



SimSurfing IC-Timing Devise Search Tool Operation Manual

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Murata Manufacturing Co., Ltd



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1. About This Tool

1-1. Outline

- The IC-Timing Devices Search tool (hereinafter, “this tool”) performs a search operation to help you determine the part number of the Murata timing device that is most suitable for your IC and access information about the recommended circuit constant setting.

IC-Timing Device Search Tool English

MHz band Timing Devices kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer:

IC Part Number:

Oscillating Frequency: to MHz

Timing Device Part Number:

Search **Reset** **Manual**

[IC Manufacturer's top page](#) [IC Product Info.](#) [Stock Check \(Where to buy\)](#) [Contact us](#) [IC Matching Service Information](#)

[Murata Product Info.\(Web\)](#) [Circuit Info.](#) [Brochure \(PDF\)](#)

☒ Search Function On/Off [Save as CSV](#) ☒ CERALOCK ☒ SMD type ☒ Crystal Units ☒ LEAD type

Select P/N: **Items 40115**

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min.) | Op. Temp. (degC Max.) | Application |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|-----------------------|-----------------------|-------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 | 70 | Consumer |
| HD7xxx | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 | 70 | Consumer |
| SL16010 | AMD | XRCGB27M000F3M00R0 | 27 | +/-30ppm | 5 | 5 | Open | 0 | 3 | 3.6 | -30 | 85 | Consumer |
| AS3911 | ams | XRCGB27M120F3A00R0 | 27.12 | +/-30ppm | 8 | 8 | Open | 0 | 2.4 | 5.5 | -40 | 125 | Automotive |
| AT85C5121 | Atmel | CSTCC3M68G56-R0 | 3.686 | +/-0.5% | 47 | 47 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTCE12M0G52-R0 | 12 | +/-0.5% | 10 | 10 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTCE16M0V53-R0 | 16 | +/-0.5% | 15 | 15 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTCE8M00G52-R0 | 8 | +/-0.5% | 10 | 10 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTCR4M00G55-R0 | 4 | +/-0.5% | 39 | 39 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTLS3M68G56-B0 | 3.686 | +/-0.5% | 47 | 47 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTLS4M00G56-B0 | 4 | +/-0.5% | 47 | 47 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT85C5121 | Atmel | CSTLS8M00G53-B0 | 8 | +/-0.5% | 15 | 15 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |
| AT89C5131 | Atmel | CSTCE12M0G15L99-R0 | 12 | +/-0.1% | 33 | 33 | Open | 0 | 3 | 5.5 | 0 | 70 | Consumer |
| AT89C5131 | Atmel | CSTCE8M00G15L99-R0 | 8 | +/-0.1% | 33 | 33 | Open | 0 | 3 | 5.5 | 0 | 70 | Consumer |
| AT89C5131 | Atmel | CSTCR6M00G15L99-R0 | 6 | +/-0.1% | 39 | 39 | Open | 0 | 3 | 5.5 | 0 | 70 | Consumer |
| AT89C51D2 | Atmel | CSTCE12M0G55-R0 | 12 | +/-0.5% | 33 | 33 | Open | 0 | 2.7 | 5.5 | -40 | 85 | Consumer |
| AT89C51D2 | Atmel | CSTCE16M0V53-R0 | 16 | +/-0.5% | 15 | 15 | Open | 0 | 2.7 | 5.5 | -40 | 85 | Consumer |

1. About This Tool

1-2. Main Functions

- Using some or all of the following as the search keys, this tool performs a search operation to help you determine the part number of the timing device that is most suitable for the IC and access information about the recommended circuit constant setting:

<Search keys>

- IC manufacturer
- IC part number
- Timing device oscillation frequency
- Murata timing device part number

MHz band Timing DeviceskHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer

IC Part Number

Oscillating Frequency

☒ Range

to

MHz

☐ Value

MHz

Timing Device Part Number

Search

Reset

Manual

- This tool helps you access circuit matching data for any IC part number and timing device part number combination that you may select from the list of search results.
- This tool helps you access detailed specifications for any timing device part number that you may select from the list of search results.
- This tool helps you access the website of the IC manufacturer that you specify during the search to browse information. (Note, however, that this cannot be done in some exceptional cases.)

