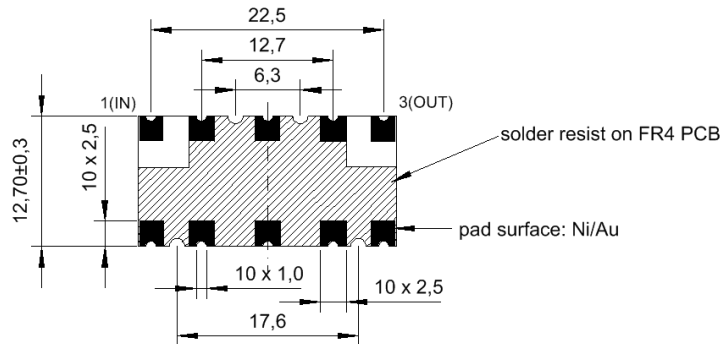


Specification for monolithic crystal filter::

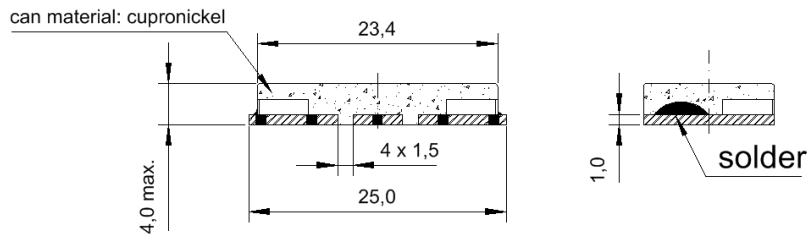
MQF 21.504-3200/01

1. General

1.1. Package:



package GS23



- | | |
|-----------------------------------|--------------------|
| 1.2. Type name: | MQF 21.504-3200/01 |
| 1.3. Number of poles: | 2 |
| 1.4. Operating temperature range: | -40°C to +85°C |
| 1.5. Operable temperature range: | -54°C to +105°C |
| 1.6. Storage temperature range: | -62°C to +105°C |

2. Electric values

- | | |
|-----------------------------------|------------|
| 2.1. Nominal centre frequency fo: | 21.504 MHz |
|-----------------------------------|------------|

2.2. Pass band

- | | |
|--|-----------------------|
| 2.2.1. Centre frequency fc
defined as geometric mean of 1.5 dB frequencies: | 21.504 MHz ± 1.0 kHz |
| 2.2.2. Bandwidth between 3 dB - frequencies: | > fc ± 16 kHz |
| 2.2.3. Group delay (absolute) at fc and at 25°C: | < 12 µs ± 3 µs |
| 2.2.4. Differential group delay at fc ± 16 kHz: | < 3.5 µs peak to peak |
| 2.2.5. Return loss (IN / OUT) at fc and at 25°C: | > 12 dB |
| 2.2.6. Insertion loss at fc: | < 5.0 dB |

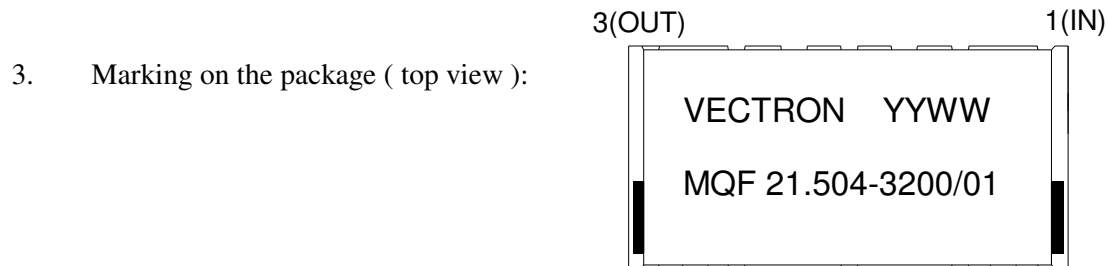
2.3. Stop band

- | | |
|---------------------------------|---------|
| 2.3.1. fo ± 100 kHz | > 25 dB |
| 2.3.2. fc ± 240 kHz.....282 kHz | > 30 dB |
| 2.3.3. fc - 384 kHz | > 45 dB |
| 2.3.4. fc ± 500 kHz | > 50 dB |

