

## Typical Frequency Point Of Small Size

Size	Typ. Freq
2520	12.000
2520	12.288
2520	16.000
2520	24.000
2520	25.000
2520	26.000
2520	27.000
2520	30.000
2520	32.000
2520	38.400
2520	40.000
2520	52.000

Size	Typ. Freq
2016	16.000
2016	16.384
2016	18.000
2016	18.432
2016	19.200
2016	20.000
2016	22.000
2016	22.579
2016	24.000
2016	24.576
2016	25.000
2016	26.000
2016	27.000
2016	27.120
2016	30.000
2016	32.000
2016	32.768
2016	34.406
2016	37.400
2016	38.400
2016	39.000
2016	40.000
2016	48.000
2016	49.152
2016	50.000
2016	52.000
2016	54.000
2016	60.000
2016	60.019
2016	80.000
2016	96.000

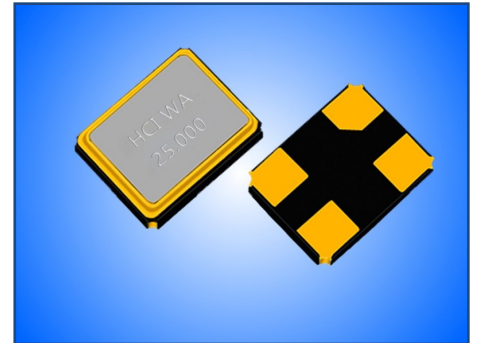
Size	Typ. Freq
1612	24.000
1612	24.576
1612	25.000
1612	26.000
1612	27.000
1612	27.120
1612	30.000
1612	32.000
1612	37.400
1612	38.400
1612	40.000
1612	48.000
1612	50.000
1612	52.000
1612	80.000
1612	96.000

**QUARTZ CRYSTAL UNIT IN SMD 2.5x2.0MM CERAMIC SEAM SEAL PACKAGE.**
**PRODUCT FEATURES**

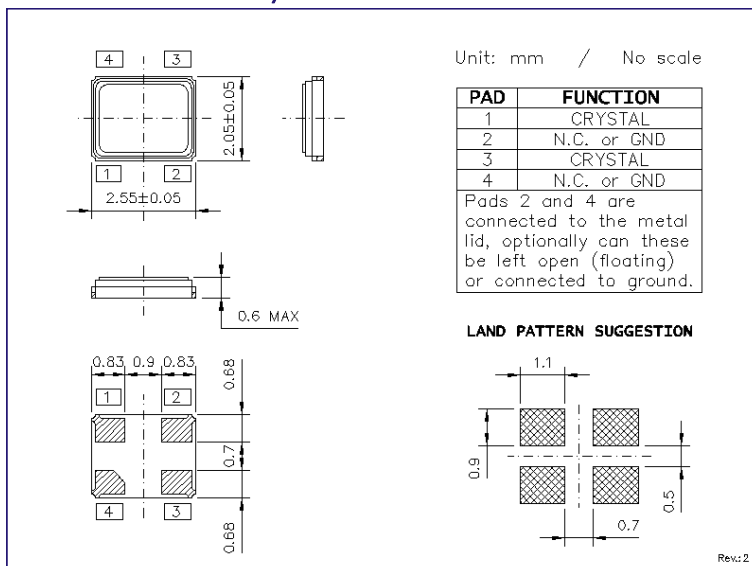
- Small dimensions 2.5x2.0x0.55 with 4 solder pads.
- Highly reliable vacuum seam sealed ceramic package.
- Tight tolerances and stabilities over temperature range.
- Automotive compliance to AEC-Q200 available.
- RoHS compliant, LEAD-FREE and HALOGEN-FREE.

**APPLICATIONS**

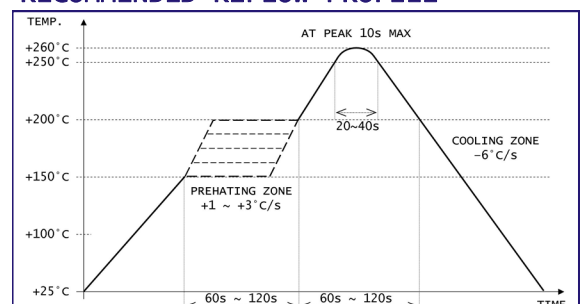
- Wireless LAN
- Bluetooth
- Mobil communication
- Handheld equipment

