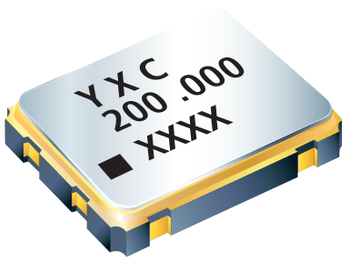
YSO690PR



Features

- Quartz Crystal Programmable Oscillator
- Any frequency between 1MHz~200MHz accurate to 6 decimal places
- Operating temperature from -40℃ to +85℃
- Period Jitter, Typical: 1pSec at 12KHz to 20MHz
- CMOS compatible output
- Industry-standard packages: 2.0x1.6 ,2.5 x 2.0 , 3.2 x 2.5 , 5.0 x 3.2 , 7.0 x 5.0 mm x mm

Applications:

- Ideal for DSC, DVC, DVR, IP CAM, Tablets, e-Books, SSD, GPON, EPON, etc
- Ideal for high-speed serial protocols such as : USB, SATA, SAS,

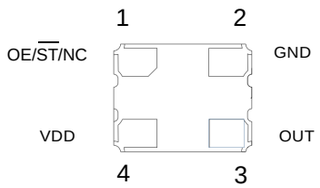
Electrical Specifications

All Min and Max limits are specified over temperature and rated operating voltage with 15 pF output load unless otherwise stated. Typical values are at 25°C and nominal supply voltage.

Parameter	1.8 V	2.5 V	3.3 V
Frequency Range	1MHz~125MHz	1MHz~200MHz	1MHz~200MHz
Supply Voltage Variation(Vdd)10%	1.62 V~1.98 V	2.25 V~2.75 V	2.97 V~3.63 V
Standby Current	400 μA		
Frequency Tolerance	±20ppm, ±25ppm, ± 50ppm, or specify		
Output Load	15pF , or specify		
Operating Temperature Range	- 40 ~ + 85 ℃, or specify		
Storage Temperature Range	- 55 ~ +150 ℃		
Voltage Vol (Max.) / Vol (Min.)	VOH = 90%Vdd/VOL = 10%Vdd		
Duty Cycle	45~55%		
Period Jitter(@12K-20Mhz)	1.8V=1.5ps 2.5V=1.1ps 3.3V=1ps		
Start-up Time	7ms Max.		
Supply Current	See Below		
Frequency Aging (at 25 ℃)	± 3 ppm / year Max.		

Pin Description

Pin	Symbol	Functionality	
1	OE/$\overline{ST}$/NC	Output Enable	H : specified frequency output L : output is low. Specified frequency output stop.
		Standby	H : specified frequency output L :output is low. Device goes to sleep mode. Supply current reduces to 400uA(Standby Current).
		No Connect	Pin 1 = VDD or Pin 1 is Open : Specified frequency output. Pin 1 has no function
2	GND	Power	Electrical ground
3	OUT	Output	Oscillator output
4	VDD	Power	Power supply voltage



