

# Crystal Resonator



## XRCGB\_F\_N Series [For Consumer Equipment]

### ■ Features

Small package (2.0x1.6mm)  
 Compatible with RoHS directive (phase 3)

### ■ Applications

PC / Visual Equipment / Small Portable Equipment



### ■ Standard Specifications

| Part Number        | Nominal Frequency (MHz) | Frequency Tolerance (at 25±3°C) | Equivalent Series Resistance (ohm) | Temperature Stability (Based on +25°C) | Drive Level (μW) | Load Capacitance (pF) |
|--------------------|-------------------------|---------------------------------|------------------------------------|--|------------------|-----------------------|
| XRCGB24M000F3N00R0 | 24.0000                 | ±30ppm max.                     | 150 max.                           | ±30ppm max. (-20 to +85°C)             | 300 max.         | 6                     |
| XRCGB24M000FAN00R0 | 24.0000                 | ±25ppm max.                     | 150 max.                           | ±25ppm max. (-10 to +70°C)             | 300 max.         | 6                     |
| XRCGB25M000F3N00R0 | 25.0000                 | ±30ppm max.                     | 150 max.                           | ±30ppm max. (-20 to +85°C)             | 300 max.         | 6                     |
| XRCGB25M000FAN00R0 | 25.0000                 | ±25ppm max.                     | 150 max.                           | ±25ppm max. (-10 to +70°C)             | 300 max.         | 6                     |
| XRCGB26M000F3N00R0 | 26.0000                 | ±30ppm max.                     | 150 max.                           | ±30ppm max. (-20 to +85°C)             | 300 max.         | 6                     |
| XRCGB26M000FAN00R0 | 26.0000                 | ±25ppm max.                     | 150 max.                           | ±25ppm max. (-10 to +70°C)             | 300 max.         | 6                     |
| XRCGB27M000F3N00R0 | 27.0000                 | ±30ppm max.                     | 150 max.                           | ±30ppm max. (-20 to +85°C)             | 300 max.         | 6                     |
| XRCGB27M000FAN00R0 | 27.0000                 | ±25ppm max.                     | 150 max.                           | ±25ppm max. (-10 to +70°C)             | 300 max.         | 6                     |
| XRCGB30M000F3N00R0 | 30.0000                 | ±30ppm max.                     | 100 max.                           | ±30ppm max. (-20 to +85°C)             | 300 max.         | 6                     |
| XRCGB30M000FAN00R0 | 30.0000                 | ±25ppm max.                     | 100 max.                           | ±25ppm max. (-10 to +70°C)             | 300 max.         | 6                     |

### ■ Dimensions



### ■ Recommendable Land Pattern



### ■ Part Numbering

|       |        |       |    |
|-------|--------|-------|----|
| XRCGB | 30M000 | F3N00 | R0 |
| ①     | ②      | ③     | ④  |

① Series Name  
 ② Nominal Frequency  
 Frequency is expressed by six-digit alphanumeric.  
 (example: 30.0000MHz → 30M000)  
 ③ Individual Specification  
 With standard products, Individual Specification is "F□N00".  
 □ are the alphanumeric characters indicating Frequency Tolerance.  
 ④ Packaging

# Crystal Resonator



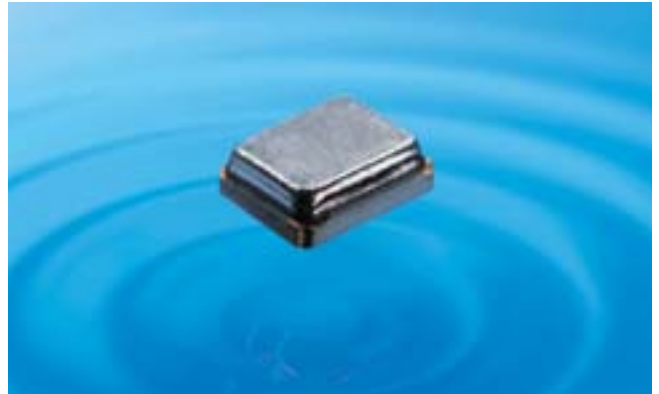
## XRCGB\_F\_M Series [For Consumer Equipment]