1. About This Tool

1-3. Product Coverage

- The table below lists the series designations of the timing devices that are covered by search operations performed using this tool:

| Type | | Series | For Consumer | For Automotive | Frequency Range |
|----------------|------|---------|--------------|----------------|---------------------|
| CERALOCK | SMD | CSTCC_G | ○ | ○ | 2.00 to 3.99MHz |
| | | CSTCR_G | ○ | ○ | 4.00 to 7.99MHz |
| | | CSTNR_G | ○ | ○ | |
| | | CSTCE_G | ○ | ○ | 8.00 to 13.99MHz |
| | | CSTNE_G | ○ | ○ | |
| | | CSTCE_V | ○ | ○ | 14.00 to 20.00MHz |
| | | CSTNE_V | ○ | ○ | |
| | Lead | CSTLS_G | ○ | × | 3.40 to 10.00MHz |
| | | CSTLS_X | ○ | × | 16.00 to 70.00MHz |
| Crystal Units | SMD | XRCFD | ○ | × | 24.000 to 29.000MHz |
| | | XRCMD | ○ | × | 30.000 to 48.000MHz |
| | | XRCGB | ○ | ○ | 24.000 to 50.000MHz |
| | | XRCHA | × | ○ | 16.000 to 24.000MHz |
| | | XRCHH | ○ | × | 16.000 to 52.000MHz |
| | | XRCJK | ○ | × | 12.000 to 52.000MHz |
| MEMS Resonator | SMD | WMRAG | ○ | × | 32.768kHz |

2.Quick Operation Guide

2-1. Start of This Tool

- Click the [IC-Timing Device Search Tool] on the top page of SimSurfing, the screen of this tool is displayed.

SimSurfing Design Support Software "SimSurfing" English **muRata**

Products page top | Design Tools page top

Characteristics Viewer

[Video] Attractions of SimSurfing
Videos to learn how SimSurfing can help you

Part Number Crossing Search

- Multilayer Ceramic Capacitors
- Three-terminal Capacitors
- Lead type Ceramic Capacitors
- Resin Molding SMD Type Ceramic Capacitors
- Polymer Capacitors
- RF Inductors
- Power Inductors
- Ferrite Beads
Noise filters for audio lines
Frequency Specified Filters
- Common mode Choke Coils

Selection Tools

[Video] Attractions of SimSurfing
Videos to learn how SimSurfing can help you

- Medium Voltage Capacitor Selection Tool
You can select the appropriate ceramic capacitors with rated voltage (250V or over) by your operating condition.
- DC-DC Converter Design Support Tool
You can select the appropriate power inductors/multilayer ceramic capacitor by your operating condition for DC-DC converters.
- Filter Design Tool
- NTC Thermistor Performance Simulator
- PTC Thermistor Performance Simulator

IC-Timing Device Search Tool

You can search the appropriate timing devices (CERALOCK or crystal units) for ICs.

English

MHz band Timing Devices kHz band Timing Devices

Help

* You Manual s (CERALOCK) and crystal units appropriate to matching
circuit Open Murata Web >

IC M Version

IC Part Number

Oscillating Frequency
Range to MHz
Value MHz

Timing Device Part Number

Search Reset Manual

IC Manufacturer's top page
Murata Product Info.(Web)
Circuit Info.
Brochure (PDF)

Stock Check (Where to buy)
Contact us
IC Matching Service Information

☒ Search Function On/Off Save as CSV

Select P/N: Items 40115

☒ CERALOCK ☒ SMD type
☒ Crystal Units ☒ LEAD type

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min.) |
|----------------|-----------------|-------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|-----------------------|
| | | | Oscillating | Frequency | | | | | | | |
| | | | ≤ 52 | ✓ (Select All) | | | | | | | Op. Temp. |
| | | | = | ✓ +/-0.07% | | | | | | | ✓ (Select) |
| | | | ≥ 2 | ✓ +/-0.1% | | | | | | | ✓ -10 |
| | | | | | | | | | | | ✓ -2 |

2. Quick Operation Guide

2-2. Screen Configuration (1/4)

(a) SimSurfing IC-Timing Device Search Tool English

(b) MHz band Timing Devices kHz band Timing Devices

(c) Help
* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer (d)

IC Part Number

Oscillating Frequency ☐ Range to MHz ☐ Value MHz

Timing Device Part Number

☒ Search Function On/Off ☒ CERALOCK ☒ SMD type ☒ Crystal Units ☒ LEAD type

Select P/N : Items 40115

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|----------------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 |

(a) Back to the top screen :

This button brings you back to the SimSurfing top screen.

