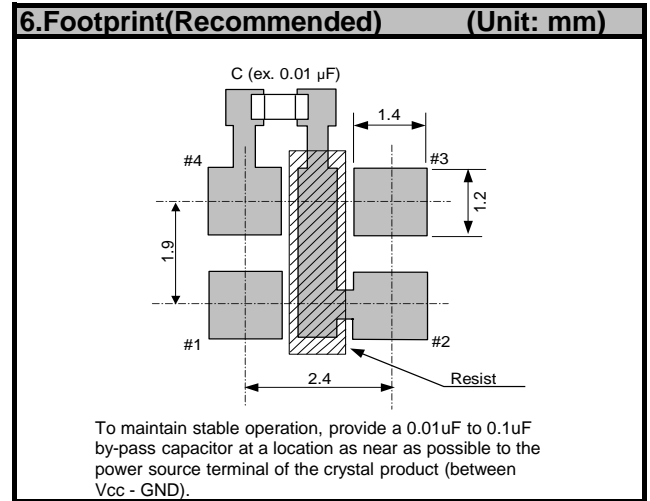
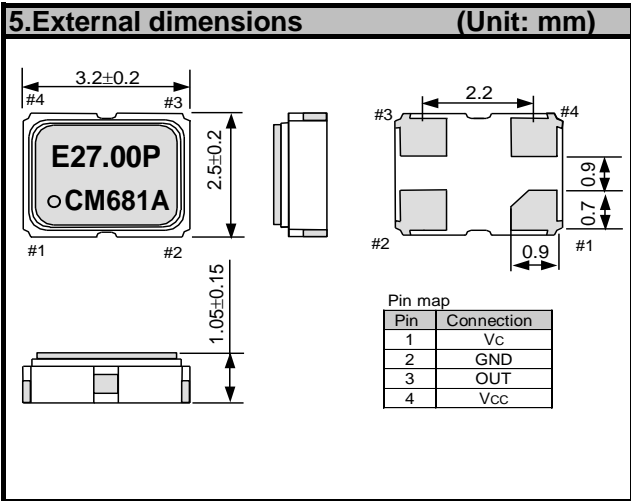
4. Use the current meter whose internal impedance value is small.

5. Power Supply

· Start up time (0 %Vcc \rightarrow 90 %Vcc) of power source should be more than 150 μs .

· Impedance of power supply should be as low as possible.

6. One point earth of test circuit is required.



8.Packing information

[1] Product number last 2 digits code(xx) description The recommended code is "00"

Q3614CE000011xx

Code	Condition	Code	Condition
00	1000pcs / Reel	12	250pcs / Reel
01	Any Q'ty vinyl bag(Tape cut)	13	500pcs / Reel
11	Any Q'ty / Reel	14	1kpcs / Reel

[2] Taping specification

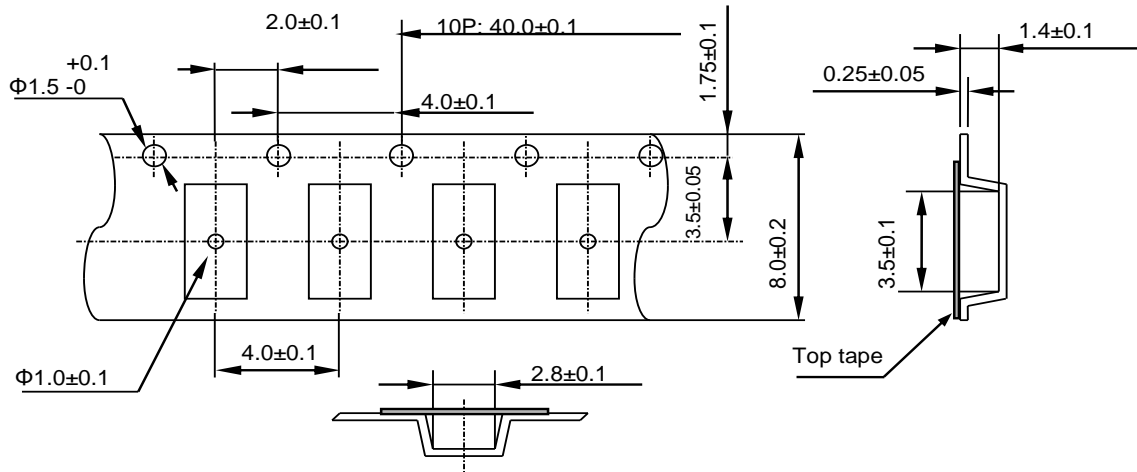
Subject to EIA-481 & IEC-60286

(1) Tape dimensions

Material of the Carrier Tape : PS

Material of the Top Tape : PET+PE

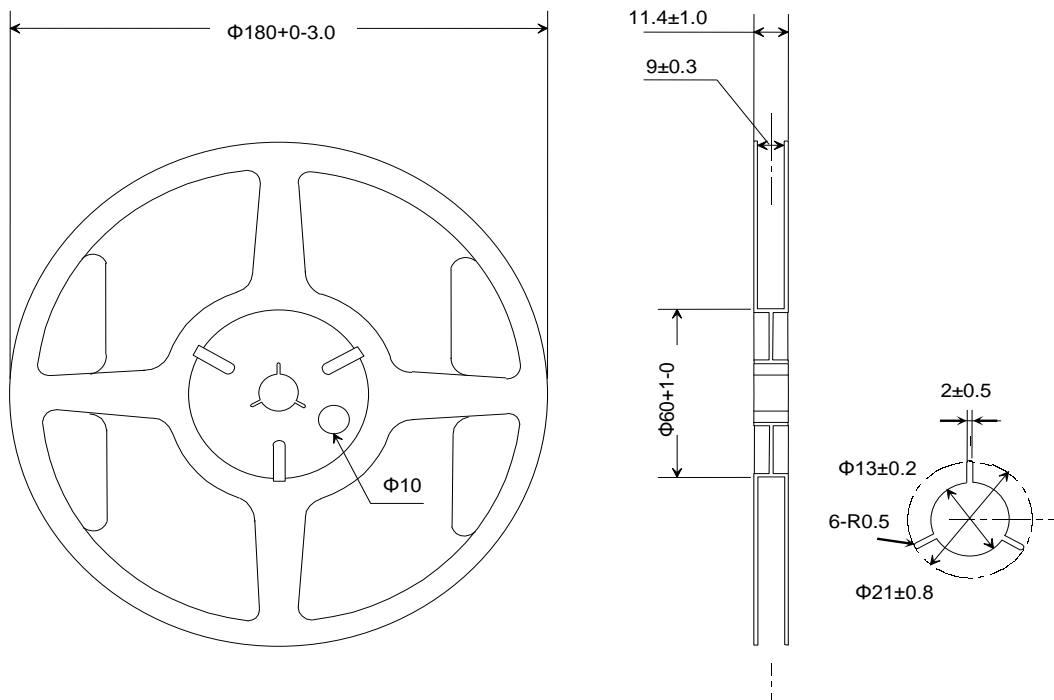
Unit: mm



(2) Reel dimensions

Material of the Reel : PS

Unit: mm



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