### ■ Features

Small package (2.0x1.6mm)  
 Compatible with RoHS directive (phase 3)

### ■ Applications

PC / Visual Equipment / Small Portable Equipment

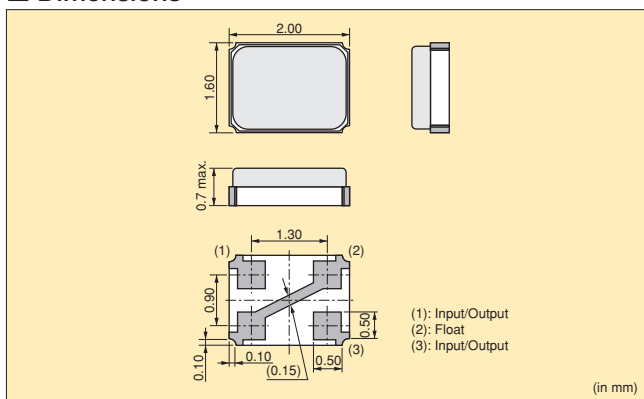


### ■ Standard Specifications

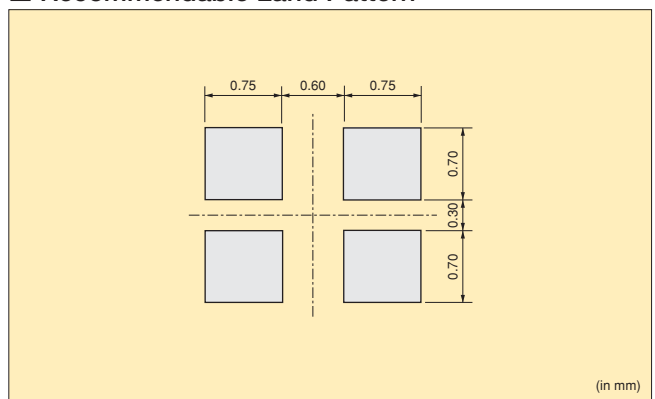
| Part Number        | Nominal Frequency (MHz) | Frequency Tolerance (at 25±3°C) | Equivalent Series Resistance (ohm) | Temperature Stability (Based on +25°C) | Drive Level (μW) | Load Capacitance (pF) |
|--------------------|-------------------------|---------------------------------|------------------------------------|--|------------------|-----------------------|
| XRCGB24M000F3M00R0 | 24.0000                 | ±30ppm max.                     | 150 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB25M000F3M00R0 | 25.0000                 | ±30ppm max.                     | 150 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB26M000F3M00R0 | 26.0000                 | ±30ppm max.                     | 150 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB27M000F3M00R0 | 27.0000                 | ±30ppm max.                     | 150 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB27M120F3M00R0 | 27.1200                 | ±30ppm max.                     | 150 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB30M000F3M00R0 | 30.0000                 | ±30ppm max.                     | 100 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB33M868F4M00R0 | 33.8688                 | ±45ppm max.                     | 100 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB40M000F4M00R0 | 40.0000                 | ±45ppm max.                     | 100 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB48M000F4M00R0 | 48.0000                 | ±45ppm max.                     | 100 max.                           | ±40ppm max. (-30 to +85°C)             | 300 max.         | 6                     |

Operating Temperature Range: -30 to +85°C

### ■ Dimensions



### ■ Recommendable Land Pattern



### ■ Part Numbering

|       |        |       |    |
|-------|--------|-------|----|
| XRCGB | 30M000 | F3M00 | R0 |
| ①     | ②      | ③     | ④  |

① Series Name  
 ② Nominal Frequency  
 Frequency is expressed by six-digit alphanumeric.  
 (example: 30.0000MHz → 30M000)  
 ③ Individual Specification  
 With standard products, Individual Specification is "F□M00".  
 □ are the alphanumeric characters indicating Frequency Tolerance.  
 ④ Packaging

# Crystal Resonator



## XRCGB\_F\_L Series [For Consumer Equipment]

### ■ Features

Available for S-ATA and USB2.0 (High Speed) /  
 USB3.0 (Super Speed)  
 Small package (2.0x1.6mm)  
 Compatible with RoHS directive (phase 3)

