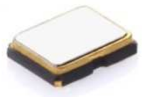
CRYSTAL UNIT

CERAMIC SMD TYPE

SX-22

- Four Pad Ceramic SMD Package
- Fundamental Crystal Design
- Tight Tolerance/Stability
- Using Highly Reliable Seam Weld Method
- Taping and Reel Available, Automatic Mountable
- Pb-free and RoHS Compliance



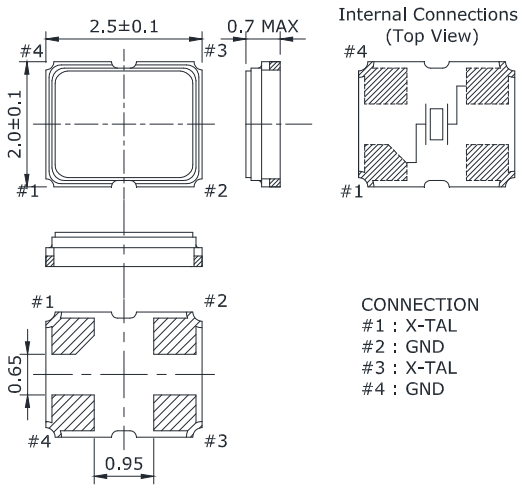
■ ELECTRICAL SPECIFICATIONS

Frequency Range	16.000 to 54.000 MHz
Operating Temperature Range	-20 to +70 ℃, -40 to +85 ℃, or specify
Storage Temperature Range	-40 to +85 ℃
Frequency Tolerance (at 25 ℃)	±15, ±30, ±50 ppm(STD), or specify
Frequency Stability Over Operating Temperature Range	±10 to ±50 ppm(-20 to +70 ℃) ±20 to ±100 ppm(-40 to +85 ℃)
Load Capacitance (CL)	8 pF(STD), Custom CL≥6 pF
Drive Level	10 μW(200 μW Max.)
Shunt Capacitance (C0)	5.0 pF Max.
Aging (at 25 ℃)	±3 ppm/year Max.
Insulation Resistance	500 MΩ Min. at 100 V_{DC}

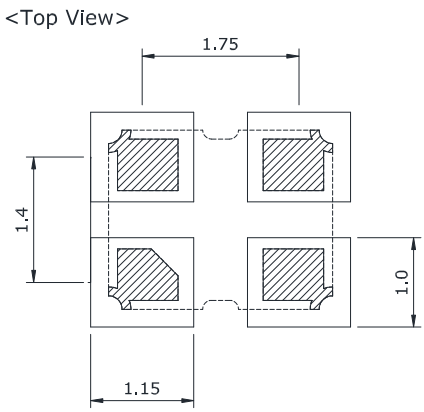
■ EQUIVALENT SERIES RESISTANCE(ESR)

Frequency Range(MHz)	ESR(Ω Max.)	Mode of Oscillation
16.000 ~ 19.999	120	Fundamental
20.000 ~ 29.999	80	Fundamental
30.000 ~ 54.000	50	Fundamental

■ MECHANICAL DIMENSIONS (mm)



■ LAND PATTERN (mm)



■ PART NUMBERING GUIDE

S Q 8 1 30 J6 – 27.00000 – T&R

PACKAGE TYPE
SX-22(2.5×2.0mm)
LOAD CAPACITANCE
8 : 8 pF
SR : SERIES
MODE OF OSCILLATION
1 : FUNDAMENTAL
FREQUENCY TOLERANCE AT 25℃
30 : ±30 ppm
XX: Two digit for Tolerance

PACKAGE OPTION
BLANK : BULK
T&R : TAPE & REEL
FREQUENCY
TABLE 1.
XX: Two digit for Stability

■ TABLE 1.

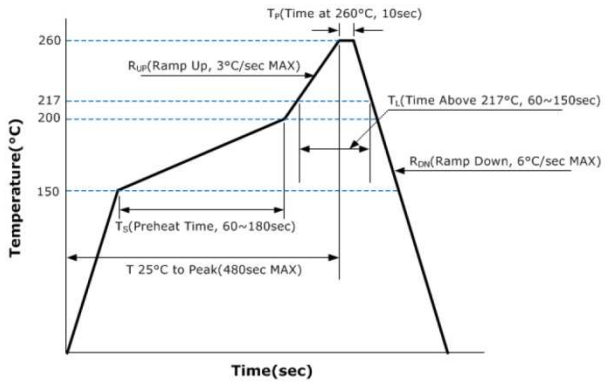
FREQUENCY STABILITY VS. TEMPERATURE RANGE

Temp \ Stability		±10	±15	±20	±30	±50	±100
		3	4	5	6	7	8
-10~70℃	D	*	*	*	*	*	*
-20~70℃	E	*	*	*	*	*	*
-30~60℃	F	*	*	*	*	*	*
-20~85℃	G		*	*	*	*	*
-30~70℃	H			*	*	*	*
-30~85℃	I			*	*	*	*
-40~85℃	J			*	*	*	*
-40~90℃	K				*	*	*
-40~105℃	L				*	*	*
-40~125℃	M					*	*

■ ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Solderability	MIL-STD-883, Method 2003

■ REFLOW PROFILE



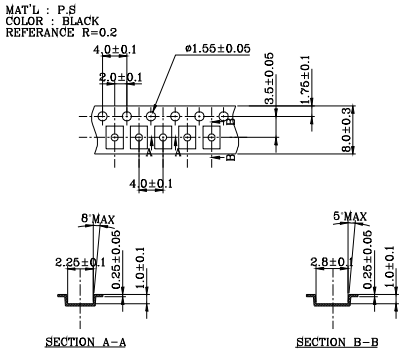
■ MARKING GUIDE

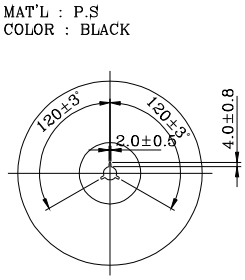
LINE 1 : XX.XX
LINE 2 : S Y WW

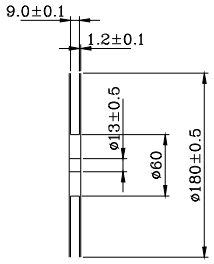
Sunny
Year
Week
Frequency in MHz

■ TAPE AND REEL DIMENSIONS

3,000pcs/reel







NOTE
1.COVER TAPE : 5.4mm(WIDTH)X0.06mm(t) MAT'L : PET
2.COLOR : BLACK