

FTF4851

Monolithic Crystal Filter

Part number: 4851 | 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	
1.2	Number of poles		4		

2.0 Insection loss

N°	Characteristics	Symbol	Min.	Nom.	Max.	Unit	Note
2.1	Insertion Loss (IL)	IL			4.0	dB	Measured on smallest attenuation in passband

3.0 Passband

N°	Characteristics	Symbol	Nom.	Unit	-Δ F _{min}	+Δ F _{max}	Unit	Note
3.1	Bandwidth between 3dB frequencies		3	dB	-22	+22	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				Peak to valley in passband

5.0 Stopband – Guaranteed Attenuation

N°	Characteristics	Symbol	Nom.	Unit	-Δ F _{min}	+Δ F _{max}	Unit	Note
5.1			≥28	dB	-100	+100	kHz	Referred to f _c
5.2			≥30	dB	-200	+200	kHz	Referred to f _c
5.3			≥30	dB	-400	+400	kHz	Referred to f _c
5.4			≥35	dB	-1	+1	MHz	Referred to f _c
5.5			≥40	dB	-2	+2	MHz	Referred to f _c
5.6			≥50	dB	-3	+3	MHz	Referred to f _c
5.7			≥50	dB	-6	+6	MHz	Referred to f _c
5.8			≥50	dB	-7	+7	MHz	Referred to f _c
5.9			≥40	dB	-7 to -20	+7 to +20	MHz	Referred to f _c

6.0 Matching

N°	Characteristics	Symbol	Resistance	Unit	Capacitance	Unit	Note
6.1	Input and output		760 ±5%	Ω	0.6 ±0.3	pF	To be confirmed after sampling
6.2	Coupling capacitance				3 ±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	-40		85	°C	

FTF4851

Monolithic Crystal Filter



Part number: 4851 | Revision: A1 | Date: 24 January 2023

8.0 Intermodulation

N°	Characteristics	Symbol	Inband	Outband	Unit	Note
8.1	Input frequency		fc±800 and fc±1600 kHz		MHz	
8.2	Input power level		-20		dBm	
8.3	Intermodulation output fc		<-100		dBm	

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: FTF4851 Line 2: 105753 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	

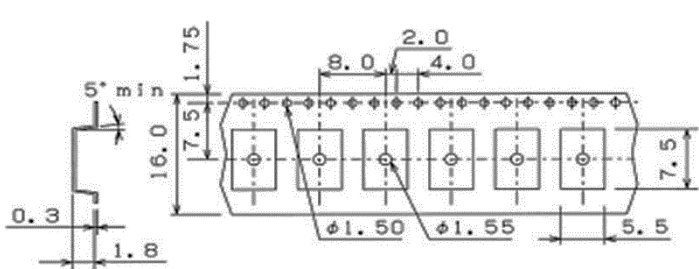
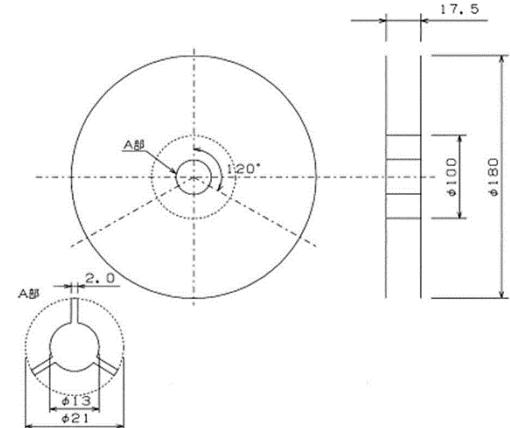
FTF4851

Monolithic Crystal Filter



Part number: 4851 | Revision: A1 | Date: 24 January 2023

12.0 Packaging

N°	Tape details	Reel details
12.1		

13.0 Specification History

Revision	Change notes	Date
A0	Preliminary Datasheet creation	Aug, 21 st 2014
A1	Re-branding Rakon to RakonXpress	Jan, 24 th 2023