

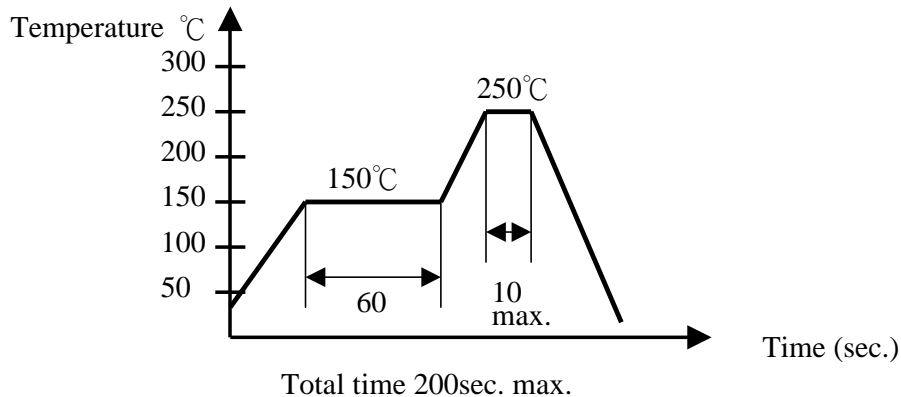
# QUARTECH

## TUNING FORK CRYSTAL UNIT

### ELECTRIC CHARAC

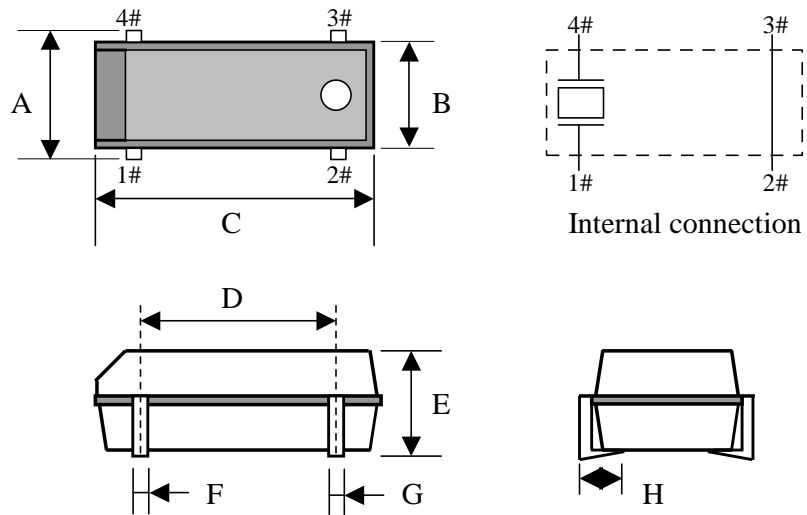
PARAMETERS	QTF-M28
Mode of Vibration	+2° X-cut ,Fundamental
Frequency Range	F 32.768KHz ( 25 ~ 150KHz )
Load Capacitance	CL 12.5 PF Typical
Frequency Tolerance at 25°C	± 20 ppm or ± 50 ppm
Series Resistance	Rr 35 KW Max.
Quality Factor	Q 40K Min.
Turnover Temperature	To 25 °C ± 5°C
Temperature Coefficient	K -0.035 ppm/°C <sup>2</sup> Typical
Operation Temperature	-40°C ~ +85°C
Shunt Capacitance	Co 1.8PF Typical
Aging 1st Year	Df/f ± 5 ppm max.
Shock Resistance	± 5 ppm max.
Capacitance Ratio	C <sub>0</sub> /C 470 Typical
Insulation resistance	500MW at DC 100V ± 15V
Drive Level	1 mW ± 0.2 mW

### REFLOW SOLDERING PROFILE



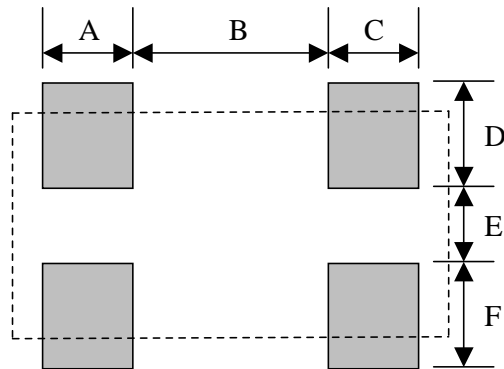
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## DIMENSION ( mm )



TYPE	A	B	C	D	E	F	G	H
QTF-M28	3.8±0.2	3.2±0.2	8.0±0.2	5.5±0.1	2.5±0.1	0.5±0.1	0.5±0.1	0.9

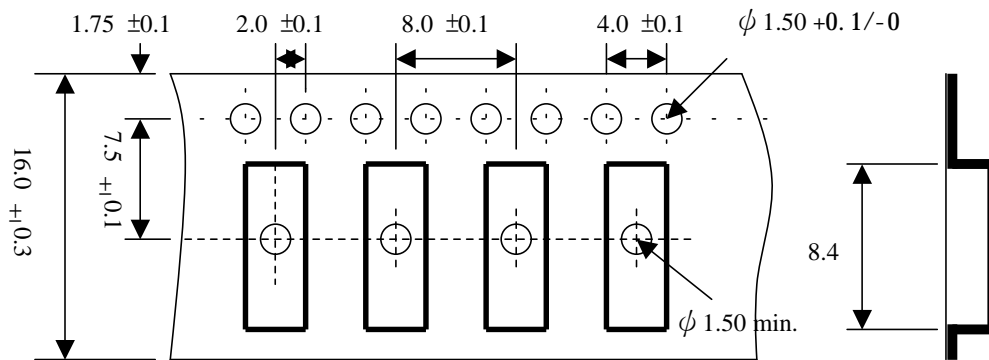
## LAND PATTERN LAYOUT ( EXAMPLE )



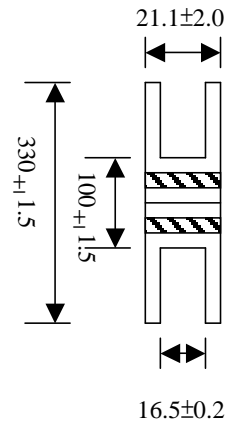
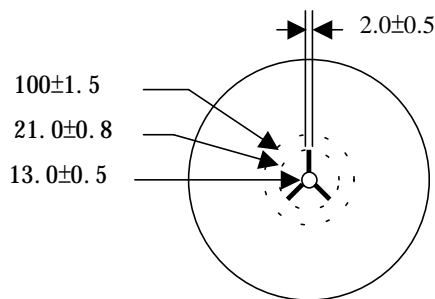
TYPE	A	B	C	D	E	F
QTF-M28	1.3	4.2	1.3	1.9	1.3	1.9

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## TAPE AND REEL DIMENSIONS



<b>W</b>	16.0 ± 0.3
<b>A0</b>	4.05 ± 0.1
<b>B0</b>	8.4 ± 0.1
<b>K0</b>	2.9 ± 0.1



1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2$
2. Carrier camber is within 1 mm in 250 mm
3. Material : Transparent Polystyrene Alloy ( UP-6100 )
4. All dimensions meet EIA-48I-Requirements
5. Thickness :  $0.35 \pm 0.05$  mm
6. Packing length per 22" reel : 62.5 Meters
7. Component load per 13" reel : 2000 pcs