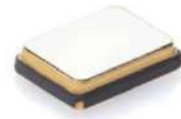


CERAMIC SMD TYPE SX-32

- 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

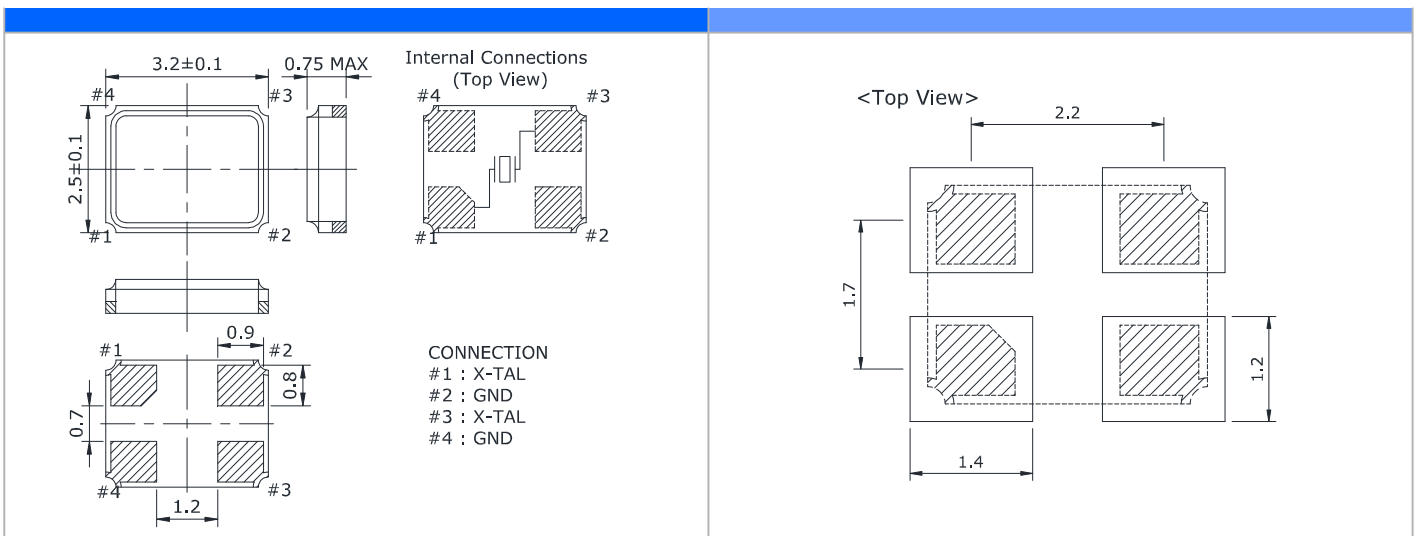
Frequency Range	12.000 to 54.000 MHz
Operating Temperature Range	-20 to +70 °C, -40 to +85 °C, or specify
Storage Temperature Range	-40 to +85 °C
Frequency Tolerance (at 25 °C)	±15, ±30, ±50 ppm(STD), or specify
Frequency Stability Over Operating Temperature Range	±10 to ±50 ppm(-20 to +70 °C) ±20 to ±100 ppm(-40 to +85 °C)
Load Capacitance (CL)	12 pF(STD), Custom CL≥8 pF or Series Resonant
Drive Level	10 μW(200 μW Max.)
Shunt Capacitance (C0)	5.0 pF Max.
Aging (at 25 °C)	±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
12.000 ~ 13.999	150	Fundamental
14.000 ~ 15.999	100	Fundamental
16.000 ~ 19.999	80	Fundamental
20.000 ~ 29.999	60	Fundamental
30.000 ~ 54.000	50	Fundamental

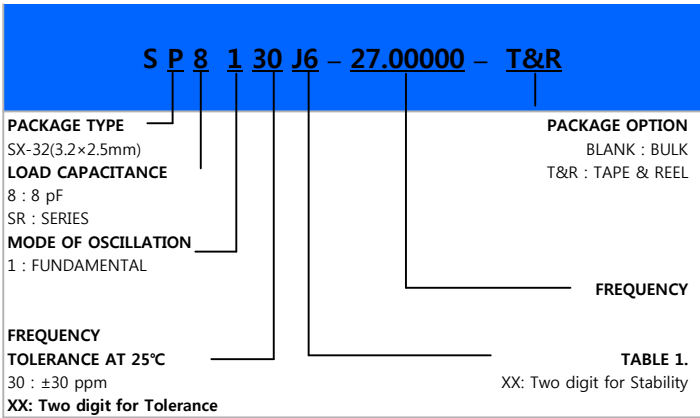
■ MECHANICAL DIMENSIONS (mm)

■ LAND PATTERN (mm)



■ PART NUMBERING GUIDE

■ TABLE 1.



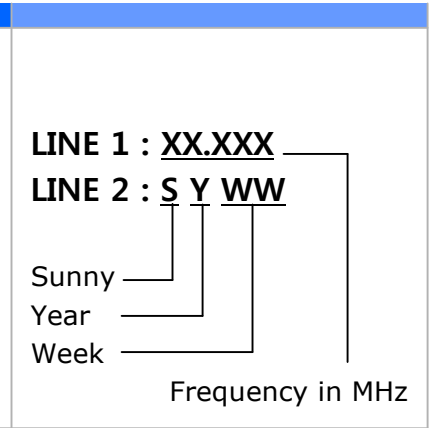
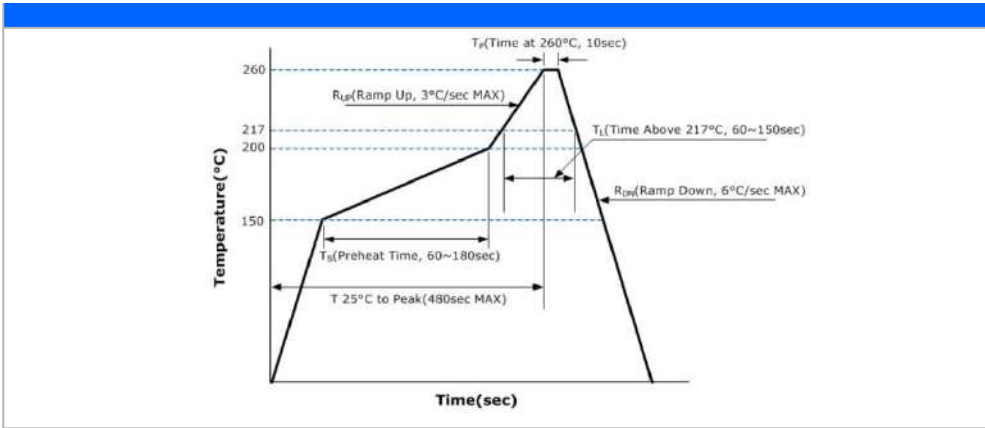
Stability		FREQUENCY STABILITY VS. TEMPERATURE RANGE					
		±10	±15	±20	±30	±50	±100
Temp		3	4	5	6	7	8
		-10~70°C	D	*	*	*	*
-20~70°C	E	*	*	*	*	*	*
-30~60°C	F	*	*	*	*	*	*
-20~85°C	G		*	*	*	*	*
-30~70°C	H			*	*	*	*
-30~85°C	I			*	*	*	*
-40~85°C	J			*	*	*	*
-40~90°C	K				*	*	*
-40~105°C	L				*	*	*
-40~125°C	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



■ TAPE AND REEL DIMENSIONS