### ■ Applications

HDD / SSD / Optical Drive (Available for S-ATA interface)  
 DSC / Camcorder / USB Flash Drive / Printer / Mobile Phone  
 etc. (USB2.0 / 3.0)



### ■ Standard Specifications

| Part Number        | Nominal Frequency (MHz) | Frequency Tolerance (at 25±3°C) | Equivalent Series Resistance (ohm) | Temperature Stability (Based on +25°C) | Drive Level (μW) | Load Capacitance (pF) |
|--------------------|-------------------------|---------------------------------|------------------------------------|--|------------------|-----------------------|
| XRCGB24M000F0L00R0 | 24.0000                 | ±100ppm max.                    | 150 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB25M000F0L00R0 | 25.0000                 | ±100ppm max.                    | 150 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB26M000F0L00R0 | 26.0000                 | ±100ppm max.                    | 150 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB27M000F0L00R0 | 27.0000                 | ±100ppm max.                    | 150 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB30M000F0L00R0 | 30.0000                 | ±100ppm max.                    | 100 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB33M868F0L00R0 | 33.8688                 | ±100ppm max.                    | 100 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB40M000F0L00R0 | 40.0000                 | ±100ppm max.                    | 100 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |
| XRCGB48M000F0L00R0 | 48.0000                 | ±100ppm max.                    | 100 max.                           | ±50ppm max. (-30 to +85°C)             | 300 max.         | 6                     |

Operating Temperature Range: -30 to +85°C

### ■ Dimensions



### ■ Recommendable Land Pattern



### ■ Part Numbering

|       |        |       |    |
|-------|--------|-------|----|
| XRCGB | 33M868 | F0L00 | R0 |
| ①     | ②      | ③     | ④  |

① Series Name  
 ② Nominal Frequency  
 Frequency is expressed by six-digit alphanumeric.  
 (example: 33.8688MHz → **33M868**)  
 ③ Individual Specification  
 With standard products, Individual Specification is "F0L00".  
 ④ Packaging

### EU RoHS Compliant

- All the products in this catalog comply with EU RoHS.
- EU RoHS is "the European Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment."
- For more details, please refer to our website 'Murata's Approach for EU RoHS' (<http://www.murata.com/info/rohs.html>).

#### ⚠Note:

##### 1. Export Control

<For customers outside Japan>

No Murata products should be used or sold, through any channels, for use in the design, development, production, utilization, maintenance or operation of, or otherwise contribution to (1) any weapons (Weapons of Mass Destruction [nuclear, chemical or biological weapons or missiles] or conventional weapons) or (2) goods or systems specially designed or intended for military end-use or utilization by military end-users.

<For customers in Japan>

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

##### 2. Please contact our sales representatives or product engineers before using the products in this catalog for the applications listed below, which require especially high reliability for the prevention of defects which might directly damage a third party's life, body or property, or when one of our products is intended for use in applications other than those specified in this catalog.

- |                             |  |
|-----------------------------|--|
| ① Aircraft equipment        | ② Aerospace equipment  |
| ③ Undersea equipment        | ④ Power plant equipment  |
| ⑤ Medical equipment         | ⑥ Transportation equipment (vehicles, trains, ships, etc.)   |
| ⑦ Traffic signal equipment  | ⑧ Disaster prevention / crime prevention equipment   |
| ⑨ Data-processing equipment | ⑩ Application of similar complexity and/or reliability requirements to the applications listed above |

##### 3. Product specifications in this catalog are as of July 2012. They are subject to change or our products in it may be discontinued without advance notice.

Please check with our sales representatives or product engineers before ordering. If there are any questions, please contact our sales representatives or product engineers.

##### 4. Please read rating and ⚠CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

##### 5. This catalog has only typical specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

##### 6. Please note that unless otherwise specified, we shall assume no responsibility whatsoever for any conflict or dispute that may occur in connection with the effect of our and/or a third party's intellectual property rights and other related rights in consideration of your use of our products and/or information described or contained in our catalogs. In this connection, no representation shall be made to the effect that any third parties are authorized to use the rights mentioned above under licenses without our consent.

##### 7. No ozone depleting substances (ODS) under the Montreal Protocol are used in our manufacturing process.

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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