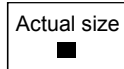
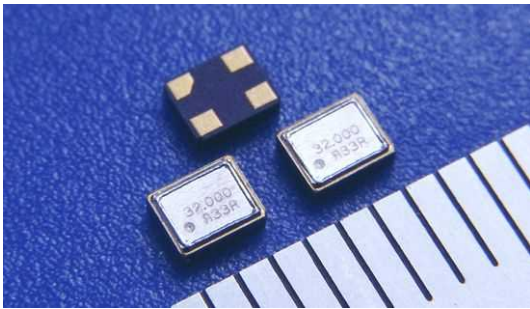


SMD Crystal Oscillator

FCXO-05/05W



◆ FEATURES

- AT-cut, MHz crystal oscillator (1 ~ 80 MHz) with 2 options;
FCXO-05: Standard type
FCXO-05W: Operating temp. 105°C type
- Compact package (2.5 × 2.0 × 0.9 mm Max. / 13 mg for both types)
- High-precision frequency (available from ±7ppm @25°C)
- High-reliable ceramic/metal package sealed with electron beam
- Specifications in conformity with AEC-Q200 available* on request (*only for FCXO-05W)

◆ APPLICATIONS

- Mobile communication / wireless modules

◆ STANDARD SPECIFICATIONS / ORDERING INFORMATION

Ordering Number (Sample): **X5A** — **49152** — **18** — **C Q3** — **H X ##**
 (1) (2) (3) (4) (5) (6) (7) (8)

(1) Type	
FCXO-05	X5A
FCXO-05W	X5W

(2) Nominal Frequency	
1.000 ~ 80.000 MHz	e.g. 49.152 MHz = 49152

(3) Supply Voltage	
1.8 ±0.18 V	18
2.5 ±0.25 V	25
3.3 ±0.33 V	33
Other: 1.60 ~ 3.63 V	NN

(4) Frequency Tolerance @ 25°C			
±7 ppm	A	±20 ppm	D
±10 ppm	B	±30 ppm	E
±15 ppm	C	±50 ppm	F
Other		N	

(5) Operating Temperature	Frequency versus Temperature Characteristics (Refer to 25°C)				
	±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 *1	-	-	-	S4	S5
Other	NN				

*1 Only applicable to FCXO-05W

(6) Storage Temperature*2	
-40 ~ +85°C	G
-40 ~ +105°C	H
-55 ~ +125°C *1	J
Other	N

*2 Not applicable to packing materials

(7) Tape & Reel (φ180 mm)	
3000 pcs/reel	X
Other	N

(8) RIVER Use Only (As needed)

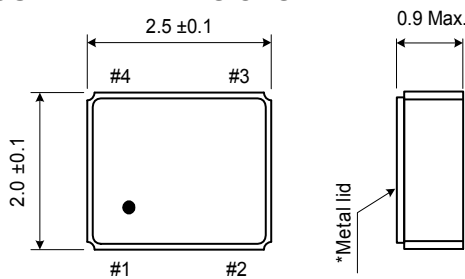
Common Parameter	Specification	Unit	Note
Current Consumption	3.0 Max.	mA	F = 40 MHz, V _{DD} = 3.0 V, No load
Stand-by Current	10 Max.	μA	Stand-by = "L"
High-level Output Voltage	V _{DD} -0.4 Min.	V	I _{OH} = -4 mA
Low-level Output Voltage	0.4 Max.	V	I _{OL} = +4 mA
Output Load	15 Max.	pF	-
Output Level	CMOS	-	-
Duty Cycle	50 ±5	%	-
Rise / Fall Time	5.0 Max.	ns	10% V _{DD} to 90% V _{DD} level

Common Parameter	Specification	Unit	Note
Startup Time	2.0 Max.	ms	V _{DD} = 3.3 V
	5.0 Max.	ms	V _{DD} = 1.8 V
Random Jitter (RJ) *3	3.7 typ.	ps	V _{DD} = 3.3 V
Total Jitter (TJ) *3	51 typ.	ps	V _{DD} = 3.3 V, T _J = n°RJ (n≅14.1, BER = 10 ⁻¹²)
Phase Jitter	1.0 Max.	ps	Offset frequency: 12 kHz ~ 5 MHz, V _{DD} = 3.3 V
Stand-by (pin #1) Function	(High)	0.7V _{DD} Min.	V Output (pin #3) enabled
	(Low)	0.3V _{DD} Max.	V Output (pin #3) disabled: High-Z

*3 Measured on "Wave Crest 3100C"

- "Ordering Number" codes are indicated in blue, and the corresponding specifications are described in black.
- Not all combinations of options are available as a standard specification.
- For "Overall Frequency-Tolerance" specifications, please select "N" for the "(4) Frequency Tolerance", and let our sales know your requirement.
- For specifications other than those above, please consult our sales or contact us via our website with your requirement.

◆ OUTLINE DIMENSIONS

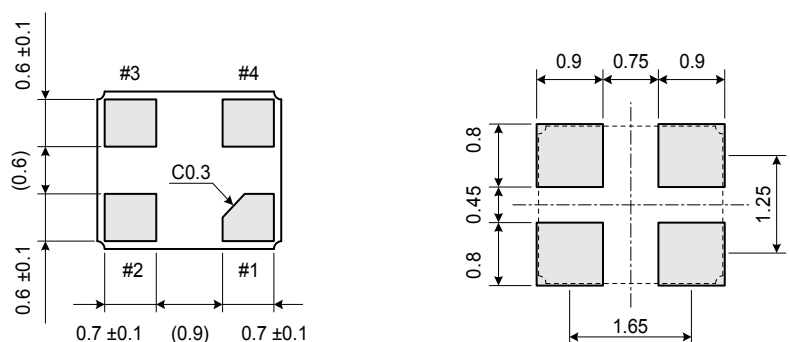


Pin	Function
#1	Stand-by
#2	Ground
#3	Output
#4	V _{DD}

- "●" indicates Pin #1.
- Pin #2 is connected to the lid*.

◆ LAND PATTERN

Unit: mm



- For operational stability, a 0.01 μF bypass capacitor should be placed between V_{DD} (Pin #4) and Ground (Pin #2) as close as possible to the product.

RIVER RIVER ELETEC CORPORATION

<http://www.river-ele.co.jp>

Sales Contacts: River Electronics (Singapore) Pte. Ltd
 Taiwan River Co. Ltd (Chinese Taipei)
 Xi'an River Electronics Corporation (China)

TEL: +65-6258-7874

FAX: +65-6258-7366

TEL: +886-2-8988-2811

FAX: +886-2-2983-4785

TEL: +86-755-86528590

FAX: +86-755-86528590