

SG-8002CA/CE Recommended Alternative (5.0V)

September 10th, 2025

SEIKO EPSON CORPORATION

MICRODEVICES Operations Division.

MD Production Control & Procurement Dept.

The information contained herein is subject to change without notice.

Schedule (5.0V)

	CY25	CY26	CY27	CY28
SG-8002CA/CE (3.3V/5V)	<ul style="list-style-type: none">● September / EOL notice● 15th of December / Submit required information		<ul style="list-style-type: none">● End of March / Last time buy● End of September / Last shipment	
Recommended Alternative SG-8202CA/CE (3.3V/5V)			<div>February / ES sample</div> <div>June / MP start</div>	

Comparison of specifications

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	Epson SG-8002CA/CE	Epson SG-8202CA/CE
PKG size	7050 / 3225	7050 / 3225
Fixed or PLL	PLL	PLL
IC supplier	Third party sourcing	Internal
Output frequency	1 to 125 MHz	1 to 170 MHz
Frequency tolerance	± 50 , $\pm 100 \times 10^{-6}$ / -20 to $+70$ °C $\pm 100 \times 10^{-6}$ / -40 to $+85$ °C	$\pm 25 \times 10^{-6}$ / -40 to $+85$ °C $\pm 50 \times 10^{-6}$ / -40 to $+105$ °C $\pm 100 \times 10^{-6}$ / -40 to $+105$ °C
Power supply voltage	5/3.3 V	5/3.3/2.5 V
Current consumption(Max.) 5V, No load	40 mA Max. (CE, 125 MHz) 45 mA Max. (CA, 125 MHz)	40 mA Max. (f0 = 125 MHz)
Output waveform	CMOS / TTL	CMOS / TTL
Phase jitter 12kHz-20MHz	175 ps Typ. (5V, 125 MHz)	5 ps Typ. (5 V, 125 MHz)

■ Feature

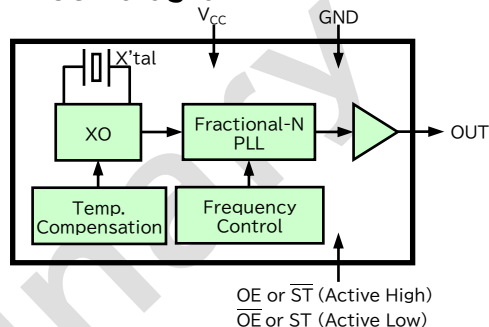
- **Low noise Fractional PLL technology** support **any frequency** between 1.0 MHz and 170 MHz with quick turn-around time
- $\pm 25 \times 10^{-6}$ (up to +85 °C) / $\pm 50, \pm 100 \times 10^{-6}$ (up to +105 °C) with **Temperature compensation function**

■ Specifications

Item	Specifications
Frequency (fo)	1.0 MHz to 170 MHz
Output	CMOS / TTL
Supply voltage (V _{CC})	2.25 V to 5.5 V
Frequency tolerance / Operating temperature	$\pm 25 \times 10^{-6}$ / -40 °C to +85 °C $\pm 50, \pm 100 \times 10^{-6}$ / -40 °C to +105 °C Including includes Initial frequency tolerance, Frequency / temperature characteristics, Frequency / voltage coefficient, Frequency / load coefficient, and Aging (+25 °C, First year)
Current consumption (No load)	40 mA Max. (fo = 125 MHz)
Symmetry	45 % to 55 % / 40 % to 60 % compatible with that defined for SG-8002Cx series
Phase jitter (@5V, 125 MHz)	5 ps Typ. / 12 kHz to 20 MHz
Function	Output enable or Stand-by

*1 Please select the "Output enable" function to use pin #1 in the "open" condition. Other than that, this product is pin compatible with SG-8002Cx series.

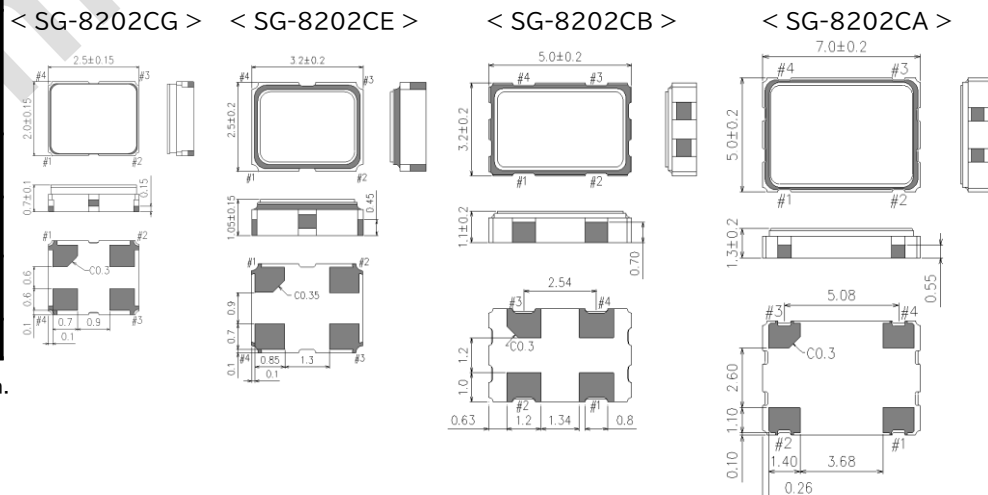
■ Block diagram



■ Pin map

#1	OE or \overline{ST} (Active High) ST or \overline{OE} (Active Low)
#2	GND
#3	OUT
#4	V _{CC}

