

# Automotive Grade SX-A8

- AEC-Q200 Compliant
- Seam Sealed Package
- Fundamental Crystal Design
- Excellent Vibration Resistance & Shock Resistance
- High Frequency Stability
- TS-16949 Certified
- Pb-free and RoHS Compliance



## ■ ELECTRICAL SPECIFICATIONS

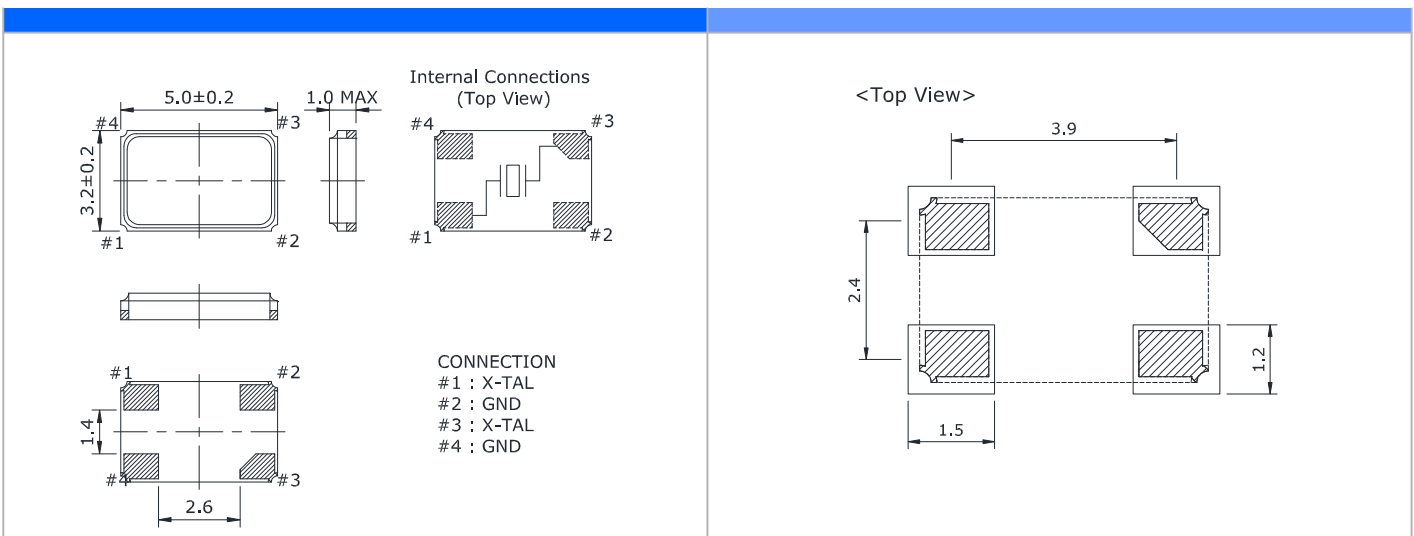
Frequency Range	8.000 to 54.000 MHz
Operating Temperature Range	-40 to +105 °C, -40 to +125 °C
Storage Temperature Range	-55 to +125 °C
Frequency Tolerance (at 25 °C)	±15, ±30, ±50 ppm(STD), or specify
Frequency Stability	±30 to ±100 ppm(-40 to +105 °C)
Over Operating Temperature Range	±50 to ±100 ppm(-40 to +125 °C)
Load Capacitance (CL)	18 pF(STD), Custom CL≥10 pF or Series Resonant
Drive Level	10 μW(100 μW) Max.
Shunt Capacitance (C0)	5.0 pF Max.
Aging (at 25 °C)	±5 ppm/year Max.
Insulation Resistance	500 MΩ Min. at 100 V <sub>DC</sub>

## ■ EQUIVALENT SERIES RESISTANCE(ESR)

Frequency Range(MHz)	ESR(Ω Max.)	Mode of Oscillation
8.000 ~ 9.999	100	Fundamental
10.000 ~ 11.999	70	Fundamental
12.000 ~ 14.999	70	Fundamental
15.000 ~ 19.999	60	Fundamental
20.000 ~ 34.999	50	Fundamental
35.000 ~ 43.999	40	Fundamental
44.000 ~ 54.000	40	Fundamental

## ■ MECHANICAL DIMENSIONS (mm)

## ■ LAND PATTERN (mm)



**■ PART NUMBERING GUIDE**

**■ TABLE 1.**

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

**PACKAGE TYPE**  
SX-8(5.0×3.2mm)

**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

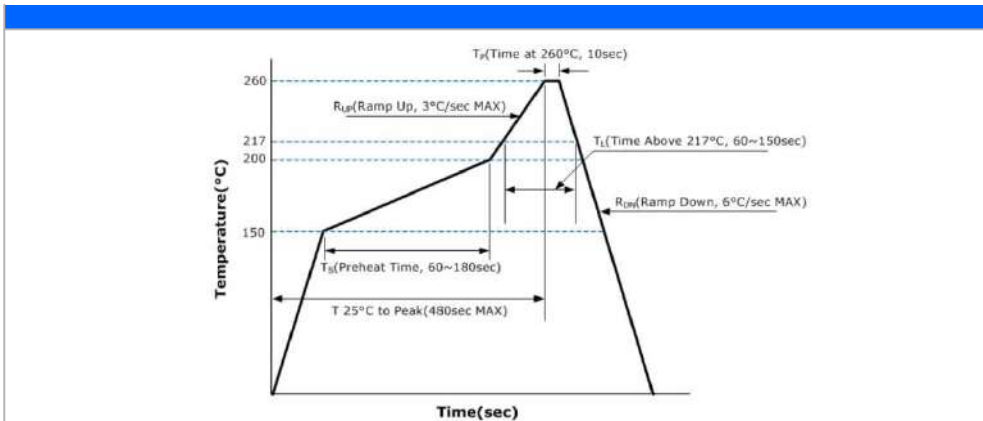
Stability		FREQUENCY STABILITY VS. TEMPERATURE RANGE					
		±10	±15	±20	±30	±50	±100
Temp		3	4	5	6	7	8
		-10~70°C	D	*	*	*	*
-20~70°C	E	*	*	*	*	*	*
-30~60°C	F	*	*	*	*	*	*
-20~85°C	G		*	*	*	*	*
-30~70°C	H			*	*	*	*
-30~85°C	I			*	*	*	*
-40~85°C	J			*	*	*	*
-40~90°C	K				*	*	*
-40~105°C	L				*	*	*
-40~125°C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

**■ ENVIRONMENTAL & MECHANICAL SPECIFICATIONS**

High Temperature Exposure	MIL-STD-202 Method 108
Temperature Cycling	JESD22 Method JA-104
Biased Humidity	MIL-STD-202 Method 103
Operational Life	MIL-STD-202 Method 108
Mechanical Shock	MIL-STD-202 Method 213, Conditions C
Vibration	MIL-STD-202 Method 204
Resistance to Soldering Heat	MIL-STD-202 Method 210, Condition B
Solderability	J-STD-002, Method B, D

**■ 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

MAT'L : P.S  
COLOR : WHITE or BLACK  
REFERENCE R=0.2