

Feature

- Standard footprint. (11.1×4.68×3.51mm typ.)
- Low profile for close PCB stacking.
- Application: Automotive; Bluetooth, Wireless; Computers Modems, Communications; Set-top Box, DECT/WDCT.



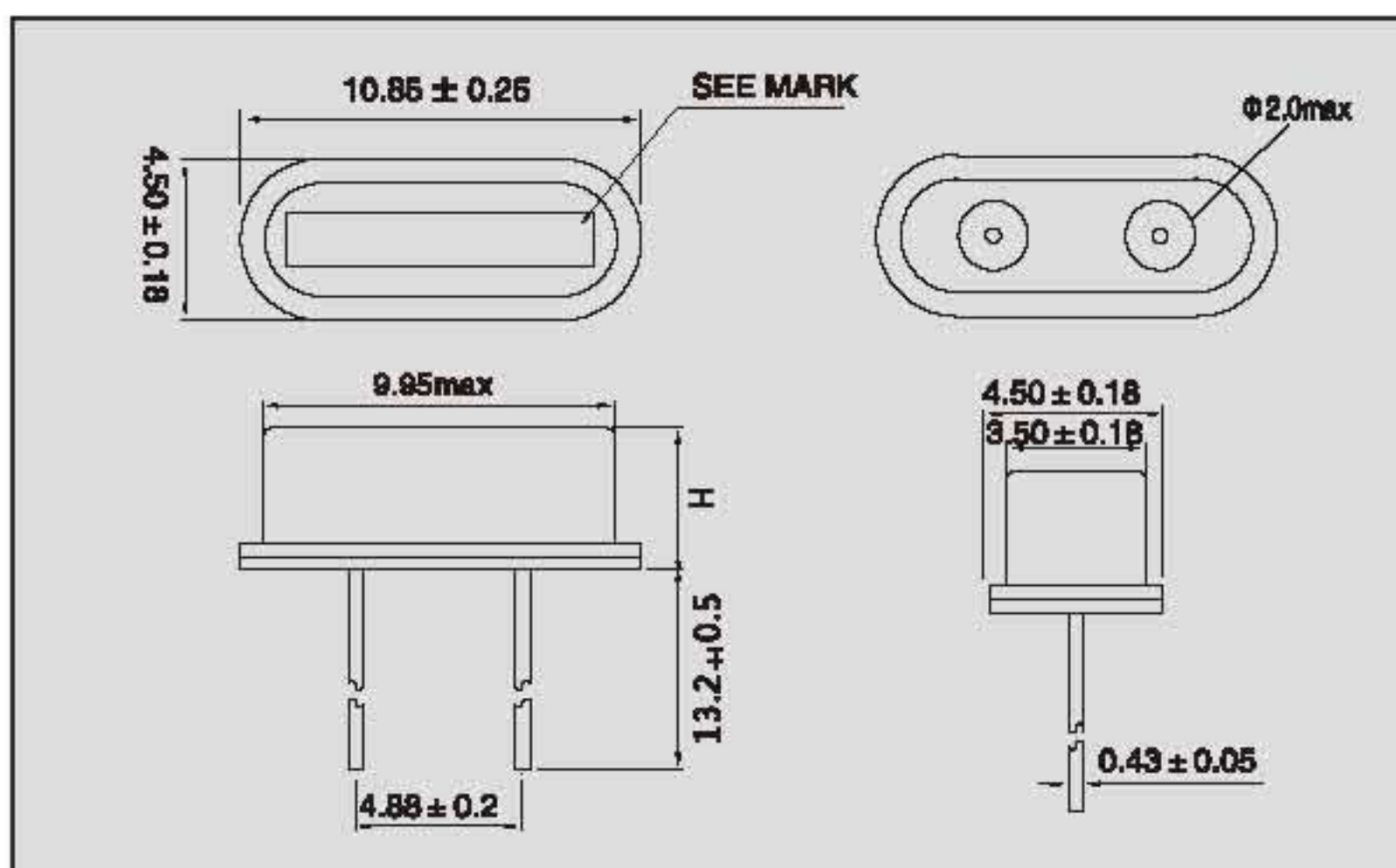
RoHS Compliant REACH Compliant

Specifications

Item	Model	RFWS Series			
Frequency Range		3.5 to 80MHz			
Oscillator Mode		Fundamental, 3rd Overtone			
Frequency Tolerance (25±3°C)		±10PPM~±50PPM			
Temperature Characteristics (with reference to +25°C)		±10PPM~±50PPM			
Operating Temperature Range		-20 to 70°C			
Load Capacitance		7pF -32pF, Series			
Storage Temperature Range		-40to+85°C			
Drive Level		10µW(max.500µW)			
Equivalent Series Resistance	Frequency Range (MHz)	Equivalent Series Resistance max. [Ω]	Frequency Range (MHz)	Equivalent Series Resistance max. [Ω]	
	3.5 to 4	140	16 to 20	30	
	4 to 5	120	20 to 30	25	
	5 to 7	80	30 to 36	(A1) 25	
	7 to 9	45	30 to 36	(A3) 80	
	9 to 13	40	36 to 80	80	
	13 to 16	35			

