

# FTF4870

## Monolithic Crystal Filter

Part number: 4870 | Revision: W1 | Date: 25 January 2023



### 1.0 Main parameters

N°	Characteristics	Symbol	Value	Unit	Note
1.1	Nominal centre frequency	fc	21.4	MHz	fundamental mode
1.3	Number of poles		4		Single SMD 7x5 package

### 2.0 Insection loss

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
2.1	Insertion Loss (IL) at fc	IL			3	dB	Measured on smallest attenuation in pass band

### 3.0 Passband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F <sub>min</sub>	+Δ F <sub>max</sub>	Unit	Note
3.1	Bandwidth between 3dB frequencies		3	dB	-10.0	+10.0	kHz	Referred to f <sub>c</sub>

### 4.0 Ripple over

N°	Characteristics	Symbol	Nom.	Unit	-Δ F <sub>min</sub>	+Δ F <sub>max</sub>	Unit	Note
4.1	Ripple over		≤1.0	dB	-10.0	+10.0	kHz	Peak to valley

### 5.0 Stopband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F <sub>min</sub>	+Δ F <sub>max</sub>	Unit	Note
5.1	StopBand		≥35	dB	-34	+34	kHz	
5.2	Alternate attenuation		70	dB	-910	-900	kHz	

### 6.0 Matching

N°	Characteristics	Symbol	Resistance	Unit	Capacitance	Unit	Note
6.1	Input and output		2000	Ω	0.5	pF	
6.2	Coupling capacitance				5.0	pF	

### 7.0 Temperature range

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
7.1	Operating	OTR	-20		70	°C	
7.2	Storage	STR	-40		85	°C	

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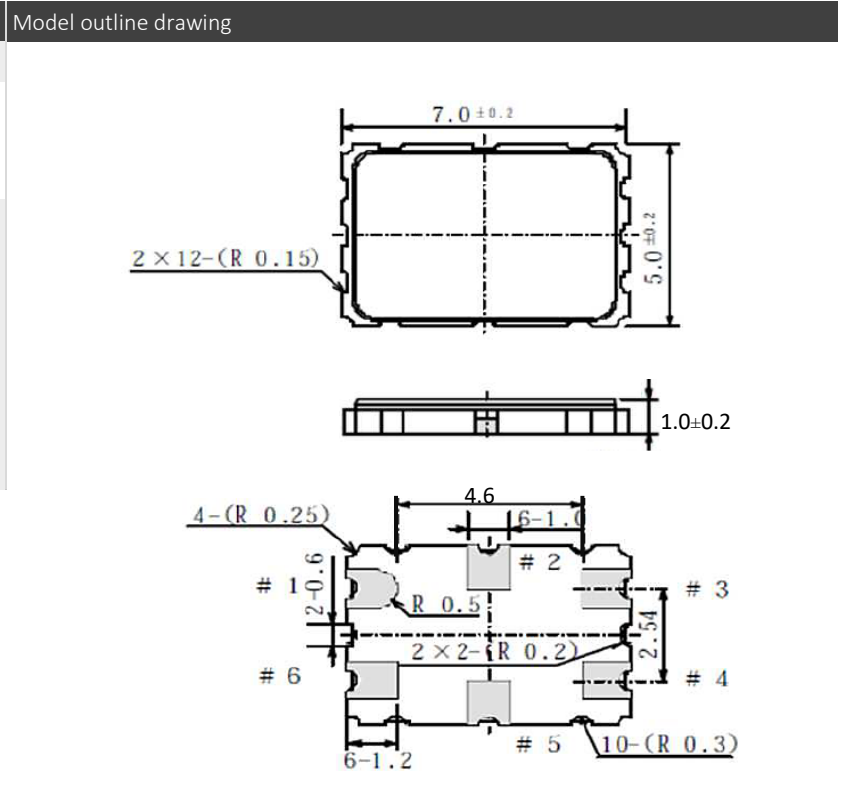
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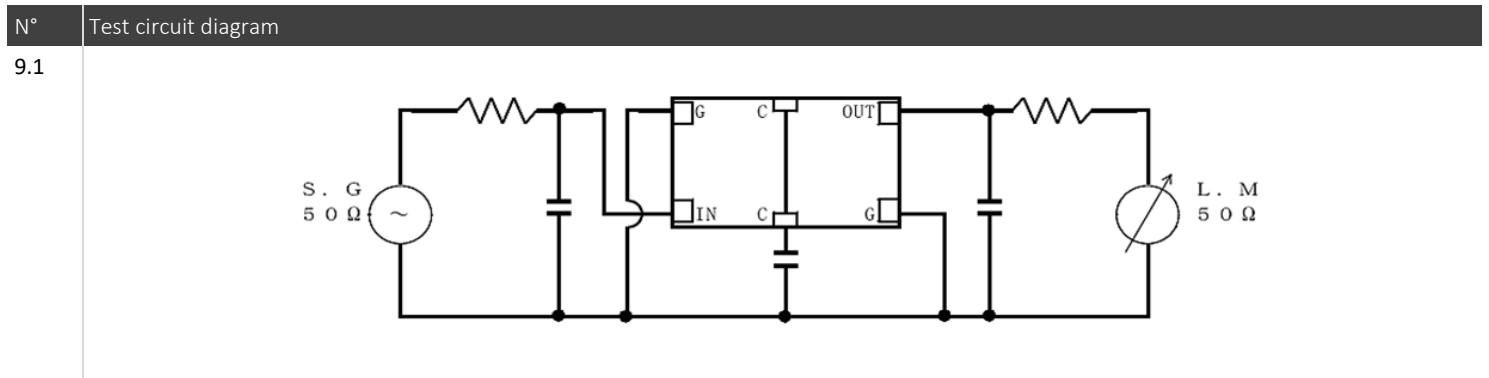
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### 8.0 Package, marking and pin connections

N°	Characteristics	Specifications
8.1	Package type	SMD, 7.0 x 5.0 mm
8.2	Marking	Line 1: FTF4870 Line 2: 106057 Line 3: YWW (Date code)
8.3	Pin connections	Pin 1, 4: GND Pin 2, 5*: Coupling capacitance Pin 3: IN / OUT Pin 6: OUT / IN  * Pins 2 and 5 are not physically connected in the package and must be connected together on the PCB.



### 9.0 Test circuit



### 10.0 Specification History

Revision	Change notes	Date
W0	Preliminary Datasheet creation	Feb, 3 <sup>rd</sup> 2016
W1	Re-branding Rakon to RakonXpress	Jan, 25 <sup>th</sup> 2023