**PRODUCT PHOTO (NOT IN SCALE)**

**PRODUCT SPECIFICATIONS**

PARAMETER	XC22M4		CONDITIONS / REMARKS
Nominal frequency range	12.000 ~ 60.000MHZ		--
Crystal cut and mode	AT-cut / Fundamental		--
Frequency tolerance	±10ppm / ±20ppm / ±30ppm		Other options available.
Frequency stability	±10ppm	±15ppm	Other options available.
Operating temperature range	-20 to +70°C	-30 to +85°C	Other options available.
Equivalent series resistance	<125Ω		12.000 to 15.999MHZ
	<100Ω		16.000 to 18.999MHZ
	<80Ω		19.000 to 29.999MHZ
	<60Ω		30.000 to 60.000MHZ
Load capacitance	6 ~ 32pF or SERIES		Please specify.
Shunt capacitance	<3.0pF		--
Drive level	50μW TYP / 200μW MAX		--
Storage temperature range	-55 to +125°C		--

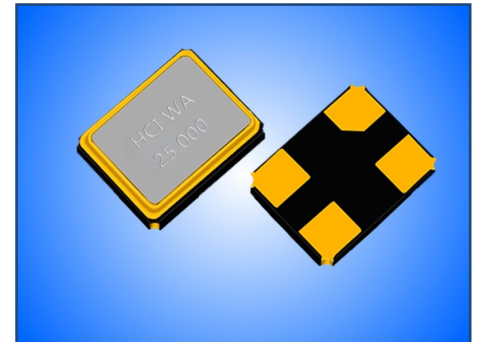
**PACKAGE OUTLINE / DIMENSIONS**

**PACKAGING INFORMATION**

- Tape & Reel compliant to EIA-481.
- Embossed carrier width 8mm.
- Component pitch in carrier 4mm.
- Reel diameter 180mm.
- QTY per reel: 3,000pcs MAX.

**RECOMMENDED REFLOW PROFILE**


**QUARTZ CRYSTAL UNIT IN SMD 2.0x1.6MM CERAMIC SEAM SEAL PACKAGE.**
**PRODUCT FEATURES**

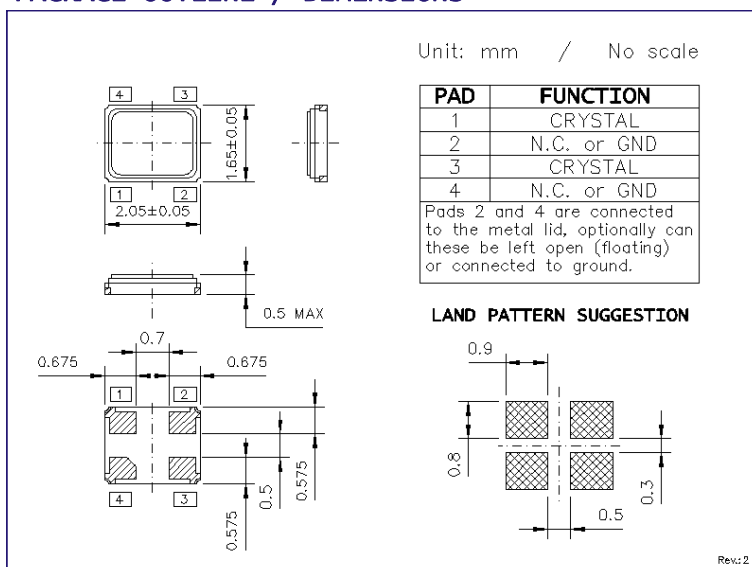
- Ultra-miniature unit dimensions 2.0x1.6x0.45 with 4 pads.
- Highly reliable vacuum seam sealed ceramic package.
- Tight tolerances and stabilities over temperature range.
- Automotive compliance to AEC-Q200 available.
- RoHS compliant, LEAD-FREE and HALOGEN-FREE.

**PRODUCT PHOTO (NOT IN SCALE)**

**APPLICATIONS**

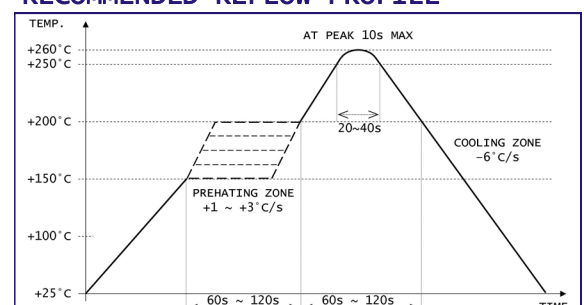
- Wireless LAN
- Bluetooth
- Mobil communication
- Handheld equipment

**PRODUCT SPECIFICATIONS**

PARAMETER	XC21M4		CONDITIONS / REMARKS
Nominal frequency range	20.000 ~ 60.000MHz		--
Crystal cut and mode	AT-cut / Fundamental		--
Frequency tolerance	±10ppm / ±20ppm / ±30ppm		Other options available.
Frequency stability	±15ppm	±20ppm	Other options available.
Operating temperature range	-20 to +70°C	-30 to +85°C	Other options available.
Equivalent series resistance	<125Ω		20.000 to 23.999MHz
	<100Ω		24.000 to 29.999MHz
	<80Ω		30.000 to 39.999MHz
	<60Ω		40.000 to 60.000MHz
Load capacitance	6 ~ 32pF or SERIES		Please specify.
Shunt capacitance	<3.0pF		--
Drive level	10μW TYP / 100μW MAX		--
Storage temperature range	-55 to +125°C		--

