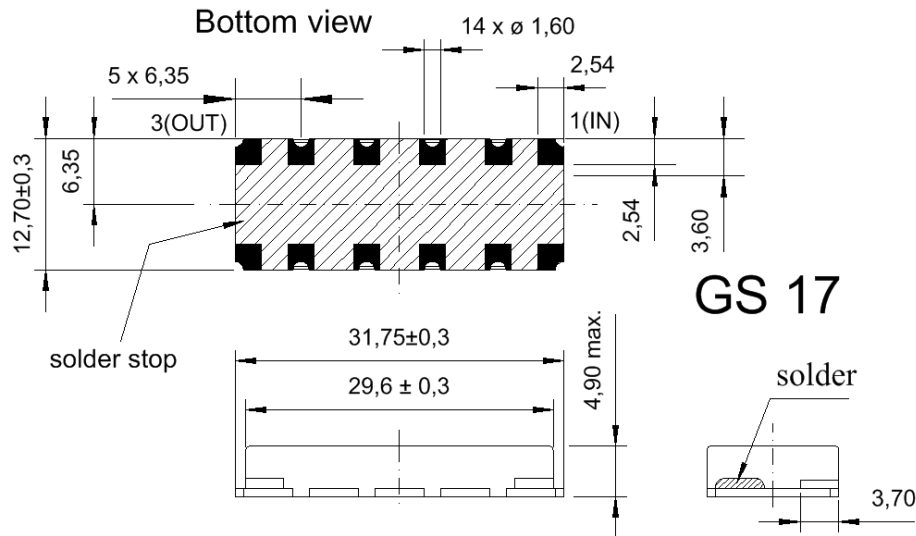


Specification for monolithic crystal filter:

**MQF 45.0-1500/63**

**1. General**

1.1. Package:

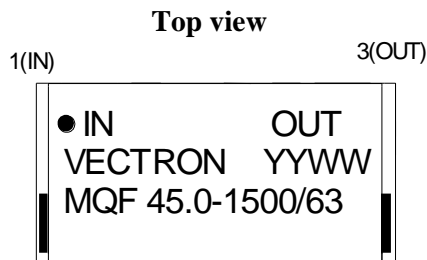


- |                                   |                  |
|-----------------------------------|------------------|
| 1.2. Type name:                   | MQF 45.0-1500/63 |
| 1.3. Number of poles:             | 6                |
| 1.4. Operating temperature range: | 0°C to +70°C     |
| 1.5. Storage temperature range:   | -40°C to +85°C   |

**2. Electric values**

- |   |                          |
|---|--------------------------|
| 2.1. Nominal centre frequency fo:                   | 45.0 MHz                 |
| 2.2. <b>Pass band</b>                               |                          |
| 2.2.1 Centre frequency fc:                          | 45.0 MHz ± 1.2 kHz       |
| 2.2.2. Bandwidth between 3 dB - frequencies:        | > fo ± 7.5 kHz           |
| 2.2.3. Ripple:                                      | < 1.5 dB at fo ± 6.0 kHz |
| 2.2.4. Insertion loss:                              | < 4.5 dB                 |
| ( measured on smallest attenuation in pass band )   |                          |
| 2.2.5. Return loss:                                 | > 10 dB at fo ± 6.0 kHz  |
| 2.3. <b>Stop band</b>                               |                          |
| 2.3.1. fo ± 25 kHz                                  | > 63 dB                  |
| 2.3.2. fo ± 50kHz.....fo ± 1MHz ):                  | > 85 dB except spurious  |
| 2.4. Terminating impedance R//C (input and output): | 50 Ω // 0 pF             |

