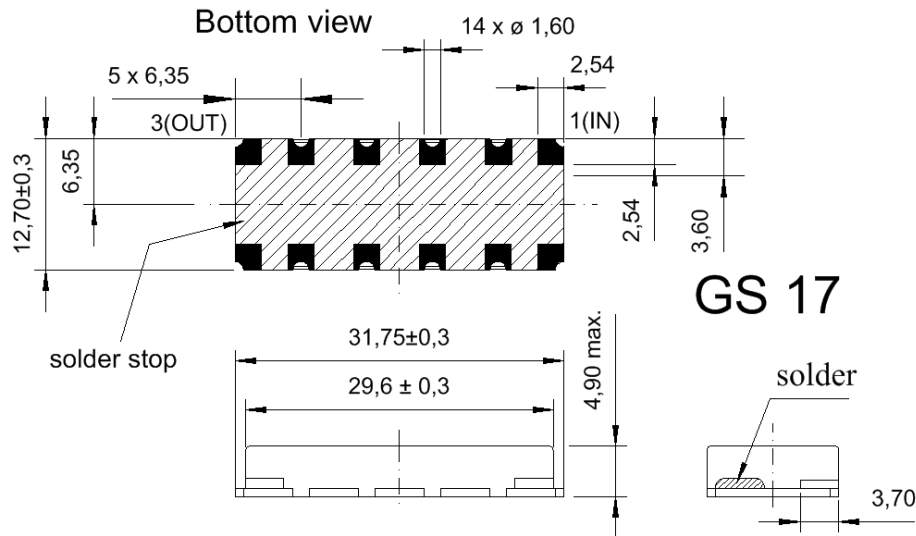


Specification for monolithic crystal filter:

MQF 45.0-1500/63

1. General

1.1. Package:

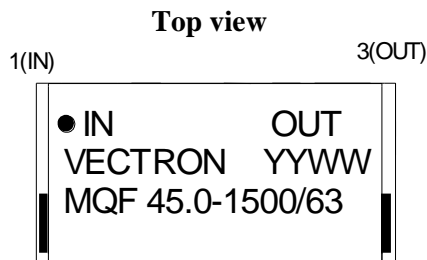


- 1.2. Type name: MQF 45.0-1500/63
- 1.3. Number of poles: 6
- 1.4. Operating temperature range: 0°C to +70°C
- 1.5. Storage temperature range: -40°C to +85°C

2. Electric values

- 2.1. Nominal centre frequency fo: 45.0 MHz
- 2.2. **Pass band**
 - 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. **Stop band**
 - 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:



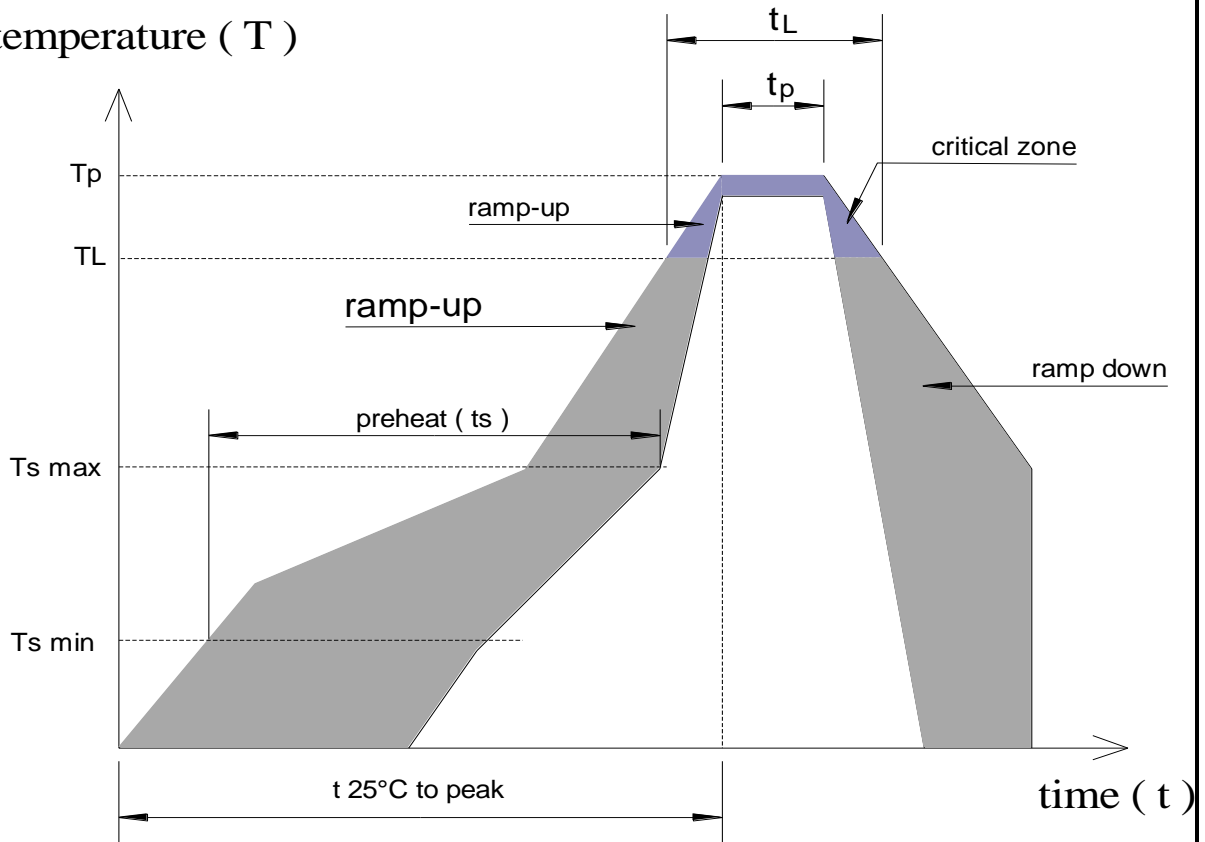
manufacturer, date code
MQF 45.0-1500/63

