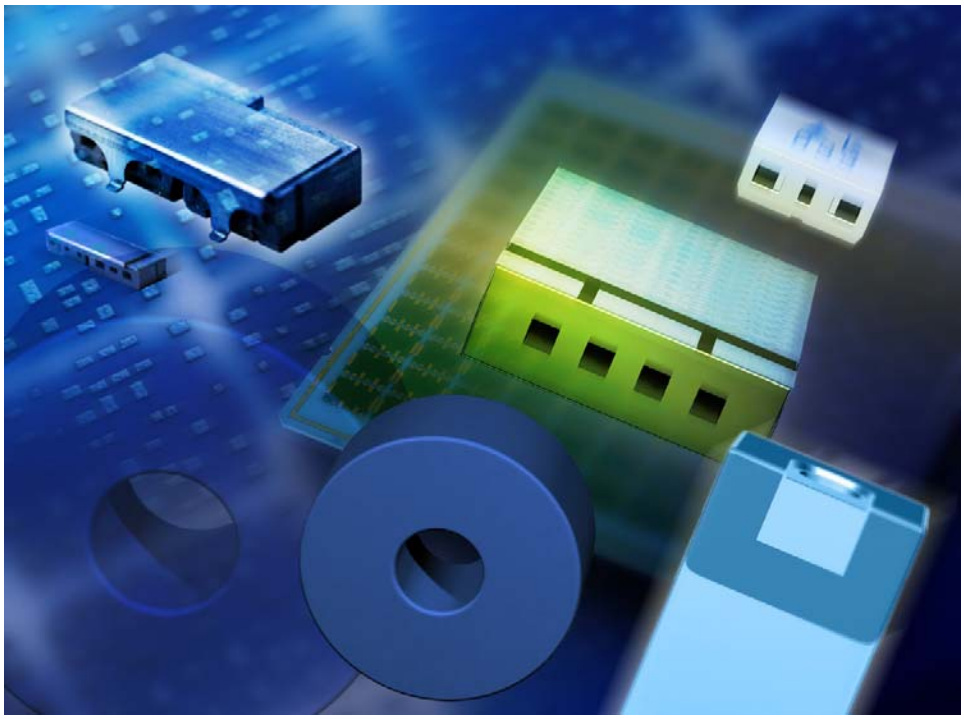
4-Pole Filter XM Radio F4052

Design Goal



Features

- SMD filter consisting of coupled resonators with stepped impedances
- $MgTiO_3$ - $CaTiO_3$ (ε_r = 21/ TC_f =0±10 ppm/K) with a coating of copper (10µm) and tin (>5µm)
- Excellent reflow solderability, no migration effect due to copper/tin metallization
- ESD insensitivity and ESD protecting due to filter characteristics

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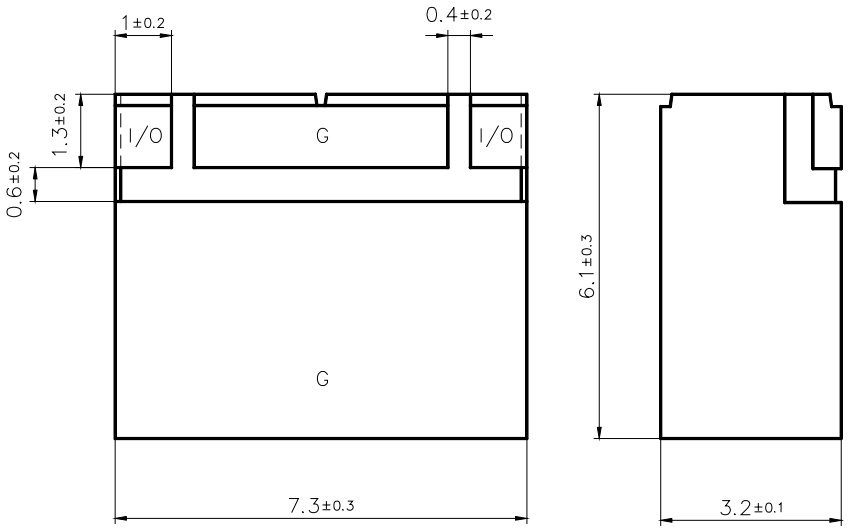
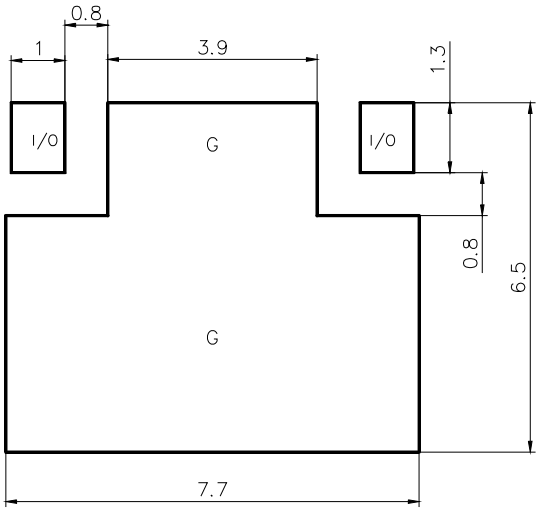
Component drawing