■ External dimension (unit in mm)



Pin description

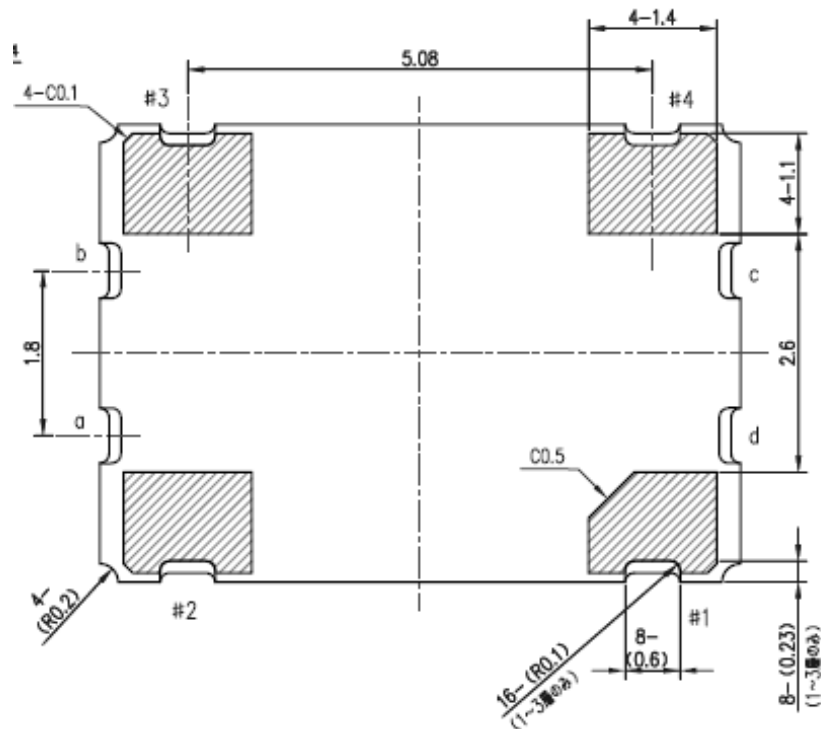
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Function		#1 pin	SG-8002CA/CE	SG-8202CA/CB/CE/CG
Active high	OE	High	Specified frequency output from OUT pin	Specified frequency output from OUT pin OUT pin is selectable (High impedance/Weak pull down)
		Open		
		Low	Out pin is low (weak pull down), only output driver is disabled.	
	$\overline{\text{ST}}$	High	Specified frequency output from OUT pin	Specified frequency output from OUT pin
		Open		Please select the "Output enable" function to use pin #1 in the "open" condition
		Low	Out pin is low (weak pull down), Device goes to standby mode. Supply current reduces to the least as I_std	Out pin is low (weak pull down), Device goes to standby mode. Supply current reduces to the least as I_std
Active low	$\overline{\text{OE}}$	High	No active low function	OUT pin is selectable (High impedance/Weak pull down)
		Open		Specified frequency output from OUT pin
		Low		
	ST	High		Out pin is low (weak pull down), Device goes to standby mode. Supply current reduces to the least as I_std
		Open		Please select the "Output enable" function to use pin #1 in the "open" condition
		Low		Specified frequency output from OUT pin

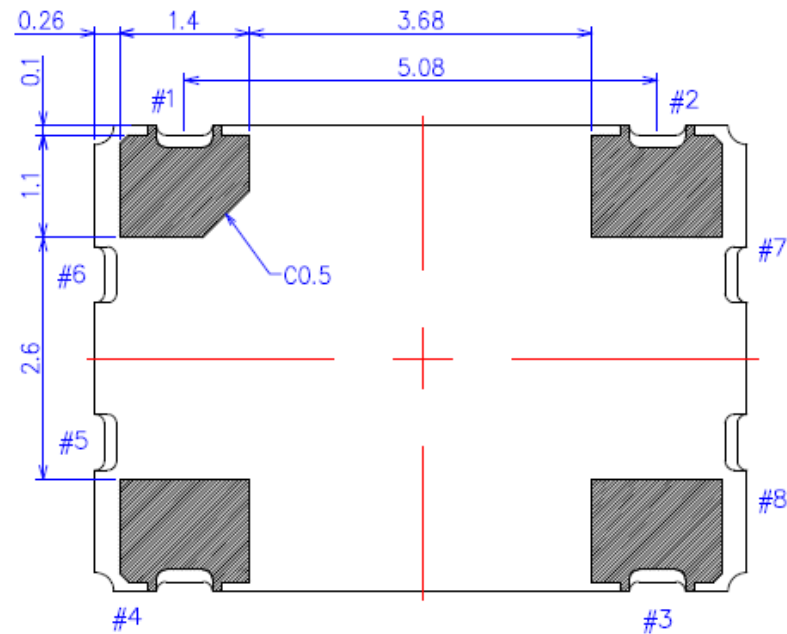
External dimensions (7050 size)

