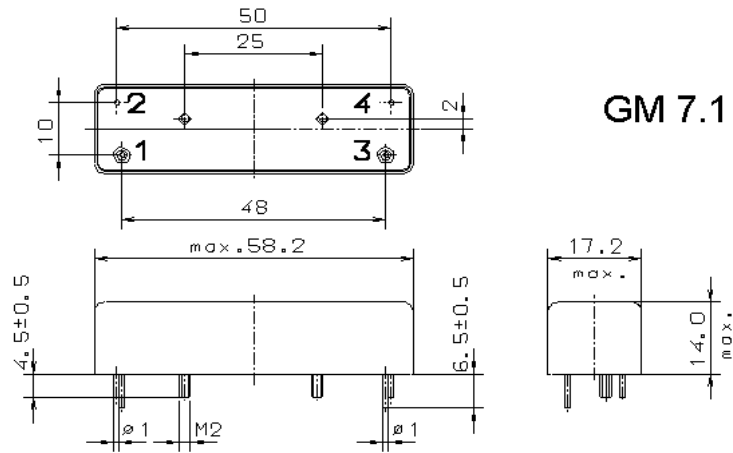


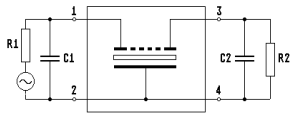
Specification for monolithic crystal filter **MQF 42.2-0800/03**

1. General

1.1. Case:



GM 7.1



- | | |
|-----------------------------------|-----------------------------|
| 1.2. Type name: | MQF 42.2-0800/03 |
| 1.3. Number of poles: | 6, 3 rd overtone |
| 1.4. Operating temperature range: | -25°C to 70°C |
| 1.5. Storage temperature range: | -40°C to 85°C |

2. Electric values

- | | |
|---------------------------------------|-----------|
| 2.1. Nominal centre frequency f_0 : | 42.20 MHz |
|---------------------------------------|-----------|

2.2. Pass band

- | | |
|---|---|
| 2.2.1. Bandwidth between 1 dB - frequencies: | $\geq f_0 \pm 4.0$ kHz |
| 2.2.2. Ripple: | ≤ 1.0 dB at $f_0 \pm 4.0$ kHz |
| 2.2.3. Group delay distortion: | ≤ 50 μ s (at $f_0 \pm 4$ kHz) |
| 2.2.4. Group delay variation (absolute value at minimum): | ≤ 50 μ s (between different samples of production) |
| 2.2.5. Insertion loss:
(measured on smallest attenuation in pass band) | ≤ 4.0 dB |

2.3. Stop band

- | | |
|--|-----------------------------|
| 2.3.1. $f_0 \pm 25$ kHz | ≥ 60 dB |
| 2.3.2. $f_0 - 40$ kHz.....- 60 kHz | ≥ 80 dB |
| 2.3.3. $f_0 - 60$ kHz.....- 42.2 MHz | ≥ 60 dB |
| 2.3.4. $f_0 + 25$ kHz.....+ 250 kHz | ≥ 60 dB |
| 2.3.5. Spurious responses $f_0 + 25$ kHz.....+ 35 MHz: | ≥ 45 dB |
| 2.4. Terminating impedance (input and output): | $50 \Omega \pm 5\%$ // 0 pF |

2.5. Intermodulation

2.5.1. Input pin: 1

frequency 1:	$f_0 \pm 30$ kHz
frequency 2:	$f_0 \pm 60$ kHz
input power level at pin 1:	-6 dBm
IM:	≥ 75 dB at f_0

2.5.2. Input pin 2:

frequency 1:	$f_0 +1$ kHz
frequency 2:	$f_0 -1$ kHz
input power level at pin 2:	0 dBm
IM:	≥ 50 dB

2.6. Maximum input power level: + 20 dBm without damage

2.7. Compression point: + 15 dBm input for inband signals

3. Environment conditions

3.1. Vibration according to IEC 68-2-6 test FC (filter case shall be fastened to the vibration table)

- frequency range (with total amplitude 0.7 mm):	5 g , 10 Hz - 55 Hz
- acceleration:	1.9 g, 4 Hz - 90 Hz
- duration:	0.5 hours

3.2. Shock according to IEC 68-2-27, test Ea

- number of directions:	3
- peak acceleration:	25 g 1/2 sine
- duration of the nominal pulse:	20 ms
- number of shocks:	3

3.3. Humidity test Db 40 according to IEC 68-2-30 21 cycles

3.4. Aging: 1000 hours at $70^\circ\text{C} \pm 3^\circ\text{C}$

3.5. Change of temperature according to IEC 68-2-14

- temperatures:	$-25^\circ\text{C} / 70^\circ\text{C}$
- exposure time:	30 minutes
- cycles:	10

3.6. Solder heat test: terminals dipped in for 6 seconds at 250°C

3.7. Long term stability: min 5 years for frequency and attenuation

4. Others

4.1. Design: case soldered

4.2. Weight: ≤ 35 g

5. Marking on the case: firm, year week
MQF 42.2-0800/03

Edited by: _____ date: _____ name: _____