

1. Feature

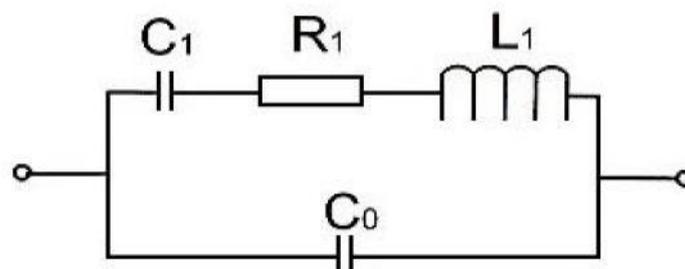
- ◆ SMD Type Fundamental Crystal Unit
- ◆ 6.0x3.5mm Package
- ◆ Pb-free, RoHS



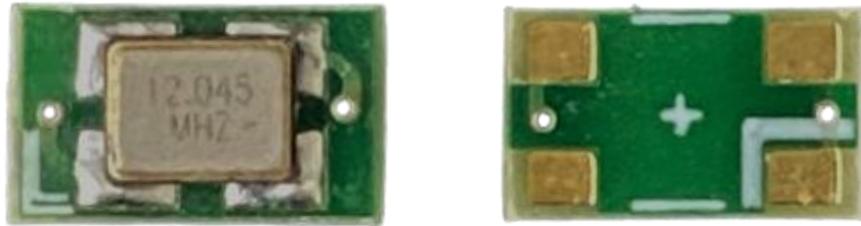
2. Specification

Specification	Condition	Min	Typ	Max	Unit
Normal Frequency	F0	12.045			MHz
Frequency Tolerance	$\Delta F/F0$	-10		10	ppm
Frequency Stability	TC	-20		20	ppm
Load Capacitance	CL		20		PF
Equivalent Series Resistance	ESR			45	Ω
Drive Level	DL		50		μW
Insulation Resistance	IR	500			M Ω
Operating Temperature Range	TOPR	-40		85	$^{\circ}C$
Storage Temperature	TSTG	-40		105	$^{\circ}C$
Aging Per Year	Fa	-3		3	ppm

