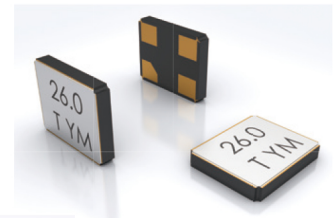


### 2.2 M2520

#### Metal Can Type Crystals M2520 Series



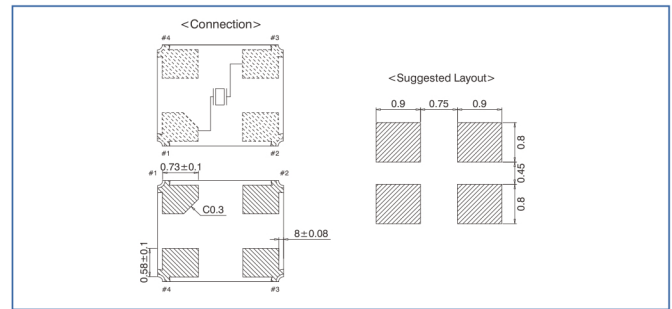
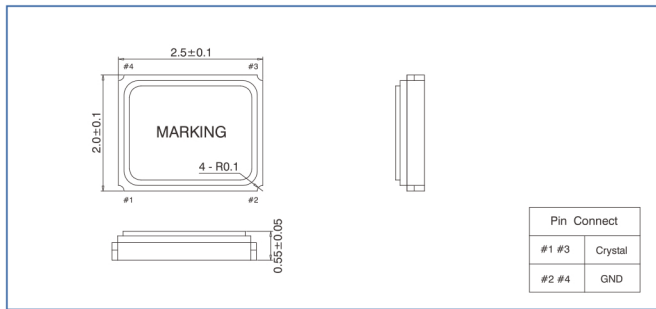
#### FEATURES

- Reflow resistance type crystal units
- Higher frequency pullability and lower equivalent series resistance
- Lower cost and highly mass production capability
- RoHS Compliant/Pb Free

#### TYPICAL APPLICATION

- The best choice of Notebook Computer TV, STB, LCDM and Cable Modem

#### DIMENSIONS



#### ELECTRICAL SPECIFICATION

Item/Type	M2520
Frequency Range	12 ~ 54 MHz
Frequency Tolerance (at 25°C)	±10 ppm, or specify
Frequency Stability Over Operating Temperature Range	±10 ppm, or specify
Operating Temperature Range	-10 ~ +60°C, or specify
Shunt Capacitance (C <sub>0</sub> )	3pF Max.
Drive Level	10μW (100μW Max.)
Load Capacitance	Series, 6pF, 12pF, 16pF, or specify
Aging (at 25°C)	±3 ppm/year Max.
Storage Temperature Range	-40 ~ +125°C

#### EQUIVALENT SERIES RESISTANCE(ESR)

Frequency	Resistance
12MHz ≤ F <sub>0</sub> < 20MHz	150 Ω Max.
20MHz ≤ F <sub>0</sub> ≤ 30MHz	80 Ω Max.
30MHz < F <sub>0</sub> < 54MHz	60Ω Max.

#### FREQ. STABILITY vs. TEMP. RANGE

ppm Temp.(°C)	ppm				ppm Temp.(°C)	ppm			
	±5	±10	±15			±15	±20	±30	±50
-10 ~ +60	△	○	○		-40 ~ +105	△	○	○	○
-20 ~ +70	×	△	○		-40 ~ +125	×	×	×	○
-40 ~ +85	×	×	△						

\*o: Available △: Condition X: Not available

Note: not all combination of options are available. Other specifications may be available upon request.