

ASO Series (Fixed Models) SMD Crystal Clock Oscillators

Kosho Inc.
A Morion Company

Parameters	Conditions	Specifications			
Type		ASO (SPXO oscillator, 5032 size, 4 pads)			
Power Supply Voltage	Vdc	+3.3V ±10%		+5.0V ±10%	
Frequency Range		10.000 MHz to 60.000 MHz	61.000 MHz to 160.000 MHz	10.000 MHz to 60.000 MHz	61.000 MHz to 160.000 MHz
Frequency Stability	All Conditions	±20ppm to ±100ppm			
Operating Temperature		-20 ⁰ to +70 ⁰ C -40 ⁰ to +85 ⁰ C			
Storage Temperature		-40 ⁰ to +85 ⁰ C			
Output Symmetry	@50% Vdc	45 / 55 %		45 / 55 %	
Current Consumption (No Load)	#1 Open (CL = 15 pF)	*Note 1		*Note 2	
Stand-by Current	"0" Level at #1	10 uA max.		15 uA max.	
Output Load	CMOS	15 pF max.			
Output Voltage	VOL VOH	+0.4V min. +2.2V max.		+0.5V min. +4.0V max.	
Rise Time / Fall Time	10% Vdd to 90% Vdd	10.0nS max.	5.0nS max.	10.0nS max.	5.0nS max.

Ordering Guide

ASO-33 1 C M 4 - 50.000 MHz

P.S. Voltage

+3.3V | +5.0V

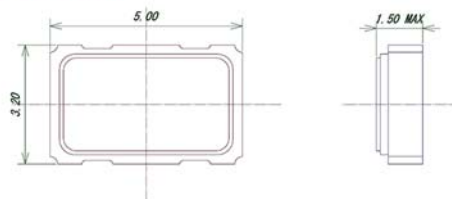
Frequency

+3.3V	+5.0V
10~160 MHz	10~100 MHz

Sign Stability

Sign	Stability
E	±20ppm
D	±25ppm
C	±30ppm
B	±50ppm
A	±100ppm
Z	Other

Dimensions



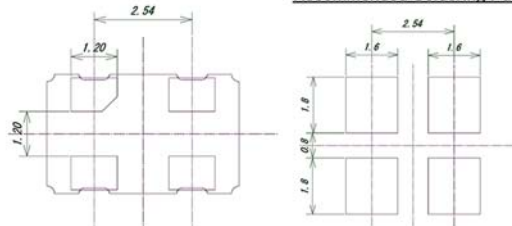
* Note 1 : Current consumption at +3.3Vdc

Frequency range	Current
1.4 ≤ f ≤ 40MHz	15 mA max.
40 < f ≤ 70MHz	25 mA max.
70 < f ≤ 125MHz	40 mA max.
125 < f ≤ 160MHz	50 mA max.

* Note 2 : Current consumption at +5.0Vdc

Frequency range	Current
1.4 ≤ f ≤ 40MHz	30 mA max.
40 < f ≤ 70MHz	45 mA max.
70 < f ≤ 100MHz	60 mA max.

Recommended Soldering Pattern



Pad Connection

Pad	Connection
#1	Tristate
#2	GND
#3	Output
#4	VDD

Sign Temp' Range

Sign	Temp' Range
S	0~ +70 ⁰ C
P	-10~ +70 ⁰ C
M	-20~ +70 ⁰ C
F	-40~ +85 ⁰ C
X	Other