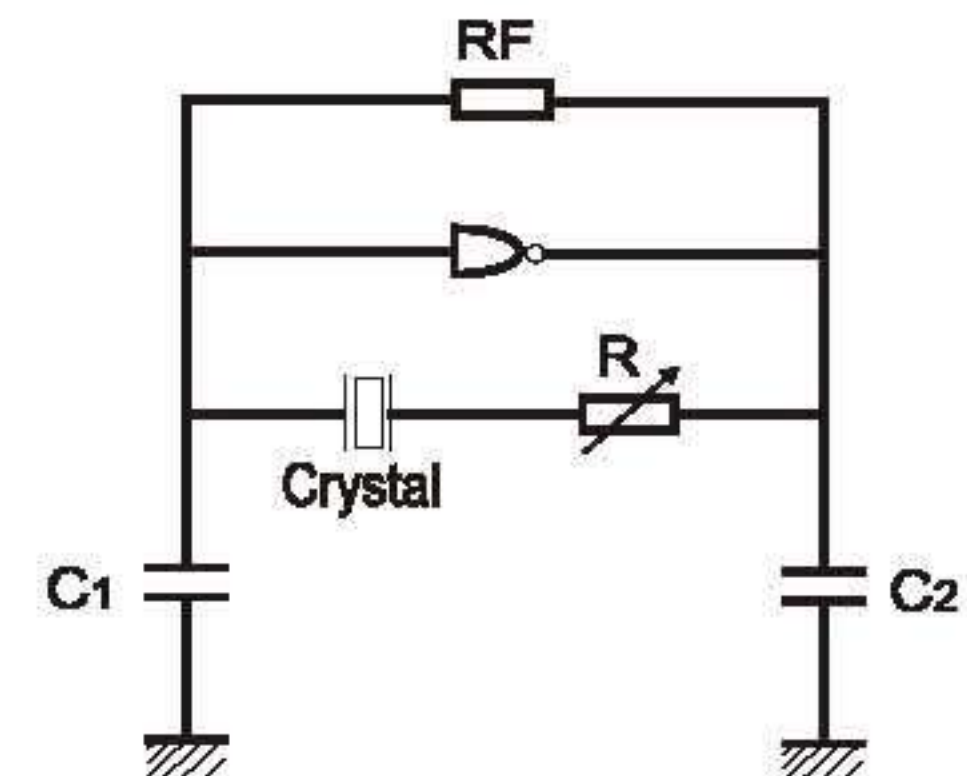
The above specifications are standard for this RFW products. Custom-made Spec. such as CL and Temp. Stability are also available. Please contact us with your enquiries.

Outline Drawing



Dip Crystal

Model	H(mm)
RFWI	3.5
RFWL	2.5



$$CL = \frac{C1 \cdot C2}{C1 + C2} + 3 \sim 7 \text{pf}$$

Ordering Information

Part Number Guide

RFW XTAL	I Package Size (mm)	20 Load Capacitance (pF)	E Freq. Tol. @25°C (ppm)	E Frequency Stability (ppm)	C Temp. Range (°C)	1 Oscillator Mode	- Dash	Freq. (Mhz)
	I:3.5mm L:2.5mm	XX=xxpF	A:±5 B:±10 P:±15 C:±20 D:±25 E:±30 G:±50	A:±5 B:±10 P:±15 C:±20 D:±25 E:±30 G:±50	I:-10~60 C:-20~70 L:-40~85	1:AT Fundamental 3:3rd Overtone		XX.XXXXXX

Frequency Stability Vs. Temperature Range

Temp.(°C)	Ppm	±5	±10	±15	±20
-10 ~ +60		+	+	+	+
-20 ~ +70		+	+	+	+
-40 ~ +85		+	+	+	+

Standard
 Available(case by case)
 Not Available

Example RFWI20EEC1-12.000000MHz
 Crystal unit, RoHS Compliant, 11.1*4.68mm; CL=20pF; Freq. Tolerance: +/-30ppm;
 Freq. Stability: +/-30ppm; Operating Temp. Range: -20~70°C; No Special; AT
 Fundamental; Normal; RoHS Compliant; Freq. 12.000000MHz.
 **Not all combinations of options are available.