

# CERAMIC SMD TYPE

## SX-7

- 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

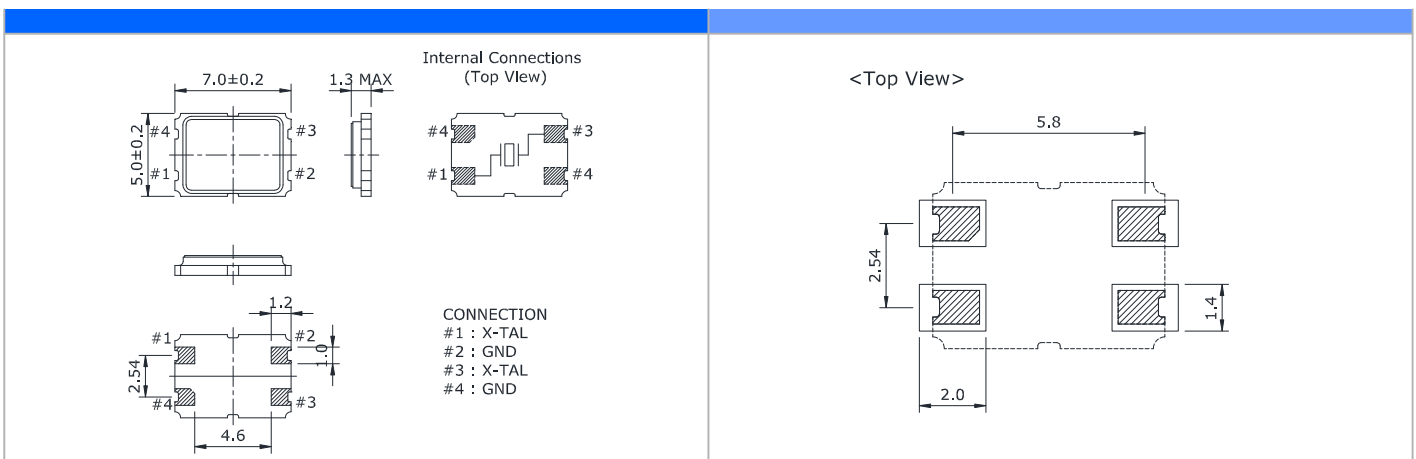
Frequency Range	6.000 to 125.000 MHz
Operating Temperature Range	-20 to +70 °C, -40 to +85 °C, or specify
Storage Temperature Range	-40 to +85 °C
Frequency Tolerance (at 25 °C)	±15, ±30, ±50 ppm(STD), or specify
Frequency Stability	±10 to ±50 ppm(-20 to +70 °C)
Over Operating Temperature Range	±20 to ±100 ppm(-40 to +85 °C)
Load Capacitance (CL)	18 pF(STD), Custom CL≥10 pF or Series Resonant
Drive Level	10 μW(200 μW Max.)
Shunt Capacitance (C0)	7.0 pF Max.
Aging (at 25 °C)	±3 ppm/year Max.
Insulation Resistance	500 MΩ Min. at 100 V <sub>DC</sub>

### ■ EQUIPMENT SERIES RESISTANCE(ESR)

Frequency Range(MHz)	ESR(Ω Max.)	Mode of Oscillation
6.000 ~ 6.999	120	Fundamental
7.000 ~ 9.999	70	Fundamental
10.000 ~ 11.999	60	Fundamental
12.000 ~ 14.999	60	Fundamental
15.000 ~ 19.999	50	Fundamental
20.000 ~ 34.999	40	Fundamental
35.000 ~ 43.999	80	3rd overtone
44.000 ~ 49.999	60	3rd overtone
50.000 ~ 79.999	60	3rd overtone
80.000 ~ 125.000	60	3rd overtone

### ■ MECHANICAL DIMENSIONS (mm)

### ■ LAND PATTERN (mm)



**■ PART NUMBERING GUIDE**

**■ TABLE 1.**

**S M 18 1 30 M7 - 27.00000 - T&R**

**PACKAGE TYPE**  
SX-7(7.0×5.0mm)

**LOAD CAPACITANCE**  
18 : 18 pF

**SR : SERIES**

**MODE OF OSCILLATION**  
1 : FUNDAMENTAL

**FREQUENCY TOLERANCE AT 25°C**  
30 : ±30 ppm  
XX: Two digit for Tolerance

**PACKAGE OPTION**  
BLANK : BULK  
T&R : TAPE & REEL

**FREQUENCY**

**TABLE 1.**  
XX: Two digit for Stability

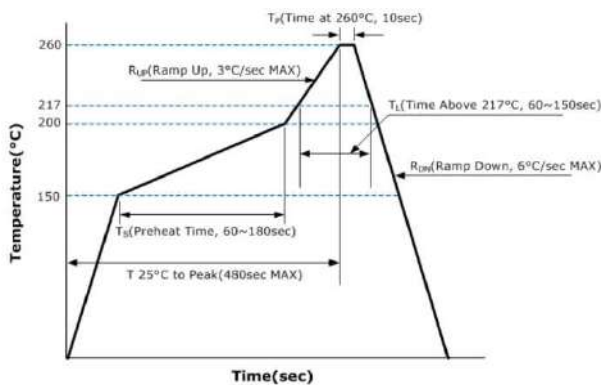
Stability		FREQUENCY STABILITY VS. TEMPERATURE RANGE					
		±10	±15	±20	±30	±50	±100
Temp		3	4	5	6	7	8
-10~70°C	D	*	*	*	*	*	*
-20~70°C	E	*	*	*	*	*	*
-30~60°C	F	*	*	*	*	*	*
-20~85°C	G		*	*	*	*	*
-30~70°C	H			*	*	*	*
-30~85°C	I			*	*	*	*
-40~85°C	J			*	*	*	*
-40~90°C	K				*	*	*
-40~105°C	L				*	*	*
-40~125°C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



**LINE 1 : XX.XXX**  
**LINE 2 : SUNNY Y WW**

Sunny \_\_\_\_\_  
 Year \_\_\_\_\_  
 Week \_\_\_\_\_

Frequency in MHz

**■ TAPE AND REEL DIMENSIONS**

1,000pcs/reel