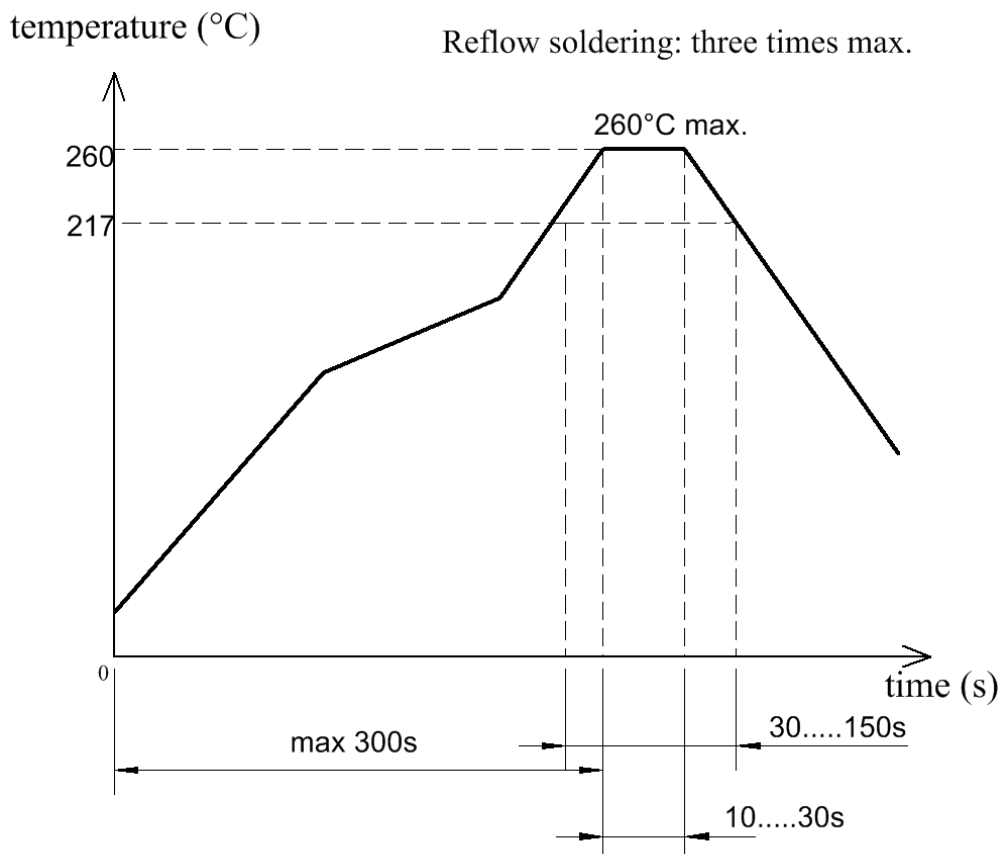
- 2.3.5. $f_c + 6.144 \text{ MHz} \pm 20 \text{ kHz}$ > 70 dB
- 2.3.6. $f_c + 250 \text{ kHz} \dots 500 \text{ kHz}$ > 50 dB
- 2.3.7. Spurious responses ($f_c + 100\text{kHz} \dots 500 \text{ kHz}$): > 15 dB
- 2.4. Terminating impedance (input and output): $50 \Omega // 0 \text{ pF}$

2.5. Out-band intermodulation
 third order intermodulation products shall be 46 dB down from either of two -14 dBm input tones at $f_c \pm 50 \text{ kHz}$ and $f_c \pm 100 \text{ kHz}$ as referenced to the input.

- 2.6. Maximum input power working / non-damaged: +3 / +15 dBm



- 4. Environment conditions: Corresponding to Telefilter's MIL standard
- 5. Soldering conditions



- 6. Taping: Maximum 600 pcs. per reel
 Reel dimension T.B.D. after sampling

Edited by: _____ date: _____ name: _____