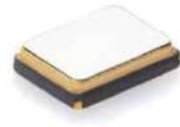


Automotive Grade SX-A32

- 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	12.000 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 Over Operating Temperature Range	±30 to ±100 ppm(-40 to +105 °C) ±50 to ±100 ppm(-40 to +125 °C)
Load Capacitance (CL)	12 pF(STD), Custom CL≥8 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 _{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)

Internal Connections (Top View) CONNECTION #1 : X-TAL #2 : GND #3 : X-TAL #4 : GND	<Top View>
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PART NUMBERING GUIDE

TABLE 1.

FREQUENCY STABILITY VS. TEMPERATURE RANGE								
Temp	Stability	±10	±15	±20	±30	±50	±100	
		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					*	*	

S P 10 1 30 M7 - 27.00000 - T&R

PACKAGE TYPE

SX-32(3.2×2.5mm)

LOAD CAPACITANCE

10 : 10 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.

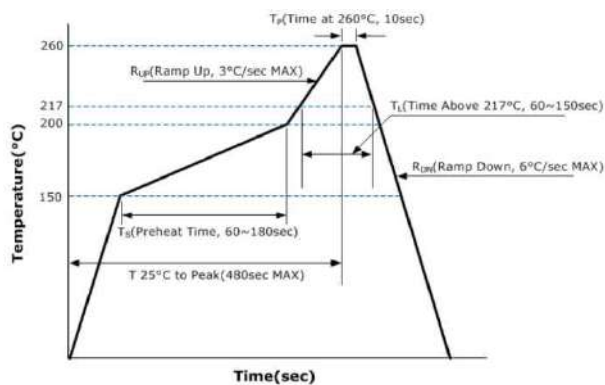
XX: Two digit for Stability

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 : S Y WW

Sunny

Year

Week

Frequency in MHz

TAPE AND REEL DIMENSIONS

3,000pcs/reel

