

7311S

Simple Packaged Crystal Oscillator (SPXO)

■ Main Application

For SONET-, SDH-, and GbEthernet-related equipment

■ Features

- Differential Output SPXO
- Low power supply voltage (+2.5V)
- Output Specification : LVDS
- Low phase jitter : Max. 1ps



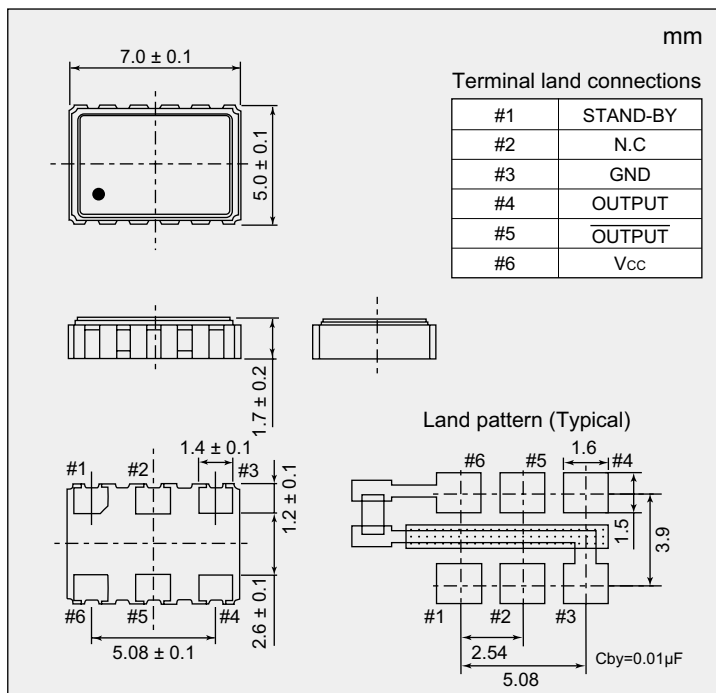
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RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

Item	Model Classification		7311S		
	GG-255R	GG-505X	GG-104X	GG-505P	GG-104P
Nominal Frequency Range (MHz)	62.5 to 220				
Supply Voltage [V _{cc}] (V)	+2.5 ± 5 %				
Load Resistance (Ω)	100 (Pad #4, #5)				
Current Consumption	During Operation (mA)		Max. 60 (Typ. 43)		
	During Standby (μA)		Max. 30		
Output Specification	LVDS (Complementary)				
Operating temperature range (°C)	0 to +70	0 to +85		-40 to +85	
Storage Temperature Range(°C)	-55 to +125				
Frequency Tolerance	Max. ±25 × 10 ⁻⁶	Max. ±50 × 10 ⁻⁶	Max. ±100 × 10 ⁻⁶	Max. ±50 × 10 ⁻⁶	Max. ±100 × 10 ⁻⁶
Symmetry (%)	45 to 55 (at 50% Waveform)				
Phase Jitter [RMS] (ps)	Max. 1 (12 kHz to 20 MHz)				
Stand-by function [Three-state]	Available				
Specification Number	NSA3344D	NSA3345D	NSA3346D	NSA3345M	NSA3346M

■ Dimensions



■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H (V _{IH} ≥ 0.7 V _{cc}) or OPEN	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{cc})	High impedance

Please specify the model name, frequency, and specification number when you order products.
For further questions regarding specifications, please feel free to contact us.

7311S

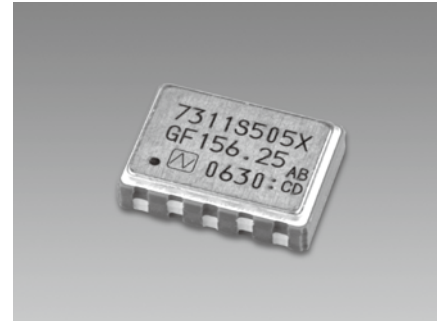
Simple Packaged Crystal Oscillator (SPXO)

■ Main Application

For SONET-, SDH-, and GbEthernet-related equipment

■ Features

- Differential Output SPXO
- Low power supply voltage (+3.3V)
- Output Specification LVDS
- Low phase jitter : Max. 1ps



