

Resin Mold SMD Crystal Unit

Economical type

Pb-free : RoHs compliance



TFM-1350A

■ Typical applications

- Pagers. PHS. Cordless Telephones. GPS. Bluetooth. etc .

■ Features

- 3.579 to 90 MHz.
- Economical type resin mold unit.
- Package : Resin mold type.
- 13.1×5.0×5.0mm

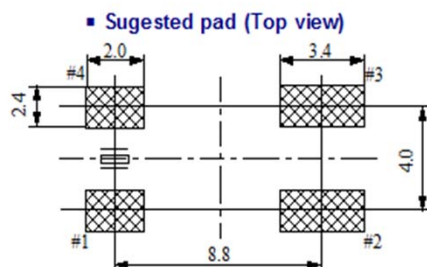
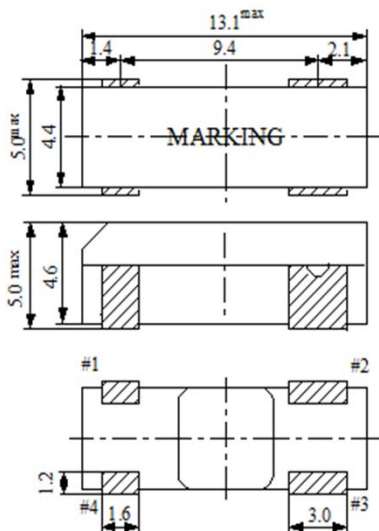
■ Specifications

Model	TFM - 1350A	
Frequency Range (Fr)	3.579 to 40.000 MHz 30.000 to 90.000 MHz	Fundamental 3rd overtone
Frequency Tolerance (max) (dF/F)	±30.0ppm to ±100.0ppm	at 25±3° C
Frequency Temperature Stability (max)	±30.0ppm to ±100.0ppm (-10 to +70° C) ±50.0ppm to ±100.0ppm (-40 to +85° C)	
Operating Temperature Range	-40 to +85° C	
Storage Temperature Range	-40 to +90° C	
Equivalent Series Resistance (max) (Rr)	See below table	
Load Capacitance (typical) (CL)	8.0pF to Series Resonance	
Parallel Capacitance (max) (Co)	7.0pF max.	
Drive Level (typical) (DL)	10.0μW to 500μW	

■ Environmental Characteristics

Description	Specification
Aging (at 25° C)	±3.0 ppm max / Year (at 25° C)
Fall Shock	Test : 3 time free drop onto concrete board from 150cm high Result: ±3.0 ppm max.
Vibration Shock	Test : Freq. 5-500Hz, Amplitude 1.5mm, Test time 4cycles/XYZ axis Result: ±3.0 ppm max.
Solderability	Test : Immersed into solder bath at 235±° C for 3 sec. Result: More than 95%
Humidity	Test : 90 to 95%RH at 60±3° C±500 hours Result: ±1.0 ppm max.
Reflow Heat	Test : 2 times of IR reflow soldering in accordance with reflow temperature profile as per the document No.:TR-0531 Result: ±5.0 ppm max.

■ Outline Drawing & Suggested Pad



■ Equivalent Series Resistance

Freq. Range	Rr (max)	Mode
3.5 to 3.9MHz	200 Ω	Fundamental
4.0 to 4.9MHz	150 Ω	
5.0 to 5.9MHz	120 Ω	
6.0 to 8.9MHz	100 Ω	
9.0 to 9.9MHz	60 Ω	
10.0 to 12.9MHz	50 Ω	3rd overtone
13.0 to 18.9MHz	35 Ω	
19.0 to 40.0MHz	25 Ω	
30.0 to 34.9MHz	80 Ω	
35.0 to 39.9MHz	70 Ω	
40.0 to 44.9MHz	65 Ω	
45.0 to 49.9MHz	60 Ω	
50.0 to 90.0MHz	80 Ω	