(b) Switching function of MHz band and kHz band :

you can switch between MHz band and kHz band of Murata's timing devices using this tab.

(c) Menu bar "Help" :

"Manual" opens this manual.

"Version" displays the versions of the SimSurfing and the stored data.

"Open Murata Web" takes you to the Murata website.

(d) Search key fields :

These fields accept the entry of the search keys used for the determination of IC part number and Murata timing device part number combinations.

(Please refer to the "3. Details of operation" for the search condition.)

2. Quick Operation Guide

2-2. Screen Configuration (2/4)

IC-Timing Device Search Tool

English

MHz band Timing Devices kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer:

IC Part Number:

Oscillating Frequency: ☐ Range to MHz ☐ Value MHz

Timing Device Part Number:

Search (e) Reset (f) Manual

IC Manufacturer's top page IC Product Info. Murata Product Info.(Web) Circuit Info. Brochure (PDF)

Stock Check (Where to buy) Contact us IC Matching Service Information

☒ Search Function On/Off (i) ☒ CERALOCK ☒ SMD type ☒ Crystal Units ☒ LEAD type

Select P/N: (h) Items 40115

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min.) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|-----------------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 |

(e) Search :

Clicking this button instructs the tool to perform a search operation using the specified keys to find relevant combinations of IC part number and timing device part number. A list display of search results (g) will appear.

(f) Reset :

Clicking this button clears the search results and search keys.

(g) List display of IC part number and Murata timing device part number combinations :

The list displays the IC part number and Murata timing device part number combinations determined by the search.

(h) Select P/N :

This field displays the timing device part number selected from the list display of IC part number and Murata timing device part number combinations (g).

(i) Narrowed-down search for CERALOCK / Crystal units :

These check boxes allow you to include only the CERALOCK units or the Crystal units in the list display of IC part number and Murata timing device part number combinations (g).

2. Quick Operation Guide

2-2. Screen Configuration (3/4)

IC-Timing Device Search Tool

English

MHz band Timing Devices kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer: [Dropdown]
IC Part Number: [Dropdown]
Oscillating Frequency: ☐ Range [] to [] MHz ☐ Value [] MHz
Timing Device Part Number: [Text]

Search Reset Manual (I)

IC Manufacturer's top page IC Product Info.
Murata Product Info.(Web)
Circuit Info.
Brochure (PDF)

Stock Check (Where to buy)
Contact us
IC Matching Service Information

☒ Search Function On/Off Save as CSV (k)
Select P/N: [Text] Items 40115
☒ CERALOCK ☒ SMD type (j)
☒ Crystal Units ☒ LEAD type

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min.) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|-----------------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 |

(j) Narrowed-down search for SMD type / LEAD type :

These check boxes allow you to include only "SMD type" or "LEAD type" in the list display of IC part number and Murata timing device part number combinations (g).

(k) Save as CSV file :

Clicking this button allows you to save data in the list display of part number combinations to a CSV file.

| Murata Products List 2019/7/24 | | | | | | | | | | | |
|--|--------|----------|-------------|----------------|----------|----------|----------|---------|--------------|-------------|--|
| Category:タイミングデバイス | | | | | | | | | | | |
| Selected conditions: (水晶振動子) AND (SMD type OR LEAD type) | | | | | | | | | | | |
| IC品名 | ICメーカー | 品番 | 発振周波数 | 周波数許容率CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC電圧(V) | IC電圧(V) Min. | 使用温度 (使用温度) | |
| HD7790 | AMD | XRCGB27M | 27 +/-25ppm | 18 | 18.1M | 0 | 108 | 13.2 | -10 | 70 Consumer | |
| HD7xxx | AMD | XRCGB27M | 27 +/-25ppm | 18 | 18.1M | 0 | 108 | 13.2 | -10 | 70 Consumer | |

(I) Manual :

Clicking this button displays a popup window shown below presenting cautions about IC part number and timing device part number combinations. Please read them carefully.