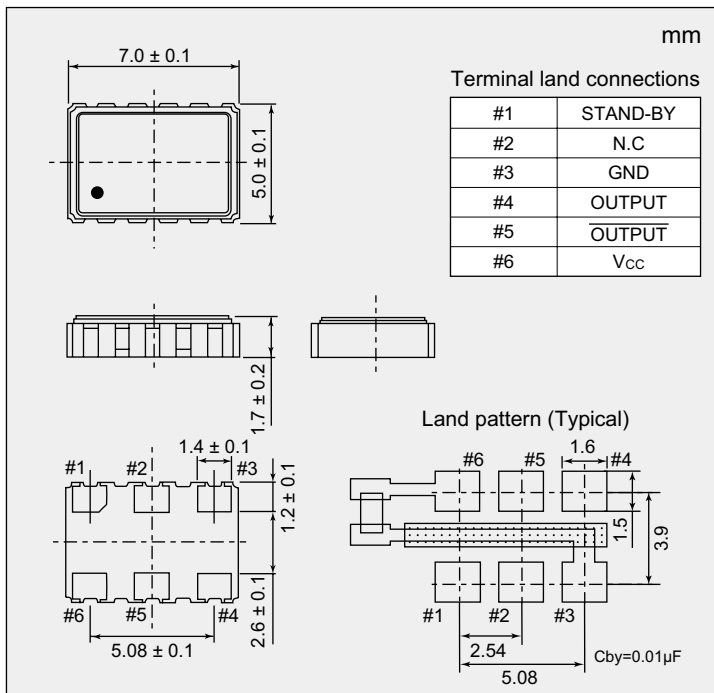
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Directive (EU) 2015/863

■ Specifications

Item	Model		7311S		
	Classification	DG-255R	DG-505X	DG-104X	DG-505P
Nominal Frequency Range (MHz)	62.5 to 220				
Supply Voltage [V _{CC}] (V)	+3.3 ± 10 %				
Load Resistance (Ω)	100 (Pad #4 - #5)				
Current Consumption	During Operation (mA)		Max. 60 (Typ. 43)		
	During Standby (μA)		Max. 30		
Output Specification	LVDS (Complementary)				
Operating Temperature Range (°C)	0 to +70	0 to +85		-40 to +85	
Storage Temperature Range (°C)	-55 to +125				
Frequency Tolerance	Max. ±25×10 ⁻⁶	Max. ±50 ×10 ⁻⁶	Max. ±100 ×10 ⁻⁶	Max. ±50 ×10 ⁻⁶	Max. ±100 ×10 ⁻⁶
Symmetry (%)	45 to 55 (at 50% Waveform)				
Phase Jitter [RMS] (ps)	Max. 1 (12 kHz to 20 MHz)				
Stand-by function [Three-state]	Available				
Specification Number	NSA3344C	NSA3345C	NSA3346C	NSA3345L	NSA3346L

■ Dimensions



■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H (V _{IH} ≥ 0.7 V _{CC}) or OPEN	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{CC})	High impedance

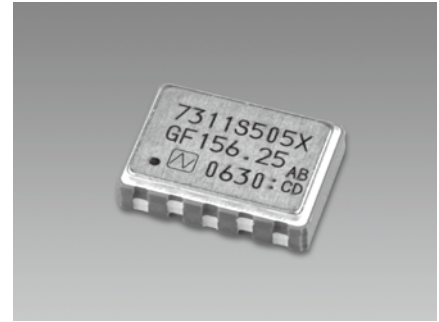
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■ Main Application

For SONET-, SDH-, and GbEthernet-related equipment

■ Features

- Differential Output SPXO
- Low power supply voltage (+2.5 V)
- Output Specification : LVPECL
- Low phase jitter : Max. 1ps



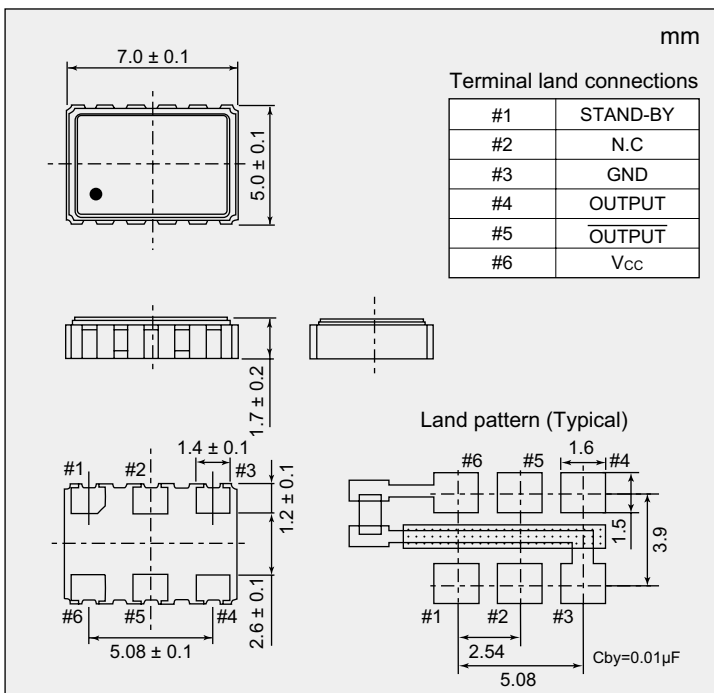
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Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

