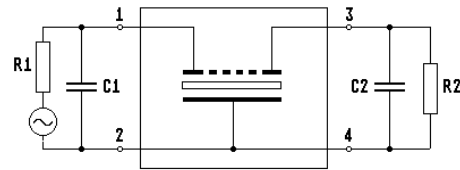
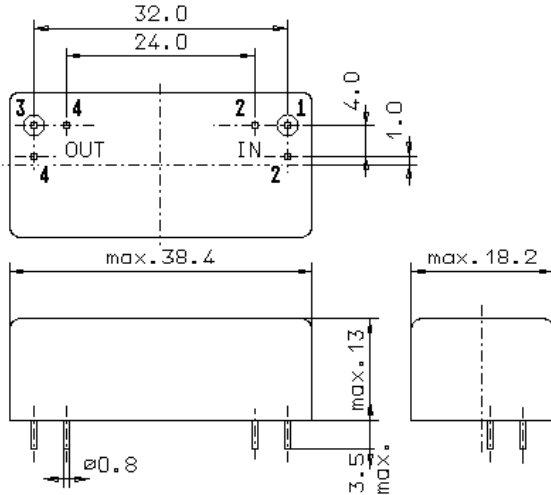


Specification for monolithic crystal filter:

**MQF 21.4-2400/09**

**1. General**

1.1. Package:



- |                                   |                  |
|-----------------------------------|------------------|
| 1.2. Type name:                   | MQF 21.4-2400/09 |
| 1.3. Number of poles:             | 10               |
| 1.4. Operating temperature range: | -20°C to +70°C   |
| 1.5. Storage temperature range:   | -40°C to +85°C   |

**2. Electric values**

- |                                   |          |
|-----------------------------------|----------|
| 2.1. Nominal centre frequency fo: | 21.4 MHz |
|-----------------------------------|----------|

**2.2. Pass band**

- |   |   |
|---|---|
| 2.2.1. Bandwidth between 3 dB - frequencies:                                | $\geq f_o \pm 12$ kHz                   |
| 2.2.2. Ripple:  | $\leq 2.0$ dB at $f_o \pm 10$ kHz       |
| 2.2.3. Group delay distortion:  | $\leq 10$ $\mu$ s at $f_o \pm 3.50$ kHz |
| 2.2.4. Group delay distortion:  | $\leq 15$ $\mu$ s at $f_o \pm 5.75$ kHz |
| 2.2.5. Group delay distortion:  | $\leq 50$ $\mu$ s at $f_o \pm 8.75$ kHz |
| 2.2.4. Insertion loss:<br>( measured on smallest attenuation in pass band ) | $\leq 3.5$ dB                           |

**2.3. Stop band**

- |  |                                  |
|--|----------------------------------|
| 2.3.1. $f_o \pm 23$ kHz                    | $\geq 70$ dB                     |
| 2.3.2. $f_o \pm 25$ kHz                    | $\geq 80$ dB                     |
| 2.3.3. $f_o \pm 30$ kHz..... $\pm 300$ kHz | $\geq 90$ dB ( except spurious ) |

- |  |                       |
|--|-----------------------|
| 2.4. Terminating impedance ( input and output ): | 470 $\Omega$ // 15 pF |
|--|-----------------------|

- |             |   |
|-------------|---|
| 3. Marking: | manufacturer, date code<br>MQF 21.4-2400/09 |
|-------------|---|

- |                            |   |
|----------------------------|---|
| 4. Environment conditions: | Corresponding to Vectron standard CF001 |
|----------------------------|---|

Edited by: \_\_\_\_\_ date: \_\_\_\_\_ name: \_\_\_\_\_