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■ SG-8002CA



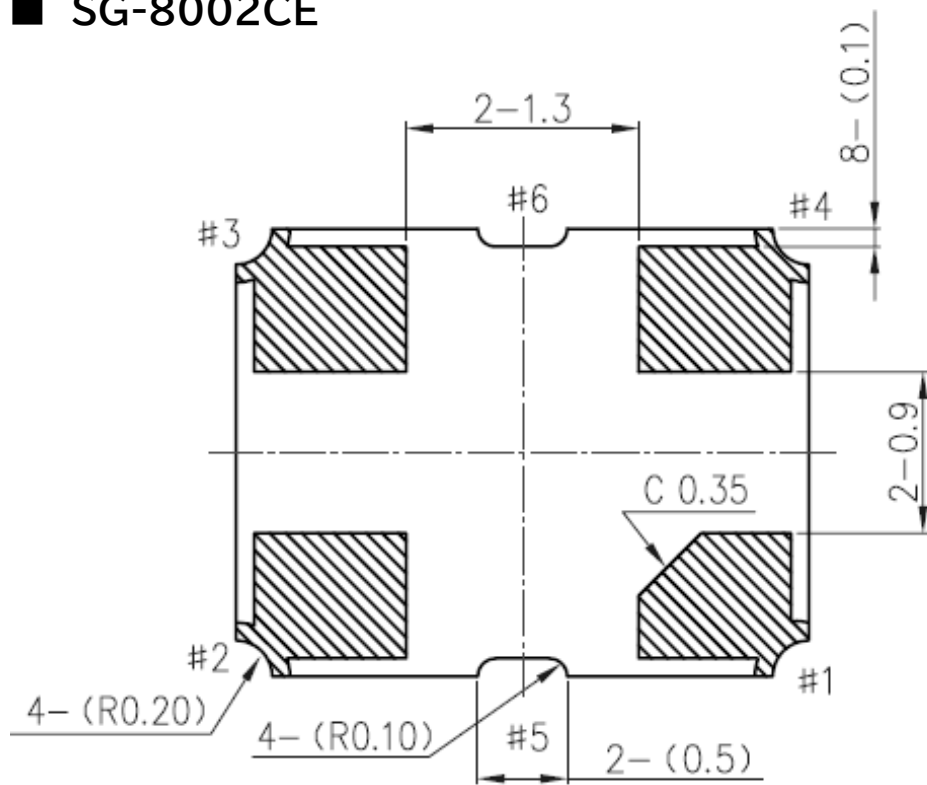
■ SG-8202CA



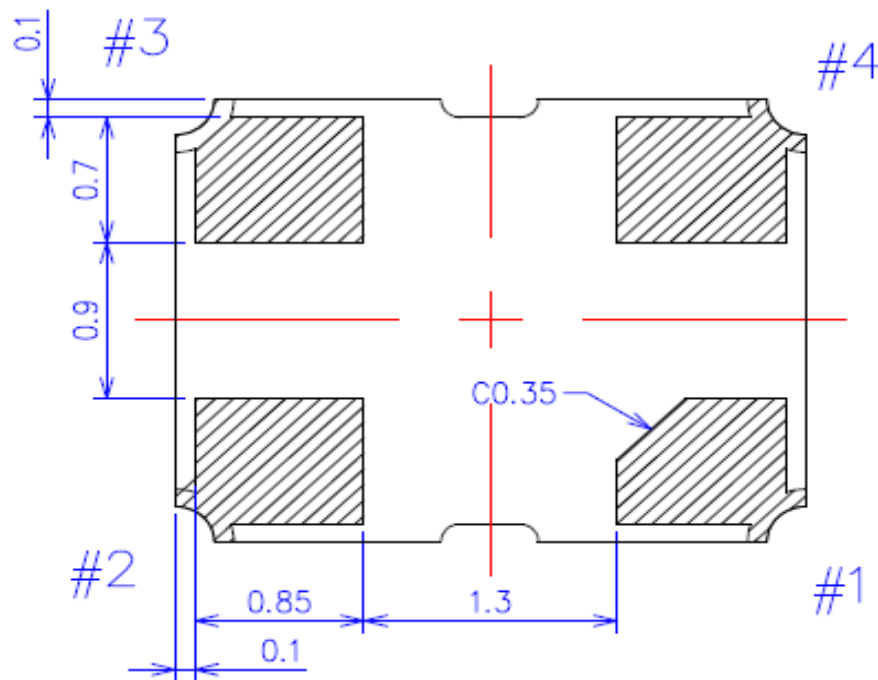
External dimensions (3225size)

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■ SG-8002CE



■ SG-8202CE



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