Item	Model Classification	7311S				
		GF-255R	GF-505X	GF-104X	GF-505P	GF-104P
Nominal Frequency Range (MHz)		62.5 to 220				
Supply Voltage [V _{cc}] (V)		+2.5 ± 5 %				
Load Resistance (Ω)		50 (to V _{cc} -2.0 V)				
Current Consumption	During Operation (mA)	Max. 88 (Typ. 55 mA)				
	During Standby (μA)	Max. 30				
Output Specification		LVPECL (Complementary)				
Operating Temperature Range (°C)		0 to +70	0 to +85		-40 to +85	
Storage Temperature Range (°C)		-55 to +125				
Frequency Tolerance		Max. ±25×10 ⁻⁶	Max. ±50 × 10 ⁻⁶	Max. ±100 × 10 ⁻⁶	Max. ±50 × 10 ⁻⁶	Max. ±100 × 10 ⁻⁶
Symmetry (%)		45 to 55 (at 50% Waveform)				
Phase Jitter [RMS] (ps)		Max. 1 (12 kHz to 20 MHz)				
Stand-by function [Three-state]		Available				
Specification Number		NSA3344B	NSA3345B	NSA3346B	NSA3345K	NSA3346K

■ Dimensions



■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H (V _{IH} ≥ 0.7 V _{cc}) or OPEN	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{cc})	High impedance

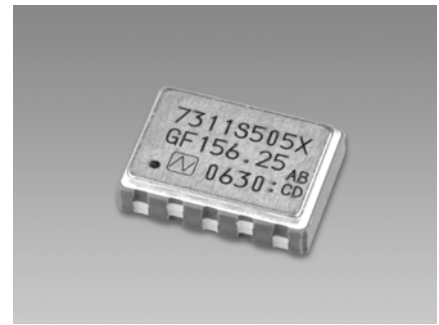
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■ Main Application

For SONET-, SDH-, and GbEthernet-related equipment

■ Features

- Differential Output SPXO
- Low power supply voltage (+3.3 V)
- Output Specification : LVPECL
- Low phase jitter : Max. 1ps



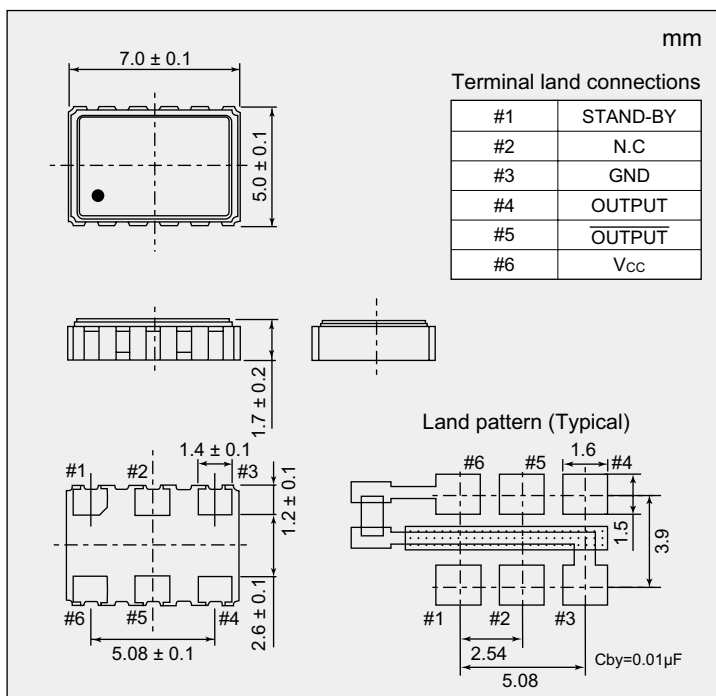
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Directive (EU) 2015/863

■ Specifications

Item	Model		7311S		
	Classification	DF-255R	DF-505X	DF-104X	DF-505P
Nominal Frequency Range (MHz)	62.5 to 220				
Supply Voltage [V _{CC}] (V)	+3.3 ± 10 %				
Load Resistance (Ω)	50 (to V _{CC} -2.0 V)				
Current Consumption	During Operation (mA)	Max. 90 (Typ. 60)			
	During Standby (μA)	Max. 30			
Output Specification	LVPECL (Complementary)				
Operating Temperature Range (°C)	0 to +70	0 to +85		-40 to +85	
Storage Temperature Range (°C)	-55 to +125				
Frequency Tolerance	Max. ±25×10 ⁻⁶	Max. ±50 ×10 ⁻⁶	Max. ±100 ×10 ⁻⁶	Max. ±50 ×10 ⁻⁶	Max. ±100 ×10 ⁻⁶
Symmetry (%)	45 to 55 (at 50% Waveform)				
Phase Jitter [RMS] (ps)	Max. 1 (12 kHz to 20 MHz)				
Stand-by function [Three-state]	Available				
Specification Number	NSA3344A	NSA3345A	NSA3346A	NSA3345G	NSA3346G

■ Dimensions



■ Standby Function Table (Three-state)

#1 Input	#4 and #5 output
Level H (V _{IH} ≥ 0.7 V _{CC}) or OPEN	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{CC})	High impedance

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