3. Marking:



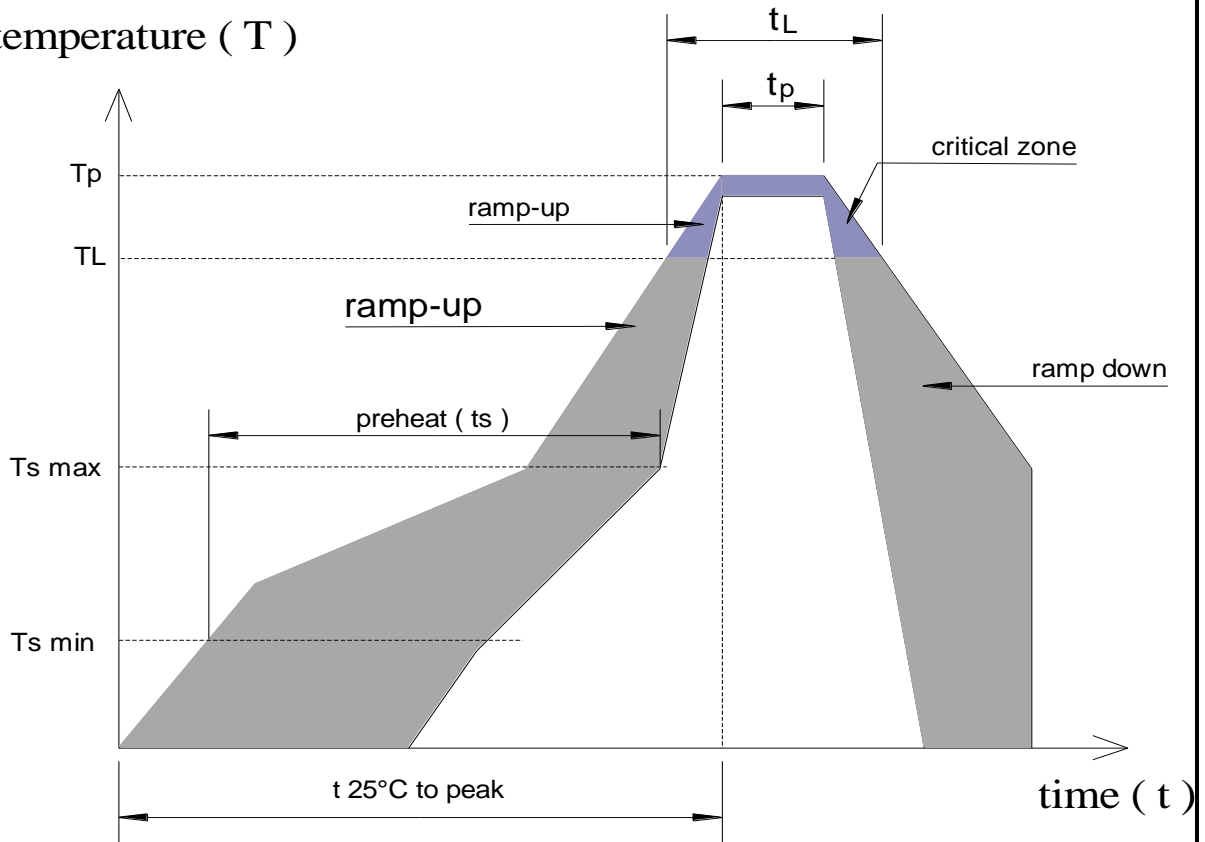
manufacturer, date code  
MQF 45.0-1500/63

4. Environment conditions:

Corresponding to Vectron CF001

5.) Reflow profile corresponding to IPC / JEDEC J-STD-020C


temperature ( T )

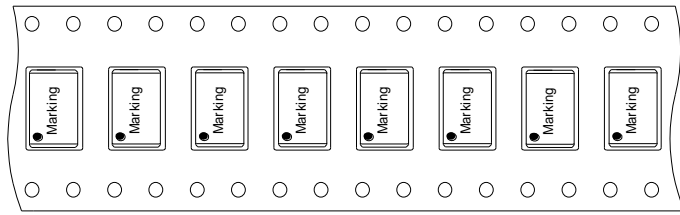


Profile Feature	Pb-free assembly	
	small body	large body
Average ramp-up rate ( TL to Tp )	3°C / second max.	
Average ramp-up rate ( Tmax to TL )	3°C / second max.	
Preheat: - Temperature Min Tmin - Temperature Min Tmax - Time ts ( Tmin to Tmax )	150°C 200°C 60-180 seconds	
Time maintained above: - Temperature TL - Time tL	217°C 60-150 seconds	
Peak temperature Tp	260 +0/-6°C	
Time within 5°C of actual peak temperature Tp	10-30 seconds	20-40 seconds
Ramp-down rate	6°C / second max.	
Time 25°C to peak temperature	8 minutes max.	
All temperatures refer to topside of the package, measured on body surface of the package		