**PACKAGE OUTLINE / DIMENSIONS**

**PACKAGING INFORMATION**

- Tape & Reel compliant to EIA-481.
- Embossed carrier width 8mm.
- Component pitch in carrier 4mm.
- Reel diameter 180mm.
- QTY per reel: 3,000pcs MAX.

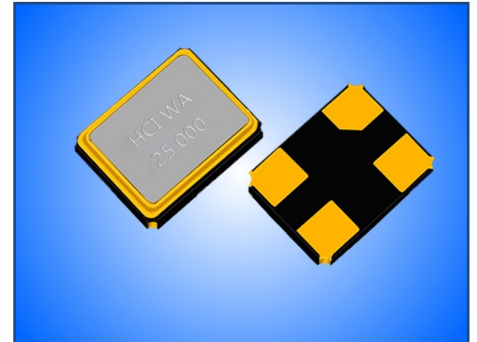
**RECOMMENDED REFLOW PROFILE**


**QUARTZ CRYSTAL UNIT IN SMD 1.6x1.2MM CERAMIC SEAM SEAL PACKAGE.**
**PRODUCT FEATURES**

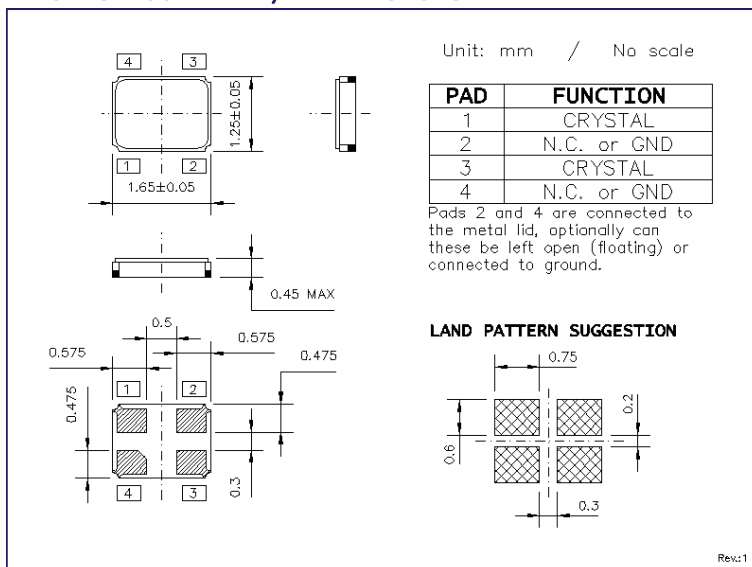
- Ultra-miniature unit dimensions 1.6x1.2x0.42 with 4 pads.
- Highly reliable vacuum seam sealed ceramic package.
- Tight tolerances and stabilities over temperature range.
- Automotive compliance to AEC-Q200 available.
- ROHS compliant, LEAD-FREE and HALOGEN-FREE.

**APPLICATIONS**

- wireless LAN
- Bluetooth
- Mobil communication
- Handheld equipment

**PRODUCT PHOTO (NOT IN SCALE)**

**PRODUCT SPECIFICATIONS**

PARAMETER	XC11M4		CONDITIONS / REMARKS
Nominal frequency range	24.000 ~ 60.000MHz		--
Crystal cut and mode	AT-cut / Fundamental		--
Frequency tolerance	±10ppm / ±20ppm / ±30ppm		Other options available.
Frequency stability	±15ppm	±20ppm	Other options available.
Operating temperature range	-20 to +70°C	-30 to +85°C	Other options available.
Equivalent series resistance	<150Ω		24.000 to 25.999MHz
	<125Ω		26.000 to 29.999MHz
	<100Ω		30.000 to 39.999MHz
	<80Ω		40.000 to 60.000MHz
Load capacitance	6 ~ 32pF or SERIES		Please specify.
Shunt capacitance	<3.0pF		--
Drive level	10μW TYP / 100μW MAX		--
Storage temperature range	-55 to +125°C		--

**PACKAGE OUTLINE / DIMENSIONS**

**PACKAGING INFORMATION**

- Tape & Reel compliant to EIA-481.
- Embossed carrier width 8mm.
- Component pitch in carrier 4mm.
- Reel diameter 180mm.
- QTY per reel: 3,000pcs MAX.

**RECOMMENDED REFLOW PROFILE**
