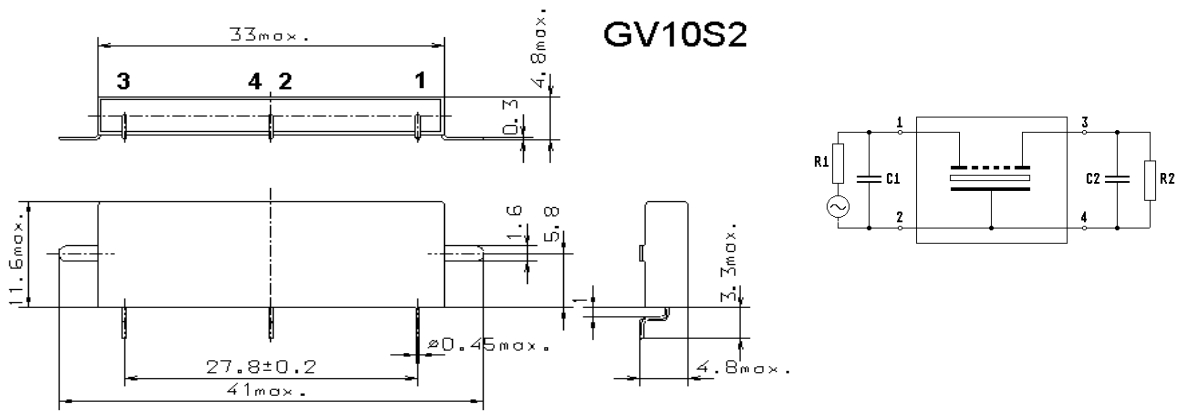
28 June 2016

Specification for monolithic crystal filter: **M Q F 2 1 . 4 - 4 0 0 0 / 2 7**

1. General

1.1. Package:

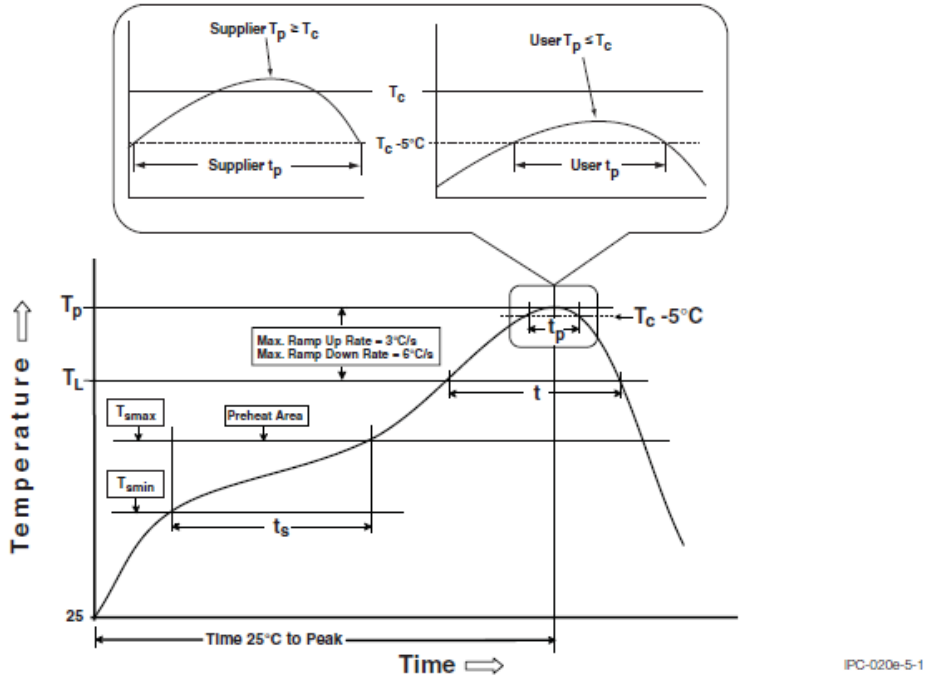


1.2.	Type name:	MQF 21.4-4000/27
1.3.	Number of poles:	6
1.4.	Operating temperature range:	-40°C to +85°C
1.5.	Storage temperature range:	-45°C to +85°C

2. Electric values

2.1.	Nominal centre frequency fo:	21.4 MHz
2.2.	**Pass band**	
2.2.1.	Bandwidth between 3 dB - frequencies:	> fo ± 20 kHz
2.2.2.	Ripple within fo ± 16 kHz:	< 1.5 dB
2.2.3.	Insertion loss: (measured on smallest attenuation in pass band)	< 5.5 dB
2.3.	**Stop band**	
2.3.1.	fo ± 60 kHz	> 60 dB (except spurious)
2.3.2.	Guaranteed attenuation:	> 80 dB (except spurious)
2.3.3.	Spurious responses:	responses allowed in the range fo + 60 kHz < f < fo + 500 kHz)
2.4.	Terminating impedance (input and output):	50 Ω // 0 pF
2.5.	Maximum input power level (working / non-damaged) :	+10 dBm / +20 dBm
3.	Marking:	manufacturer, date code MQF 21.4-4000/27
4.	Environment conditions:	Corresponding to Vectron MIL standard

5. Reflow soldering profile corr. to IPC/JEDEC J-STD-020E



Profile Feature	Pb-Free Assembly
Preheat/Soak: Temperature Min (T_{smin}) Temperature Min (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150°C 200°C 60-120 seconds
Ramp-up rate (T_L to T_p)	3°C / second max.
Liquidous temperature (T_L) Time (t_L) maintained above:	217°C 60-150 seconds
Peak package body temperature (T_p)	245°C
Average ramp-up rate (T_{smax} to T_L)	3°C / second max.
Time (T_p) within 5°C of the specified classification temperature (T_c)	30 seconds
Ramp-down rate	6°C / second max.
Time 25°C to peak temperature	8 minutes max.

Edited by: date: _____ name: _____