

FTF4913

Monolithic Crystal Filter



Part number: 4913 | Revision: A1 | Date: 24 January 2023



1.0 Main parameters

N°	Characteristics	Symbol	Value	Unit	Note
1.1	Nominal centre frequency	fc	90.0	MHz	3 rd overtone
1.2	Number of poles		4		

2.0 Insection loss

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
2.1	Insertion Loss (IL)	IL			7	dB	

3.0 Passband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F _{min}	+Δ F _{max}	Unit	Note
3.1	Bandwidth between 3dB frequencies		3	dB	-3.75	+3.75	kHz	Referred to f _c

4.0 Ripple over

N°	Characteristics	Symbol	Nom.	Unit	-Δ F _{min}	+Δ F _{max}	Unit	Note
4.1	Ripple over		≤1.0	dB				

5.0 Stopband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F _{min}	+Δ F _{max}	Unit	Note
5.1	StopBand 1 (@25°C)		≥20	dB	-12.5	+12.5	kHz	Referred to f _c
5.2	StopBand 2 (20 to 70°C)		≥18	dB	-12.5	+12.5	kHz	Referred to f _c
5.3	StopBand 3 (@25°C)		≥40	dB	-25	+25	kHz	Referred to f _c
5.4	StopBand 4 (20 to 70°C)		≥38	dB	-25	+25	kHz	Referred to f _c
5.5	StopBand 5 (@25°C)		≥50	dB	-50	+50	kHz	Referred to f _c
5.6	StopBand 6 (20 to 70°C)		≥48	dB	-50	+50	kHz	Referred to f _c
5.7	StopBand 7 (@25°C)		≥63 ≥35	dB	-100 -	- +100	kHz	Referred to f _c
5.8	StopBand 8 (20 to 70°C)		≥61 ≥35	dB	-100 -	- +100	kHz	Referred to f _c
5.9	Guaranteed Attenuation		≥75 ≥60	dB	-910 -	- +910	kHz	Referred to f _c

6.0 Matching

N°	Characteristics	Symbol	Resistance	Unit	Capacitance	Unit	Note
6.1	Input and output		500 ±5%	Ω	1.5 ±0.3	pF	
6.2	Coupling capacitance				5.0 ±0.3	pF	

7.0 Temperature range

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
7.1	Operating	OTR	-40		85	°C	
7.2	Storage	STR	-45		85	°C	

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8.0 Intermodulation

N°	Characteristics	Note
8.1	Input two signals to filter at $f_0 \pm 800$ kHz and $f_0 \pm 1600$ kHz both at a level of -20 dBm. Output f_0 -100 dBm max.	

9.0 Input level

N°	Characteristics	Symbol	Value	Unit	Note
9.1	Measurement level		-10	dBm	
9.2	Maximum level		+5	dBm	

10.0 Package, marking and pin connections

N°	Characteristics	Specifications	Model outline drawing
11.1	Package type	SMD, 7.0 x 5.0 mm	
11.2	Marking	Line 1: FTF4913 Line 2: 106610 Line 3: YWW (Date code)	
11.3	Pin connections	Pin 1, 4: GND Pin 2, 5*: Coupling capacitance Pin 3: Output Pin 6: Input * Pins 2 and 5 are not physically connected in the package and must be connected together on the PCB.	

Unit: mm

11.0 Test circuit

N°	Test circuit diagram
12.1	

12.0 Specification History

Revision	Change notes	Date
A0	Preliminary Datasheet creation	Apr, 15 th 2021
A1	Re-branding Rakon to RakonXpress	Jan, 24 th 2023