

# FTF4886

## Monolithic Crystal Filter

Part number: 4886 | Revision: W1 | Date: 24 January 2023



### 1.0 Main parameters

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

### 2.0 Insection loss

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
2.1	Insertion Loss (IL) at fc	IL			4	dB	To be confirmed after sampling

### 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	-12.5	+12.5	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				

### 5.0 Stopband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F <sub>min</sub>	+Δ F <sub>max</sub>	Unit	Note
5.1	StopBand 1 (@25°C)		≥28	dB	-50	+50	kHz	Referred to f <sub>c</sub>
5.2	StopBand 2 (20 to 70°C)		≥25	dB	-50	+50	kHz	Referred to f <sub>c</sub>
5.3	StopBand 3 (@25°C)		≥48	dB	-100	+100	kHz	Referred to f <sub>c</sub>
5.4	StopBand 4 (20 to 70°C)		≥45	dB	-100	+100	kHz	Referred to f <sub>c</sub>
5.5	StopBand 5 (@25°C)		≥58	dB	-200	+200	kHz	Referred to f <sub>c</sub>
5.6	StopBand 6 (20 to 70°C)		≥55	dB	-200	+200	kHz	Referred to f <sub>c</sub>
5.7	Guaranteed Attenuation		≥75	dB	-910		kHz	Referred to f <sub>c</sub>

### 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	To be confirmed after sampling

### 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	

### 8.0 Intermodulation

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

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### 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
10.1	Package type	SMD, 7.0 x 5.0 mm	
10.2	Marking	Line 1: FTF4913 Line 2: 106610 Line 3: YWW (Date code)	
10.3	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
11.1	

### 12.0 Specification History

Revision	Change notes	Date
W0	Preliminary Datasheet creation	May, 16 <sup>th</sup> 2018
W1	Re-branding Rakon to RakonXpress	Jan, 24 <sup>th</sup> 2023