2. Quick Operation Guide

2-2. Screen Configuration (4/4)

IC-Timing Device Search Tool

English

MHz band Timing Devices kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer:

IC Part Number:

Oscillating Frequency: ☐ Range to MHz ☐ Value MHz

Timing Device Part Number:

Search Reset Manual

IC Manufacturer's top page (m) IC Product Info. (q)

Murata Product Info.(Web) (n)

Circuit Info. (o)

Brochure (PDF) (p)

Stock Check (Where to buy)

Contact us

IC Matching Service Information

☒ Search Function On/Off ☒ CERALOCK ☒ SMD type ☒ Crystal Units ☒ LEAD type

Select P/N: Items 40115

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Mir) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|----------------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 |

(m) IC Manufacturer's website :

This button takes you to the website of the IC manufacturer for the IC part number currently selected in the list display (g).

(n) Product Info. (Web) or Reference SPEC (PDF) :

This button opens the detailed product information page in our web catalog for the timing device part number currently selected in the list display (g). In the case of unpublished on our website, opens a PDF data about detailed product information.

(o) Circuit Info. :

This button opens a data file containing information about the recommended circuit constant setting for the IC part number and timing device part number combination currently selected in the list display (g).

(p) Brochure (PDF) :

This button opens an application note about the recommended circuit constant setting for the IC part number and timing device part number combination currently selected in the list display (g).

(q) IC Product Info. :

This button opens an IC information file or an IC information web site of IC maker about the recommended circuit constant setting for the IC part number and timing device part number combination currently selected in the list display (g).

2. Quick Operation Guide

2-3. Basic Operations (1/3)

1. Input search conditions to the **area (1)**.

The screenshot shows the 'IC-Timing Device Search Tool' interface. On the left, there are input fields for 'IC Manufacturer', 'IC Part Number', 'Oscillating Frequency' (with 'Range' and 'Value' options), and 'Timing Device Part Number'. A red circle labeled (1) highlights this entire input area. To the right of these fields are 'Search', 'Reset', and 'Manual' buttons. Further right are links for 'IC Manufacturer's top page', 'Murata Product Info.(Web)', 'Circuit Info.', and 'Brochure (PDF)'. Below the input fields, there are checkboxes for 'Search Function On/Off', 'CERALOCK', 'Crystal Units', 'SMD type', and 'LEAD type'. At the bottom left, there is a 'Select P/N' dropdown menu.

<Search conditions>

- **IC Manufacturer** : Select one from the pull-down menu.
- **IC Part Number** : Enter the part number of an IC for which you are looking for a timing device to be used with.
- **Oscillating Frequency** : Specify the desired oscillation frequency or the desirable range of oscillation frequency.
- **Timing Device Part Number** : You may specify the target timing device part number or use a part of timing device part number as a search key.

(Please refer to the "3. Details of operation" for the search condition.)

2. Quick Operation Guide

2-3. Basic Operations (2/3)

2. Click the (2) [Search] button, the search results are displayed on the (3) part number list.

The screenshot shows the 'IC-Timing Device Search Tool' interface. It includes search filters for IC Manufacturer, IC Part Number, Oscillating Frequency (Range or Value), and Timing Device Part Number. A 'Search' button is highlighted with a red circle and labeled (2). Below the search filters, there are checkboxes for 'Search Function On/Off', 'CERALOCK', 'Crystal Units', 'SMD type', and 'LEAD type'. A 'Select P/N' field shows 'Items 40115'. The search results are displayed in a table with columns: IC Part Number, IC Manufacturer, Part Number, Osc. Freq. (MHz), Frequency Tolerance, and CL1 (pF). The table is highlighted with a red circle and labeled (3).

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| HD7xxx | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| SL16010 | AMD | XRCGB27M000F3M00R0 | 27 | +/-30ppm | 5 |
| AS3911 | ams | XRCGB27M120F3A00R0 | 27.12 | +/-30ppm | 8 |
| AT85C5121 | Atmel | CSTCC3M68G56-R0 | 3.686 | +/-0.5% | 47 |

You may add or modify the search keys to narrow down the search results concerning the IC part number and timing device part number combinations.

2. Quick Operation Guide

2-3. Basic Operations (3/3)

3. If a (3) part number list display of search results does not appear after clicking the (2) [Search] button, click the (4) [Reset] button to clear the search keys. Redefine your search using less keys and click the (2) [Search] button again.