4. Environment conditions:

Corresponding to Vectron CF001

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


temperature (T)

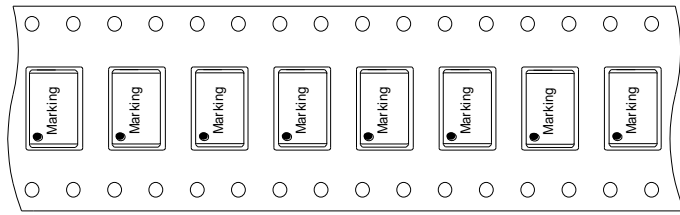


Profile Feature	Pb-free assembly	
	small body	large body
Average ramp-up rate (TL to Tp)	3°C / second max.	
Average ramp-up rate (Tmax to TL)	3°C / second max.	
Preheat:		
- Temperature Min Tmin	150°C	
- Temperature Min Tmax	200°C	
- Time ts (Tmin to Tmax)	60-180 seconds	
Time maintained above:		
- Temperature TL	217°C	
- Time tL	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		

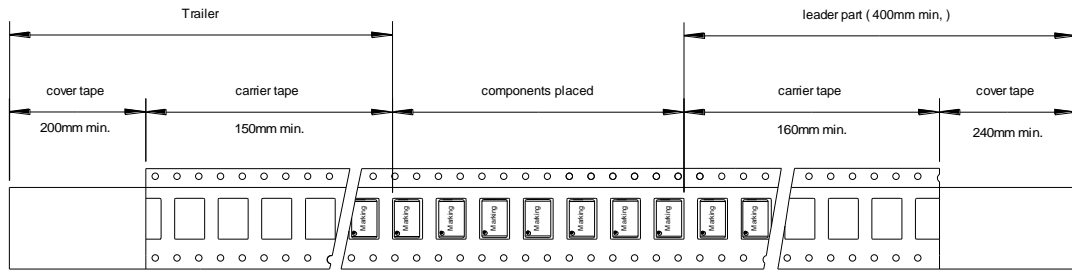
6. Taping


Maximum 600 pcs. / reel

Drawing out direction 



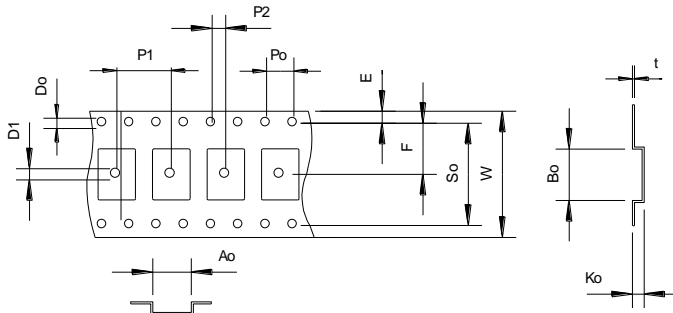
Tape dimension (mm)



Drawing out direction (leading direction) 

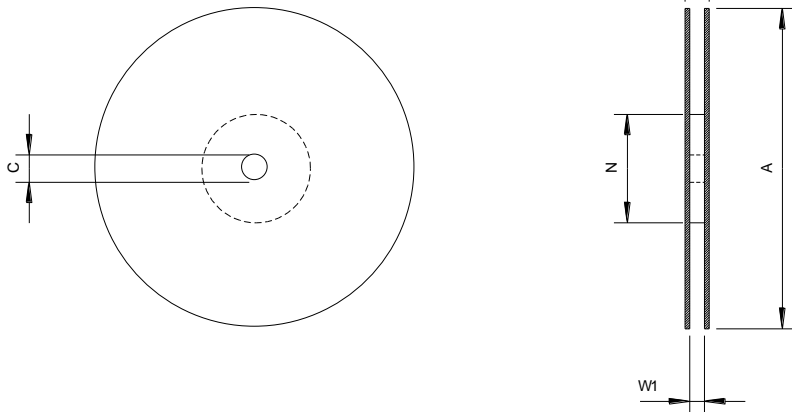
Tape (all dimensions in mm)

- W: 44.0 ± 0.3
- So: 40.4 ± 0.1
- Po: 4.0 ± 0.1
- P1: 20.0 ± 0.1
- F: 20.2 ± 0.15
- Ko: 5.1 ± 0.1
- Ao: 13.2 ± 0.1
- Bo: 32.25 ± 0.1
- t: 0.4 ± 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 ± 0.25
- W2: 49.5 ± 0.5



Edited by: _____ date: _____ name: _____