1.6 × 1.2mm for Consumer Products/ Mobile Communications



RoHS Compliant
PSL: R4Y MSL1

How to Order

CX1612DB 24000 □□ □ □ □ CC
① ② ③④ ⑤ ⑥ ⑦ ⑧

①Series (Type and Size)
②Frequency (24000 to 76800kHz)
③④Load Capacitance (Unit:pF) Ex.: D1:8.1pF

③Integer part	
D	8
E	9
F	10
G	11
H	12
Z	Special suffix

④After the decimal point	
0	.0
1	.1
2	.2
3	.3
4	.4
5	.5
6	.6
7	.7
8	.8
9	.9

Packaging
(Tape & Reel 3000/ 20000 pcs./ reel)

⑤Frequency Tolerance

F	±10×10⁻⁶
G	±15×10⁻⁶
H	±20×10⁻⁶
J	±25×10⁻⁶
K	±30×10⁻⁶
M	±40×10⁻⁶
P	±50×10⁻⁶
W	All Over
Z	Special suffix

Features

- Crystal unit for Digital Electronics and Consumer Products
- Ultra-miniature and low profile 32MHz or more accepts 0.35mm-high or less
- Ceramic package • Reflow compatible

Applications

- Smartphone (Bluetooth®, Wireless LAN, NFC)
- Wearable devices
- Short range wireless (LPWA)

* Bluetooth® Trademarks are owned by Bluetooth SIG, Inc.

⑥Operating Temp. Range ⑦Frequency Temp. Stability

⑥ \ ⑦		F	J	L	R	S
		±10ppm	±15ppm	±20ppm	±40ppm	±50ppm
G	-20 to 75°C	✓	✓	✓	✓	✓
L	-30 to 85°C		✓	✓	✓	✓
P	-40 to 85°C			✓	✓	✓
R	-40 to 105°C				✓	✓
S	-40 to 125°C				✓	✓

⑧Individual Specification (STD Specification is "CC" .)

Specifications

Item	Symbol	Specification	Unit	Remarks
Frequency Range	f_nom	24000 to 76800	kHz	Please contact us for other frequency range.
Overtone Order	OT	Fundamental	—	
Load Capacitance	CL	8	pF	Please contact us for other CL requirements.
Frequency Tolerance	f_tol	± 15	× 10⁻⁶	25° C ± 3° C
Motional Series Resistance	R1	Table 1	ohm	
Drive Level	DL	10 μ W(100 μ W max.)	μ W	
Operating Temp. Range	T_use	− 30 to +85	° C	
Storage Temp. Range	T_stg	− 40 to +85	° C	
Frequency Temp. Characteristics	f_tem	± 20	× 10⁻⁶	Freq. deviation from the value at 25° C
Shunt capacitance	C0	2.0max.	pF	

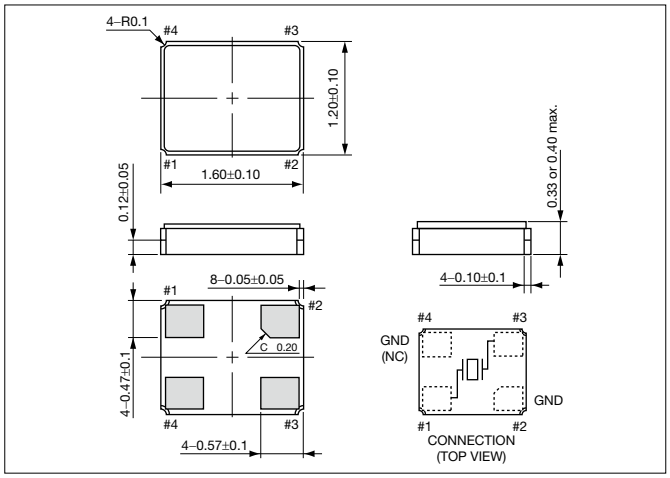
Please contact us for other specifications.

◆Table 1
Motional Series Resistance ESR (C1)

Frequency (MHz)	ESR (Ohm)
24≦F<32	150
32≦F<48	80
48≦F≦76.8	50

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

