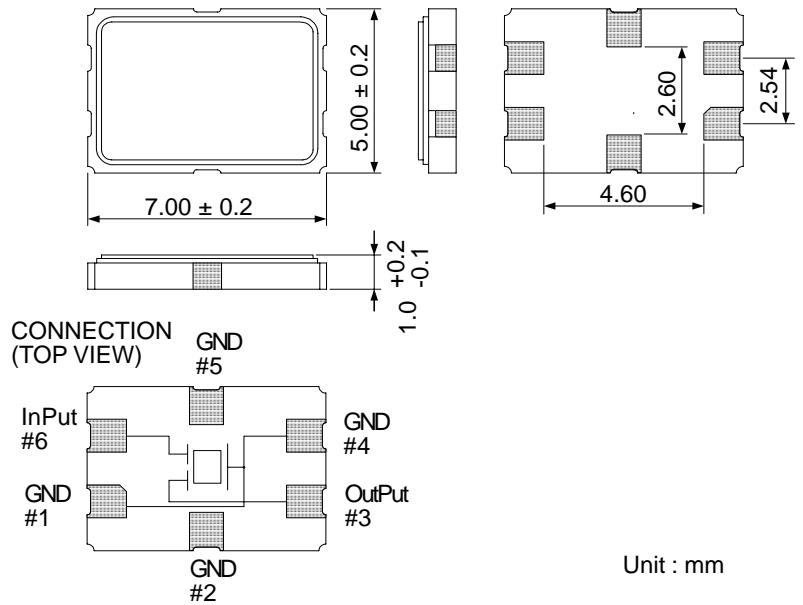


# SF-2113

## Monolithic Crystal Filters

### Features

- Ultra thin (1.0mm Height)
- Small SMD cramic package.
- High resolution frequency tolerance obtained.
- SMT and reflow compatible.



Specification												
Model	#of pole	Frequency (MHz)	PassBand width		StopBand width		Ripple dB max.	Insertion Loss dB max.	Guaranteed Attenuation		Terminating Impedance ohms//pF	Holder
			dB	±kHz	dB	±kHz			dB	fokHz-		
21408A	2	21.400	3	3.75	15	12.5	1.0	2.0	70	-910	850//6.0	SF-2113
21808A	2	21.800	3	3.75	15	12.5	1.0	2.0	70	-910	850//6.0	SF-2113
21415A	2	21.400	3	7.5	18	28	1.0	2.0	70	-910	1500//2.0	SF-2113
21715A	2	21.700	3	7.5	18	28	1.0	2.0	70	-910	1500//2.0	SF-2113
22011B	4	22.050	3	5.5	30	20	1.0	3.0	80	-910	1600//2.0	SF-2113X2

Machanical Performance		
Test items	Test Condition	
Shock(Random drop)	Dumy:100g Height:120cm Dropped cycle:3 cycle Drop it onto a hard wooden board(Thickness:30mm) for 6 directions (XX'YY'ZZ'). This should be 1 cycle.	The malfunction and are not in the outward appearance. It must satisfy all electrical characteristic.
Vibration	Frequency:10~55Hz Amplitude:1.5mm Period:About 1 min Test Time:XYZ each direction 2h	The malfunction and are not in the outward appearance. It must satisfy all electrical characteristic.
Solderability	Solder:JIS Z 3282(H60A) Flux :JIS K 5902 Temp.of :230±5(DEG C) Solder bath Dipping time:5±0.5S	The dipping surface of the lead shell be at least 95% covered with a continuons new solder coating.
Leakage	Air leak test Helium leak test	Leak rate 1x10 <sup>-4</sup> atm cc/sec max. Leak rate 1x10 <sup>-8</sup> atm cc/sec max.
Damp heat	Temp:+40±2(DEG C) Humidity:90~95% Time:240±8Hr Test after 2 hours	The malfunction and are not in the outward appearance. It must satisfy all electrical characteristic.
Cold	Temp:-25±3(DEG C) Time:1000H±24Hr Test after 2 hours	The malfunction and are not in the outward appearance. It must satisfy all electrical characteristic.
Dry heat	Temp:+70±2(DEG C) Time:1000H±24Hr Test after 2 hours	The malfunction and are not in the outward appearance. It must satisfy all electrical characteristic.
Solvency	Oganic liquid cleaning	