Specification for monolithic crystal filter:

**MQF 45.0 - 3000/23**

1. **General**
   1.1. Package:

   **GS 2**

   ![Diagram of GS 2 package](image)

   1.2. Type name: MQF 45.0-3000/23
   1.3. Number of poles: 4
   1.4. Operating temperature range: -40°C to +85°C
   1.5. Storage temperature range: -45°C to +85°C

2. **Electric values**
   2.1. Nominal centre frequency fo: 45.0 MHz
   2.2. **Pass band**
   2.2.1. Bandwidth between 3 dB - frequencies: > fo ± 15.0 kHz
   2.2.2. Ripple: < 1.0 dB at fo ± 10.0 kHz
   2.2.3. Insertion loss: < 3.0 dB
       (measured on smallest attenuation in pass band)
   2.3. **Stop band**
   2.3.1. fo ± 50.0 kHz: > 30 dB
   2.3.2. fo ± 100 kHz: > 50 dB (expect spurious)
   2.3.3. Alternate attenuation: > 50 dB (expect spurious)
   2.3.4. Spurious responses: > 20 dB in the range fo ± 1000 kHz
   2.4. Maximum input power (working/non-damaged): 0 / +15 dBm
   2.5. Terminating impedance R/C (input and output): 1500 Ω // 0.7 pF
   2.5.1. Coupling capacitance (Cc): 3.0 pF
   3. **Marking:** M45B6
date code
   4. **Environment conditions:**
       Corresponding to Vectron standard CF001
   5. Filters are Pb-free and 2002 /95 / EC RoHS compliant
6. Reflow soldering conditions:

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Time (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>260°C max.</td>
<td>max 300s</td>
</tr>
<tr>
<td>217</td>
<td>30,...,150s</td>
</tr>
<tr>
<td>0</td>
<td>10,...,30s</td>
</tr>
</tbody>
</table>

Reflow soldering: three times max.

7. Packing

maximum 1000 pcs. / reel

Tape dimension (mm)

- W: 16.0 ± 0.1
- Po: 4.0 ± 0.1
- P1: 8.0 ± 0.1
- P2: 2.0 ± 0.1
- Do: 1.5 ± 0.1 / -0
- Di: 1.5 ± 0.1 / -0
- E: 1.75 ± 0.1
- F: 7.5 ± 0.1
- Fa: 1.7 ± 0.1
- Ao: 5.6 ± 0.1
- Bo: 7.6 ± 0.1
- t: 0.3 ± 0.05

Reel (all dimension in mm)

- A: ø 178 ± 2
- C: ø 15 ± 0.5
- N: ø 60 ± 1
- W: 17.5 ± 1.5
- W2: 21.5 ± 1.5

Edited by: ____________________________ date: _____________ name: ____________________________