View from below onto the solder terminals and view from beside

Recommended footprint



solder pads

I / O — connected to lines with an impedance of 50 Ohm

Standard condition — FR4 material
permitivity : 4.4
ground layers below footprint
preferred thickness : 0.3
Vias : Ø0.3 / mm²
For other thickness
correlation might be necessary

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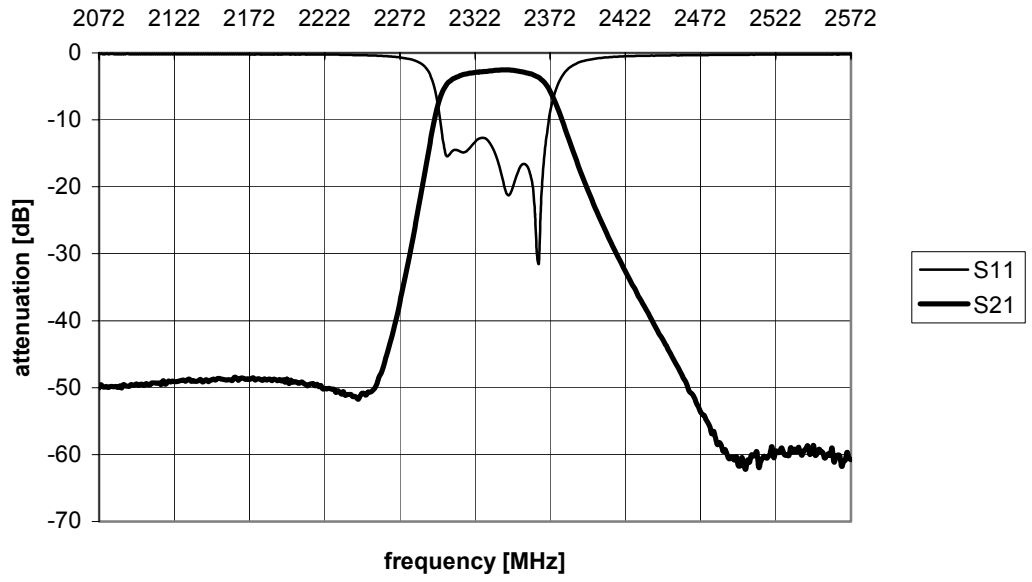
Characteristics

		min.	typ.	max.	
Center frequency	f_C	-	2338.755	-	MHz
Insertion loss	α_{IL}		2.2	2.5	dB
Passband	B	5.5			MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$		0.2	0.5	dB
Standing wave ratio	SWR		1.4	2.0	
Group delay in Passband			15	40	
Impedance	Z		50		Ω
Attenuation	α				
at 2198.755 (f_c –140MHz)		45	49		dB
at 2478.755 (f_c +140MHz)		50	54		dB

Maximum ratings

EC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature	T_{op}	-20 / +80	°C

Typical passband characteristic



Design Goal

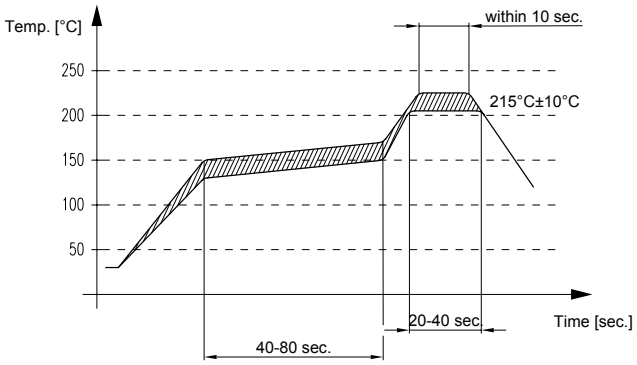
Processing information

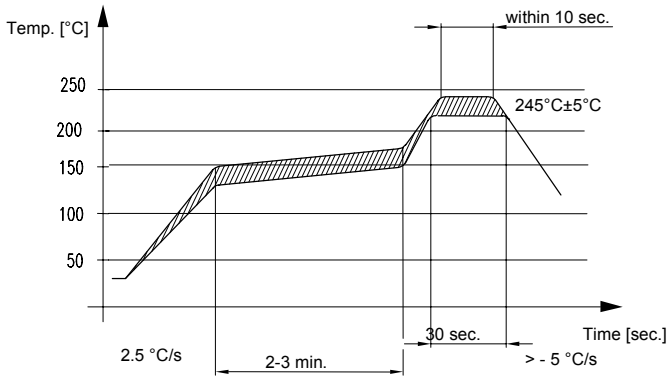
- Wettability acc. to IEC 68-2-58: ≥ 75% (after aging)

Soldering Requirements

	Profile for eutectic SnPb solder paste	Profile for leadfree solder paste	
Soldering type	reflow	reflow	
Maximum soldering temperature (measuring point on top surface of the component)	235 (max. 2 sec.) 225 (max. 10 sec.)	260 (max. 2 sec.) 250 (max. 10 sec.)	°C °C

Recommended soldering conditions (infrared):





Delivery mode

- Blister tape acc. to IEC 286-3, polyester, grey
- Pieces/tape: **t.b.d.**

Note: This document is PRELIMINARY. All specifications are subject to change and are not guaranteed.