

# Murata Timing Devices

Ceramic Resonator	Crystal Unit (Resin sealed)	Crystal Unit (Metal sealed)	TCXO
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## ● For General Usage



	Size	Series	Image	Oscillation Frequency [MHz]					Tolerance [ppm] ※					
				10	20	30	40	50	1	10	100	1000		
Consumer / Industrial	2520	CSTCW_X												
	3213	CSTCE_V												
	3213	CSTCE_G												
	4520	CSTCR_G												
	7230	CSTCC_G												
	2016	XRCGB_F_P												
	2016	XRCGB_F_L/Z												
	2520	XRCHA_F_L/Z												
	2520	XRCHH												
	3225	XRCJH												
	5032	XRCLH												
WiFi / BT	1612	XRCFD												
	1612	XRCMD												
GPS Small cell	2520	XNCHH / XTCHH												
	3225	XNCJH / XTCJH												
	5032	XTCLH_E												
	5032	XTCLH_J												

※Initial tolerance + Frequency Shift by Temperature

## ● For Automotive Usage



	Size	Series	Image	Oscillation Frequency [MHz]					Tolerance [ppm] ※					
				10	20	30	40	50	1	10	100	1000		
Automotive ECU	3213	CSTCE_V13C												
	3213	CSTCE_G15C												
	4520	CSTCR_G15C												
Car multimedia	2520	CSTCW_X11C												
	2016	XRCGB_F_G												
ADAS	2016	XRCGB_F_A												
	2520	XRCHA_F_A												

※Initial tolerance + Frequency Shift by Temperature

● You can get more information about Timing Devices by visiting the URL below or right QR code.  
<http://www.murata.com/en-global/products/timingdevice>

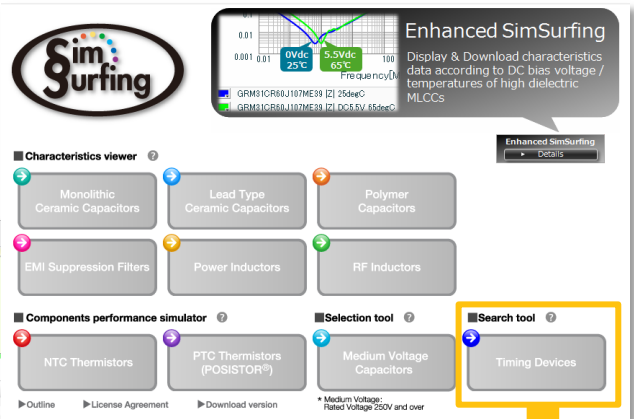
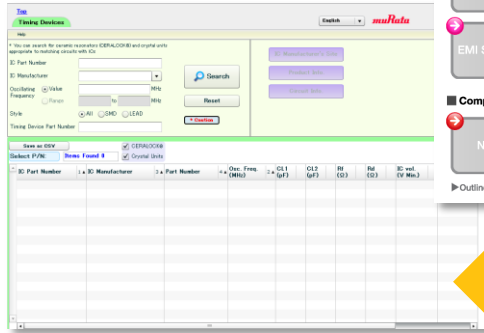
● IC vs Timing Device matching can be referred by "SimSurfing"  
<http://www.murata.com/simsurf/ic-td/>



## ● IC Part Number –Timing Devices Search

Search for Timing Devices by IC part number or search for IC part number by Timing Devices on our website. It is possible to search by either oscillating frequency or frequency range, too.

<http://www.murata.com/simsurf/ic-td/>



## ● Murata Sound Components



Piezoelectric Sound Components utilize natural oscillation of piezoelectric ceramics. They are widely used in the applications from consumer products to automotive and industrial equipment.

Type	Part Number	Size (mm)	Appearance ※	Sound Pressure Level (dB)
Piezoelectric Diaphragms	7BB-20-6	φ20×0.42		—
Piezoelectric Sounders (Pin Type)	PKM13EPYH4000-A0	φ12.6×6.9		70 (min.) [±1.5Vo-p, 4kHz, Square Wave, 10cm]
	PKM17EPP-2002-B0	φ17×9.8		70 (min.) [3Vo-p, 2kHz, Square Wave, 10cm]
	PKM22EPPH2002-B0	φ22×12		70 (min.) [±1.5Vo-p, 2kHz, Square Wave, 10cm]
	PKM22EPPH4012-B0	φ22×12		85 (min.) [±1.5Vo-p, 4kHz, Square Wave, 10cm]
Piezoelectric Sounders (SMD Type)	PKMCS0909E4000-R1	9×9×1.9		65 (min.) [±1.5Vo-p, 4kHz, Square Wave, 10cm]
	PKLCS1212E2000-R1 (For Consumer)	12×12×3		70 (min.) [±1.5Vo-p, 2.0kHz, Square Wave, 10cm]
	PKLCS1212E20A0-R1 (For Automotive)	12×12×3		75 (min.) [±1.5Vo-p, 2.4kHz, Square Wave, 10cm]
	PKLCS1212E2400-R1 (For Consumer)	12×12×3		75 (min.) [±1.5Vo-p, 2.4kHz, Square Wave, 10cm]
	PKLCS1212E24A0-R1 (For Automotive)	12×12×3		75 (min.) ±1.5Vo-p, 4kHz, Square Wave, 10cm]
	PKLCS1212E4001-R1 (For Consumer)	12×12×3		75 (min.) ±1.5Vo-p, 4kHz, Square Wave, 10cm]
	PKLCS1212E40A1-R1 (For Automotive)	12×12×3		75 (min.) ±1.5Vo-p, 4kHz, Square Wave, 10cm]

※ It is not size of the original.

● You can get more information about Sound Components by visiting the URL below or right QR code.  
<http://www.murata.com/en-global/products/sound>



## ● My Murata®

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<https://my.murata.com>