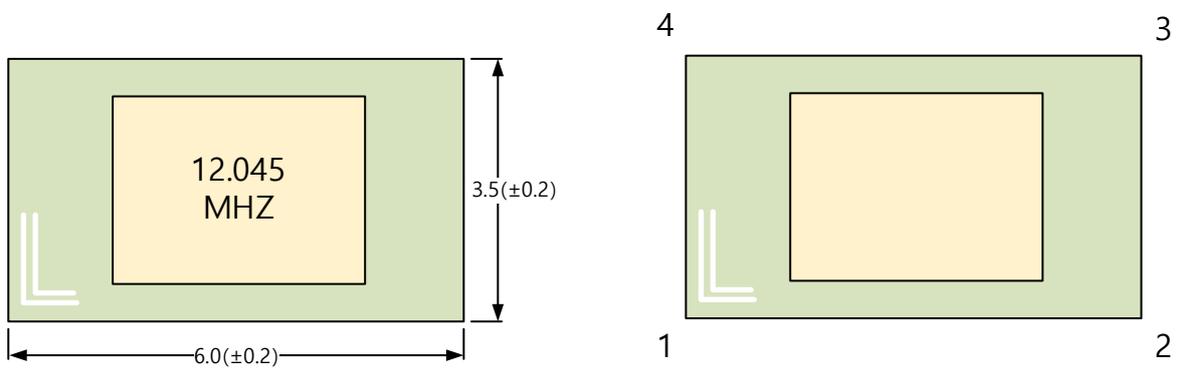
3. Equivalent Circuit



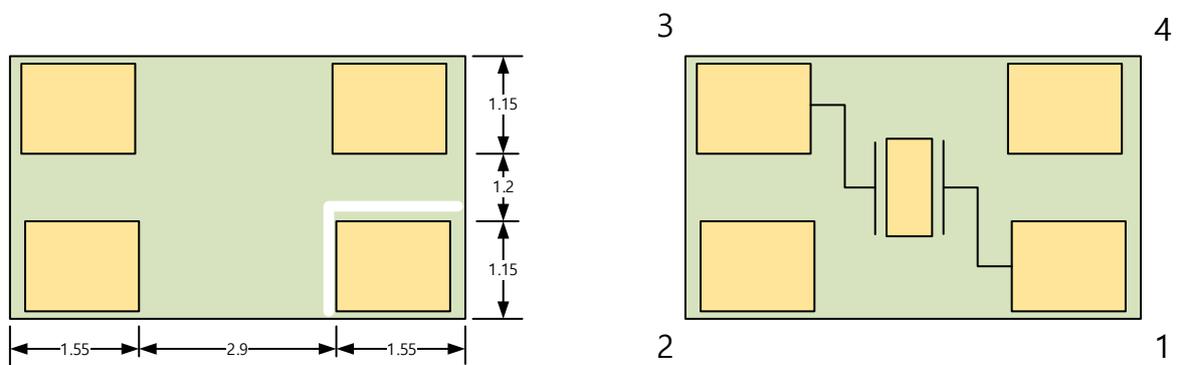
4. Product



5. Outline Dimensions (Unit: mm)



Top View



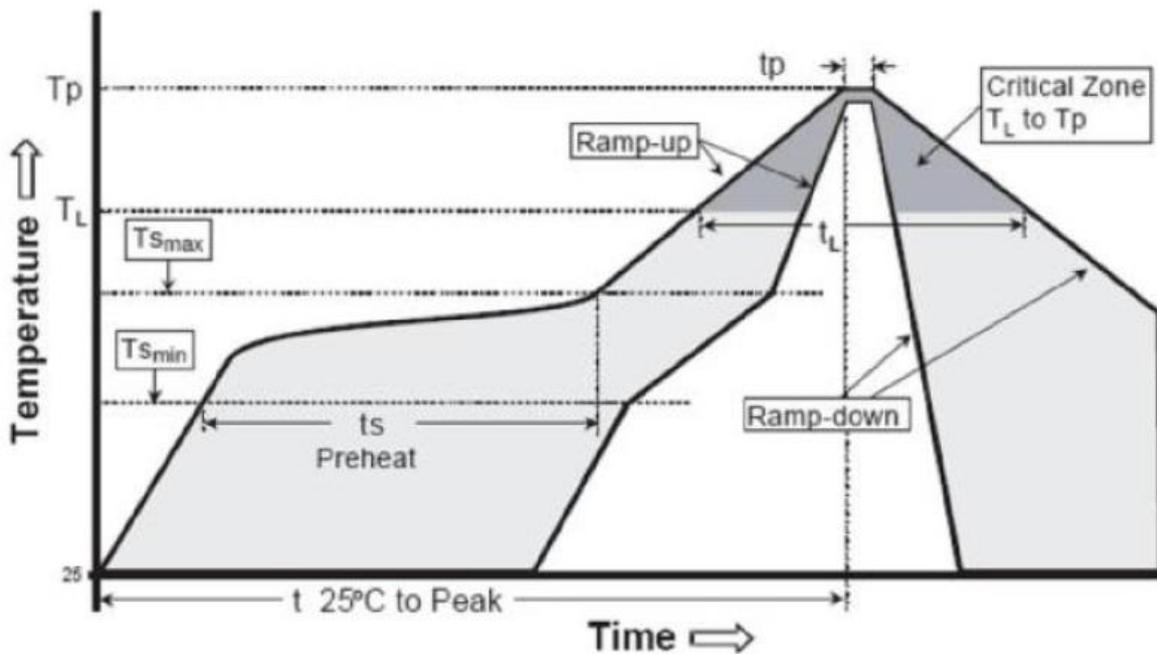
Bottom View



Side View

6. Reflow Profiles

Profiles Feature	Pb-Free Assembly
Average Ramp-up Rate (Ts max to Tp)	3°C/second max.
Preheat	
Temperature Min (Ts min)	125°C
Temperature Max(Ts max)	200°C
Time (ts min to ts max)	60~180 seconds
Time maintained above Temperature (TL)	217°C
Time (tL)	60~150 seconds
Peak/Classification Temperature (Tp)	
Time within 5°C of actual Peak Temperature(tp)	20~40 second
Ramp-down rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.
Suggest reflow times	3 times max.



End of Data Sheet