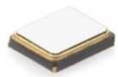
CRYSTAL UNIT

CERAMIC SMD TYPE

SX-21

- 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



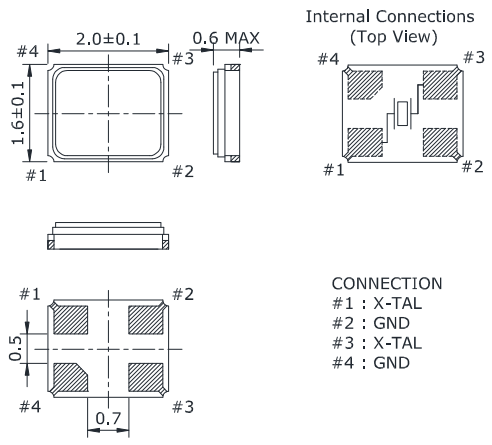
■ ELECTRICAL SPECIFICATIONS

Frequency Range	20.000 to 60.000 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
20.000 ~ 23.999	150	Fundamental
24.000 ~ 25.999	100	Fundamental
26.000 ~ 39.999	80	Fundamental
40.000 ~ 60.000	60	Fundamental

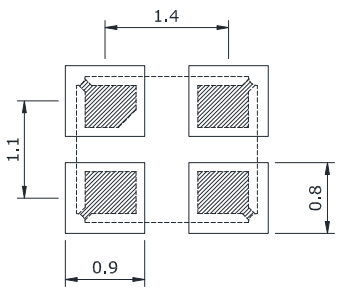
■ MECHANICAL DIMENSIONS (mm)



CONNECTION
#1 : X-TAL
#2 : GND
#3 : X-TAL
#4 : GND

■ LAND PATTERN (mm)

<Top View>



■ PART NUMBERING GUIDE

S R 8 1 30 J6 – 27.00000 – T&R

PACKAGE TYPE
SX-21(2.0×1.6mm)
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

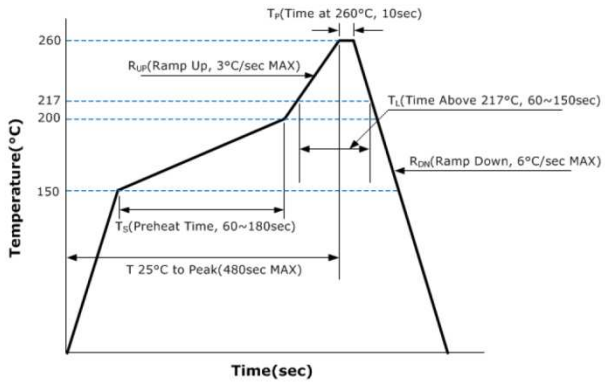
■ TABLE 1.

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