The screenshot shows the 'IC-Timing Device Search Tool' interface. It has two tabs: 'MHz band Timing Devices' (selected) and 'kHz band Timing Devices'. The search criteria section includes fields for 'IC Manufacturer', 'IC Part Number', 'Oscillating Frequency' (with 'Range' and 'Value' options), and 'Timing Device Part Number'. To the right of these fields are buttons for 'Search' (annotated with (2)), 'Reset' (annotated with (4)), and 'Manual'. Below the search criteria, there are checkboxes for 'Search Function On/Off', 'CERALOCK', 'Cryst', 'SMD type', and 'SMD type'. A 'Select P/N' field shows 'Items 40115'. The bottom section is a table of search results, which is annotated with (3). The table has columns: 'IC Part Number', 'IC Manufacturer', 'Part Number', 'Osc. Freq. (MHz)', 'Frequency Tolerance', and 'CL1 (pF)'. The results list several parts from manufacturers like AMD, ams, and Atmel.

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) |
|----------------|-----------------|--------------------|------------------|---------------------|----------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| HD7xxx | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| SL16010 | AMD | XRCGB27M000F3M00R0 | 27 | +/-30ppm | 5 |
| AS3911 | ams | XRCGB27M120F3A00R0 | 27.12 | +/-30ppm | 8 |
| AT85C5121 | Atmel | CSTCC3M68G56-R0 | 3.686 | +/-0.5% | 47 |

3. Details of Operation

3-1. Setting of the Search Condition

SimSurfing IC-Timing Device Search Tool

MHz band Timing Devices kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer

IC Part Number

Oscillating Frequency ☒ Range ☐ Value

Timing Device Part Number

Search

Reset

<Details of the search condition>

- **IC Manufacturer :**
Select one from the pull-down menu.
- **IC Part Number :**
Enter the part number of an IC for which you are looking for a timing device to be used with.
It is possible to search by partial IC part number.
The "μ" (micro) character is replaced with "u" (small character).
Please enter small "u" instead. Also please note only capital "U" should be used when alphabetical "U" is the key to search.
- **Oscillating Frequency :**
Specify the desired oscillation frequency or the desirable range of oscillation frequency. Select a frequency or frequency range using the radio buttons and then enter value(s) into the field(s).
- **Timing Device Part Number :**
You may specify the target timing device part number or use a part of timing device part number as a search key.

3. Details of Operation

3-2. Search Condition of Timing Devices

- This (5) search conditions of timing device allow you to more narrow down the (3) part number list.

- **Osc. Freq. :**
This item allows you to narrow down the list by frequency range.
- **Frequency Tolerance :**
These check boxes allow you to narrow down the list by the frequency tolerance.
- **Op. Temp. (degC Min.) :**
These check boxes allow you to narrow down the list by the minimum value of operating temperature.
- **Op. Temp. (degC Max.) :**
These check boxes allow you to narrow down the list by the maximum value of operating temperature.
- **Application :**
These check boxes allow you to include only “for Automotive” or “for Consumer” in the list.

Search Function On/Off ☒ **Save as CSV** ☒ CERALOCK ☒ SMD type ☒ LEAD type

Select P/N : **Items 40115**

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) | CL2 (pF) | Rf (ohm) | Rd (ohm) | IC vol. (V Min.) | IC vol. (V Max.) | Op. Temp. (degC Min.) | Op. Temp. (degC Max.) | Application |
|----------------|-----------------|--------------------|------------------|---------------------|----------|----------|----------|----------|------------------|------------------|-----------------------|-----------------------|-------------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 | 70 | Consumer |
| HD7xxx | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 | 18 | 1M | 0 | 10.8 | 13.2 | -10 | 70 | Consumer |
| SL16010 | AMD | XRCGB27M000F3M00R0 | 27 | +/-30ppm | 5 | 5 | Open | 0 | 3 | 3.6 | -30 | 85 | Consumer |
| AS3911 | ams | XRCGB27M120F3A00R0 | 27.12 | +/-30ppm | 8 | 8 | Open | 0 | 2.4 | 5.5 | -40 | 125 | Automotive |
| AT85CS121 | Atmel | CSTCC3M68G56-R0 | 3.686 | +/-0.5% | 47 | 47 | Open | 0 | 2.85 | 5.4 | -40 | 85 | Consumer |

3. Details of Operation

3-3. Save the Part Number List as CSV File

- Clicking the (6) [Save as CSV] button allows you to save the list indicated on the (3) part number list to a CSV file.