Pin Assignments

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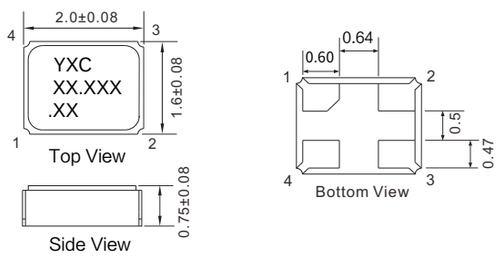
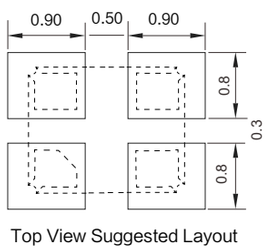
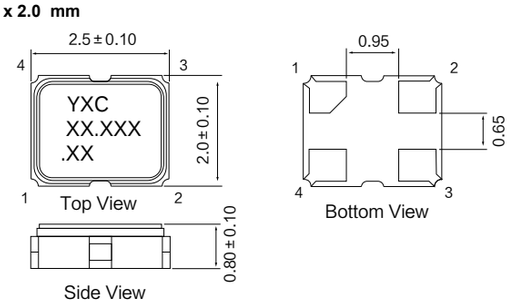
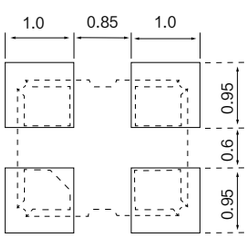
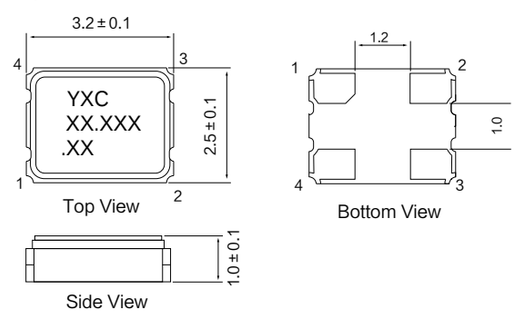
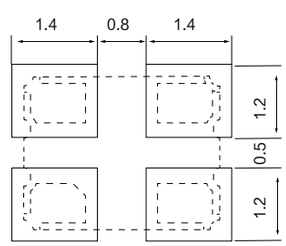
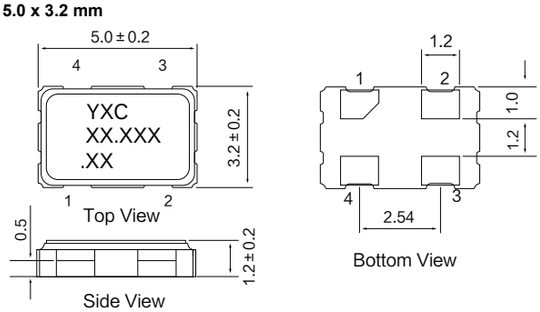
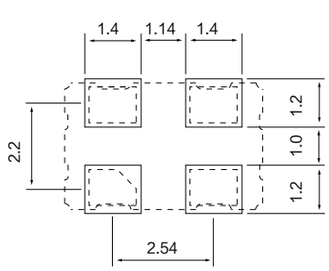
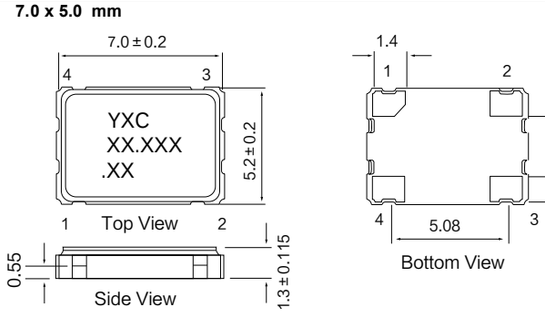
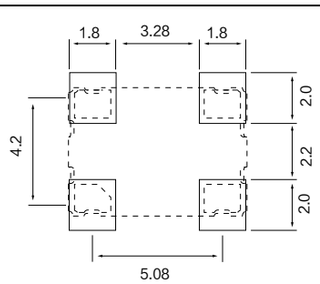
Dimensions and Patterns

Package Size – Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
2.0 x 1.6 mm 	
2.5 x 2.0 mm 	
3.2 x 2.5 mm 	
5.0 x 3.2 mm 	
7.0 x 5.0 mm 	

Notes:

1. A capacitor of value 0.01μF~0.1μFor higher between Vdd and GND is required.

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★ PART NUMBER GUIDE

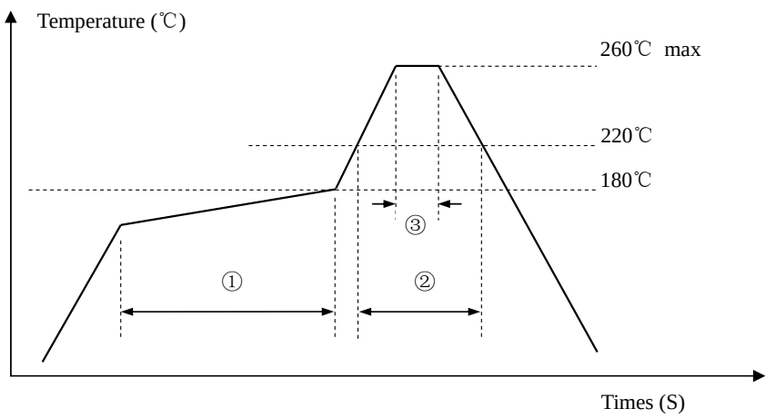
*e.g. O97050200MEDA4SI-** *YSO690PR=7.0 ×5.0 SMD SEAM TYPE*

Quartz Crystal Oscillator	Series	Dimensions	Frequency (Hz)	Supply voltage (V)	Frequency Stability Overall (ppm)	output	Pin	Material	Operating Temp. Range	–	Remark
O	9	7050	200M	E	D	A	4	S	I	-	*

★ INPUT CURRENT

Supply Voltage	Power Dissipaton				
	1.000 ~ 30.000 MHz	30.000 ~ 75.000 MHz	75.000 ~ 110.000 MHz	133.000 ~ 166.000 MHz	166.000 ~ 200.000 MHz
1.8 V	18 mA max	19 mA max	20 mA max	20 mA max	20 mA max
2.5 V	21 mA max	22mA max	23 mA max	24mA max	25mA max
3.3 V	23 mA max	24 mA max	25 mA max	26 mA max	27 mA max

★ REFLOW SOLDERING PROFILE



Pb free reflow A	①	Preheat	160~180℃	120sec. max
	②	Primary heat	220℃	60sec. max
	③	Peak	260℃	10sec. max.

★ Test Circuit