

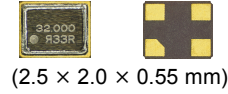
SMD Crystal Unit

2.5 x 2.0 mm / 11 ~ 80 MHz

FCX-05

FEATURES

- AT-cut 11 ~ 80 MHz crystal unit
- Frequency tolerance of ± 7 ppm (@25°C) available
- Wide operating temperature range of -40 to +125°C available
- High pulling-sensitivity
- Robust ceramic package with metal lid sealed by electron beam
- Specifications in conformity with AEC-Q200 available on request



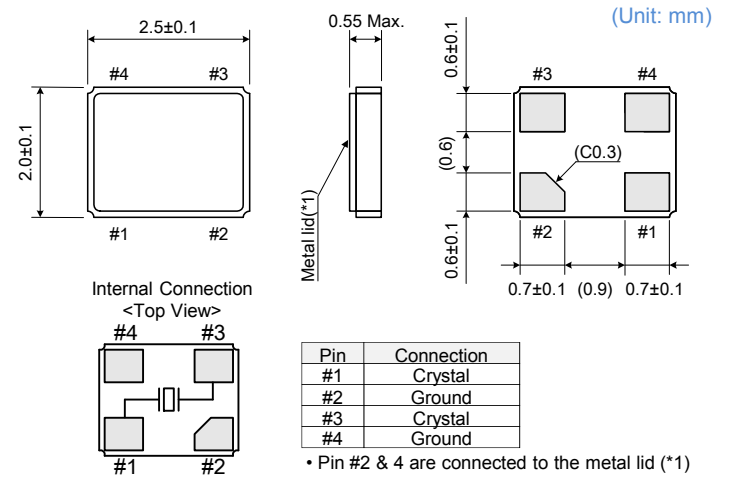
APPLICATIONS

- Car audio systems / car GPS units / remote keyless entry / dash cameras

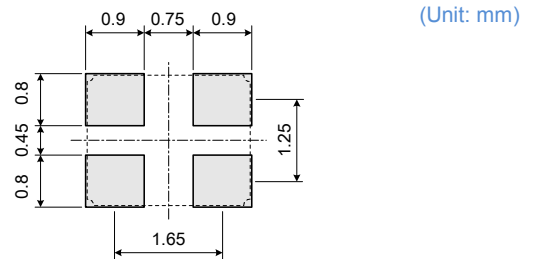
STANDARD SPECIFICATIONS

Item	Specifications	Conditions / Remarks
Nominal frequency	11,000 ~ 80,000 MHz	-
Overtone order	Fundamental	-
Frequency tolerance	± 7 ppm ~	@25°C See below for more options
Equivalent series resistance (E.S.R.)	200Ω Max.	11 MHz to 12 MHz
	150Ω Max.	12 MHz to 13 MHz
	100Ω Max.	13 MHz to 17 MHz
	80Ω Max.	17 MHz to 23 MHz
	60Ω Max.	23 MHz to 30 MHz
Storage temperature	50Ω Max.	30 MHz to 80 MHz
	-55 ~ +125°C	-
Operating temperature	-40 ~ +85°C	See below for more options
	-40 ~ +125°C	
Frequency/temperature characteristics	± 10 ppm (-30 ~ +85°C) ± 50 ppm (-40 ~ +125°C)	Refer to 25°C See below for more options
Load capacitance	5.0 pF ~	Please specify
Drive level	200 μW Max.	-
Tape and reel	3000 pcs/reel	Reel diameter: \varnothing 180 mm

OUTLINE DIMENSIONS



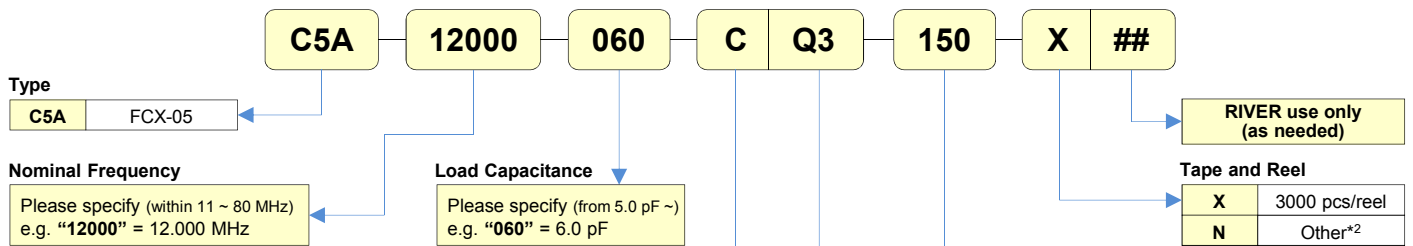
RECOMMENDED LAND PATTERN



GENERAL NOTES

- Certain combinations of standard options may be classified as high-spec models.
- Please consult us for specifications that do not match the standard specifications.
- The information in this document is subject to change without notice.

ORDERING NUMBER GUIDE



Frequency Tolerance*1	
A	± 7 ppm
B	± 10 ppm
C	± 15 ppm
D	± 20 ppm
E	± 30 ppm
F	± 50 ppm
G	Overall*1
N	Other*2

Operating temperature	Frequency/temperature characteristics				
	± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 ~ +70°C	P1	P2**	P3**	P4**	P5**
-30 ~ +85°C	Q1	Q2	Q3**	Q4**	Q5**
-40 ~ +85°C	-	R2	R3**	R4**	R5**
-40 ~ +105°C	-	-	-	S4**	S5**
-40 ~ +125°C	-	-	-	-	T5**
Other*2	NN				

Equivalent Series Resistance (E.S.R.)	
200	200Ω Max. (11 MHz to 12 MHz)
150	150Ω Max. (12 MHz to 13 MHz)
100	100Ω Max. (13 MHz to 17 MHz)
080	80Ω Max. (17 MHz to 23 MHz)
060	60Ω Max. (23 MHz to 30 MHz)
050	50Ω Max. (30 MHz to 80 MHz)
NNN	Other*2

1. For overall frequency stability inclusive of stability at 25°C and an operating temp. range, please select "G (Overall)" from the table "Frequency Tolerance" followed by a code that is with "" from the table "Freq./Temp. Characteristics & Operating Temp.". (e.g. GP2 = Overall ± 15 ppm (-20 ~ +70°C))
*2. Please consult us for your requirements.