IC-Timing Device Search Tool

MHz band Timing Devices | kHz band Timing Devices

Help

* You can search for ceramic resonators (CERALOCK) and crystal units appropriate to matching circuits with ICs

IC Manufacturer:

IC Part Number:

Oscillating Frequency: ☐ Range to MHz ☐ Value MHz

Timing Device Part Number:

Search **Reset** **Manual**

IC Manufacturer's top page [↗](#)

Murata Product Info.(Web) [↗](#)

Circuit Info. [↗](#)

Brochure (PDF) [↗](#)

☒ Search Function On/Off **Save as CSV** [↓](#)

Select P/N : **Items 40115**

☒ CERALOCK ☒ SMD type
☒ Crystal Units ☒ LEAD type

Oscillating Frequency: ☐ ≤ 52 ☐ = ☐ ≥ 2

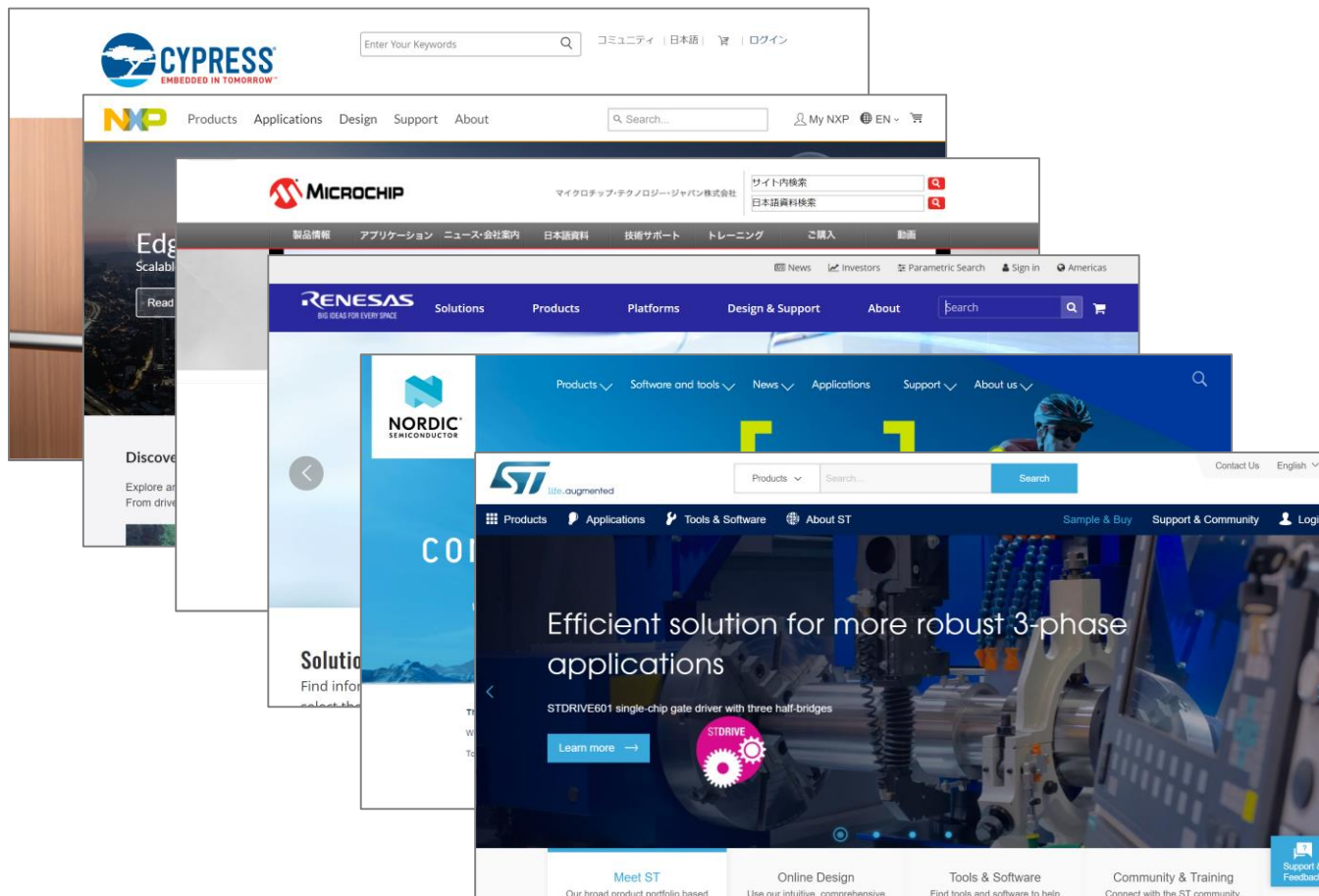
Frequency: ☒ (Select All) ☐ +/-0.07% ☒ +/-0.1%

