Specification for monolithic crystal filter: MQF 20.208-3200/06

1. General
1.1. Package:

1.2. Type name: MQF 20.208-3200/06
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: 20.208 MHz
2.2. Pass band
2.2.1. Centre frequency fc at +25°C: 20.208 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: > 8 dB
2.2.6. Insertion loss at fc: < 4.0 dB
2.3. Stop band

2.3.1. $f_c \pm 25$ kHz  > 4 dB
2.3.2. $f_c \pm 100$ kHz  > 25 dB
2.3.3. $f_c \pm 240$ kHz.....282 kHz  > 30 dB
2.3.4. $f_c - 384$ kHz  > 45 dB
2.3.5. $f_c \pm 500$ kHz  > 50 dB
2.3.6. $f_c + 6.144$ MHz ± 20 kHz  > 70 dB
2.3.7. Alternate attenuation:  > 50 dB
2.3.8. Spurious responses  > 15 dB ( $f_c +100$kHz...500 kHz):

2.4. Terminating impedance (input and output):  50 $\Omega$ // 0 pF

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

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

3. Marking on the package (top view):  

![Marking on the package](vectron yyww mtf 20.208-3200/06)

4. Environment conditions: Corresponding to Vectron MIL standard
5. Soldering conditions
   temperature ($^\circ$C)  
   Reflow soldering: three times max.

6. Taping: Maximum 500 pcs. per reel, reel diameter 300 mm

Edited by: ________________________  date: __________________________  name: __________________________