

Product nameFA-238 24.000000 MHz 12.0 +50.0-50.0

Product Number / Ordering codeQ22FA23800065xx

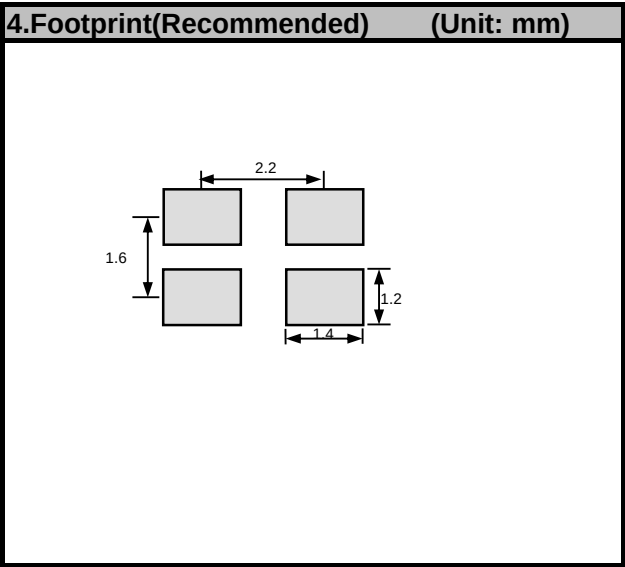
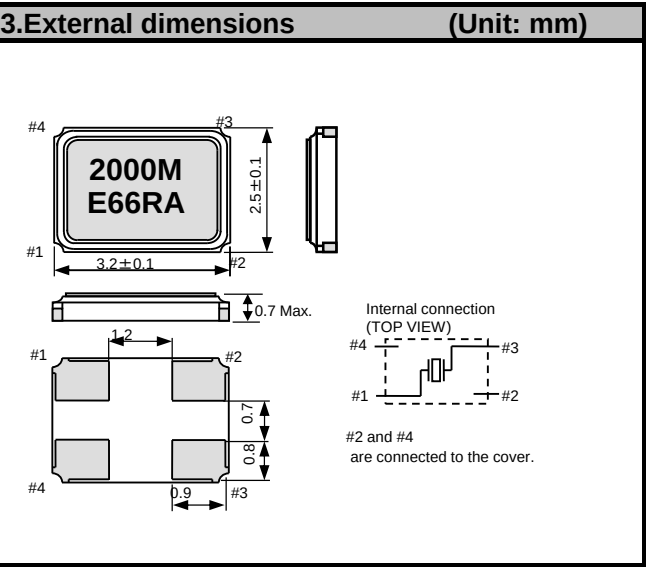
Please refer to the 5.Packing information about xx (last 2 digits)

Pb free / Complies with EU RoHS directive

Reference weight Typ. 16 mg

1.Absolute maximum ratings						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions / Remarks
Storage temperature	T_stg	-40	-	+125	°C	Storage as single product
Operating temperature	T_use	-40	-	+105	°C	

2.Specifications(characteristics)						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions / Remarks
Nominal frequency	f_nom	-	24.000000	-	MHz	Fundamental
Frequency tolerance	f_tol	-50	-	+50	x 10 ⁻⁶	@+25°C
Frequency Stability over temperature	f_tem	-30	-	+30	x 10 ⁻⁶	-20°C to +70°C
Operating temperature	T_use	-20	-	+70	°C	
Level of drive	DL	10	100	200	μW	
Load capacitance	CL	-	12	-	pF	
Motional resistance (ESR)	R1	-	-	60	Ω	
Motional capacitance	C1	-	2.97	-	fF	
Motional inductance	L1	-	14.79	-	mH	
Shunt capacitance	C0	-	1.07	-	pF	
Frequency aging	f_age	-5	—	+5	x10 ⁻⁶ /year	@+25°C, First year



5.Packing information

[1]Product number last 2 digits code (xx) description

The recommended code is "17"

Q22FA23800065xx

Code	Condition	Code	Condition
01	Any Q'ty vinyl bag(Tape cut)	14	1000pcs / Reel
11	Any Q'ty / Reel	15	2000pcs / Reel
12	250pcs / Reel	00	3000pcs / Reel
13	500pcs / Reel	17	4000pcs / Reel

(1) Tape dimensions TE0804L

Material of the Top Tape : PET+PE

[illegible]

Material of the Reel : PS

Technical drawing of a mechanical part, likely a wheel or disc, showing three views: front view, side view, and a detail view of the central hole.

Front View (Left):

- Overall diameter: $\phi 180.00$ (tolerance: $+0/-3$).
- Inner diameter: $\phi 76$.
- Radius of the outer rim: $R160$.
- Four spokes are shown, each with a width of $H \phi 3$.
- A central hole is labeled G .

Side View (Right):

- Overall thickness: 11.40 (tolerance: ± 1).
- Distance from the top surface to the center of the central hole: 9.00 (tolerance: ± 0.3).
- Distance from the bottom surface to the center of the central hole: 60.00 .

Detail View (Bottom Right):

- Shows the central hole with a diameter of $\phi 21 \pm 0.8$.
- Shows the central hole with a diameter of $\phi 13 \pm 0.2$.
- Shows the central hole with a diameter of $\phi 2.00$ (tolerance: $+0.3/-0$).

6. Reflow profile

Reflow condition

Pre Heating Temperature

Tp1 ~ Tp2 = + 170 ° C

Heating Temperature

TMit = + 220 ° C

Peek Temperature

TMax. = + 260 ° C

Point of measuring

In case of Solderability
Terminal.

In case of Resistance to soldering heat
Surface.

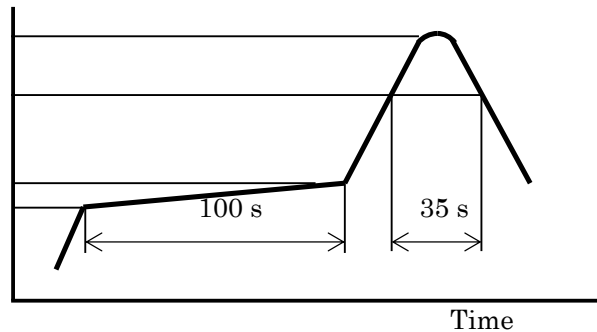
Temperature

TMax.

TMit

Tp2

Tp1



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