| IC Part Number | IC Manufacturer | Part Number | Osc. Freq. (MHz) | Frequency Tolerance | CL1 (pF) |
|----------------|-----------------|------------------------------------|------------------|---------------------|----------|
| HD7790 | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| HD7xxx | AMD | XRCGB27M000FAN16R0 | 27 | +/-25ppm | 18 |
| SL16010 | AMD | XRCGB27M000F3M00R0 | 27 | +/-30ppm | 5 |
| AS3911 | ams | XRCGB27M120F3A00R0 | 27.12 | +/-30ppm | 8 |
| AT85C5121 | Atmel | CSTCC3M68G56-R0 | 3.686 | +/-0.5% | 47 |

Appendix

Examples of Published Materials (1/3)

- ✓ (m) Examples of the linked IC manufacturers' websites



Appendix

Examples of Published Materials (2/3)

✓ (n) Example of Product Info. (Web)

Home > Products > Product Details

Please be sure to read these general terms of use, before using this product.

XRCGB24M000F0L00R0

Timing Devices > Ceramic Resonators/Crystal Units/MEMS Resonators

In Production

Ready to Ship

[Send your inquiry ?](#)

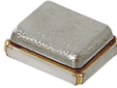
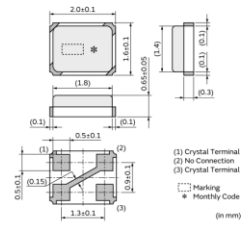
[Specs free sample request](#)

[Stock Check \(Where to buy\)](#)

[Download a PDF file of this page](#)

[How to read part numbers](#)

Appearance & Shape

(1) Crystal Terminal
(2) No Connection
(3) Crystal Terminal

Marking
Monthly Code
(in mm)

Specifications

| | |
|------------------------------------|-----------------------|
| Product Type | Crystal Unit |
| Series | XRCGB |
| Type | HCR2016 |
| Frequency | 24.0000MHz |
| Frequency Tolerance | ±100ppm max. (25±3°C) |
| Operating Temperature Range | -30°C to 85°C |
| Frequency Shift by Temperature | ±1.50ppm max. |
| Frequency Aging | ±1.50ppm max. |
| Equivalent Series Resistance (ESR) | 150ohm max. |
| Drive Level (DL) | 150µW (300µW max.) |
| Load Capacitance (CL) | 8pF |
| Shape | SHD |
| Wash | Not available |
| L x W (size) | 2.0x1.6mm |

Features

The crystal unit that realized small package and highly accurate frequency. Based on Murata's excellent package technology and high grade quartz crystal elements, achieving small size and high accuracy resonators.

Features

1. The series is available in the applications to be necessary for high accuracy resonator. Especially, it is the best for the communication clocks such as 5-A3A and U3B2.0.
2. The resonator is extremely small size (2.0 x 1.6 x 0.7 (mm)), and contribute to reduction in mounting area.
3. The series complies to RoHS directive, being lead-free (phase 3).

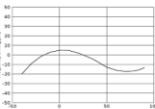
Applications

Other Usage: Consumer

Packaging Information

| Packaging | Specifications | Minimum Order Quantity |
|-----------|--------------------|------------------------|
| RD | 120mm Plastic Tape | 3000 |

Product Data



Temperature Characteristics

Appendix

Examples of Published Materials (3/3)

✓ (o) Example of Circuit Info.