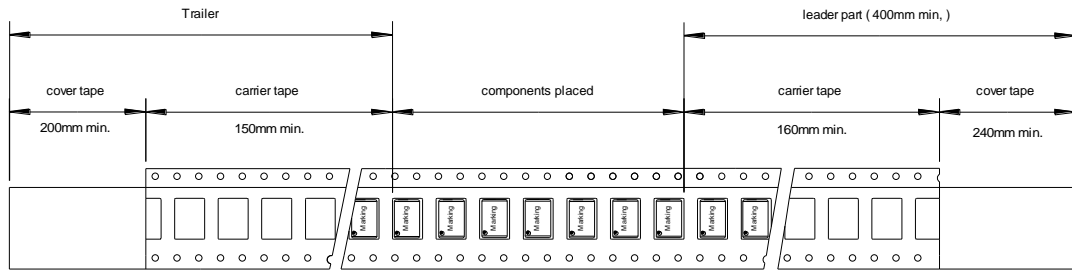
## 6. Taping


Maximum 600 pcs. / reel

Drawing out direction 



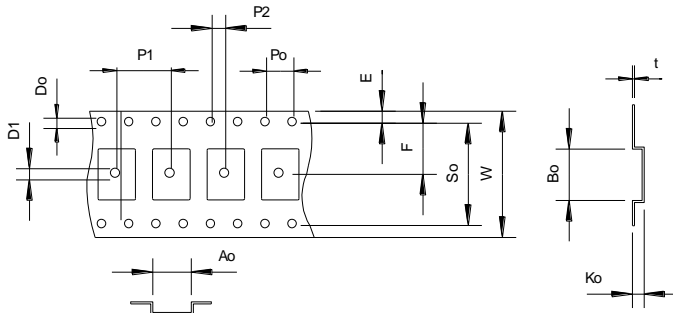
Tape dimension ( mm )



Drawing out direction ( leading direction ) 

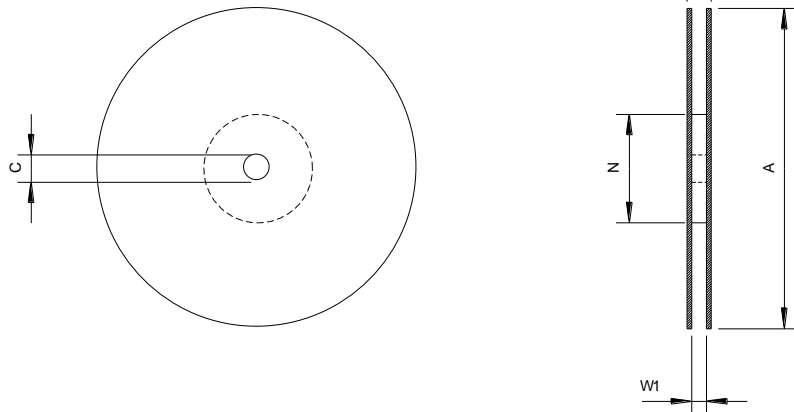
Tape ( all dimensions in mm )

- W:  $44.0 \pm 0.3$
- So:  $40.4 \pm 0.1$
- Po:  $4.0 \pm 0.1$
- P1:  $20.0 \pm 0.1$
- F:  $20.2 \pm 0.15$
- Ko:  $5.1 \pm 0.1$
- Ao:  $13.2 \pm 0.1$
- Bo:  $32.25 \pm 0.1$
- t:  $0.4 \pm 0.05$



Reel ( all dimension in mm )

- A:  $\varnothing 330 \text{ max.}$
- C:  $\varnothing 21.8 \pm 0.5$
- N:  $\varnothing 100 \text{ min.}$
- W1:  $45.5 \pm 0.25$
- W2:  $49.5 \pm 0.5$



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