

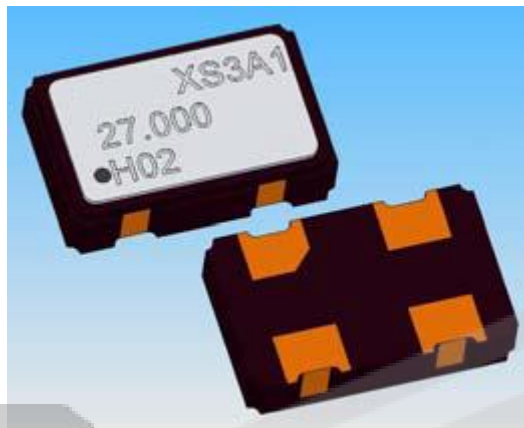


**We are committed to the supply of all types of substrate wafers to the microelectronics industry**

## XS Type Crystal Oscillator

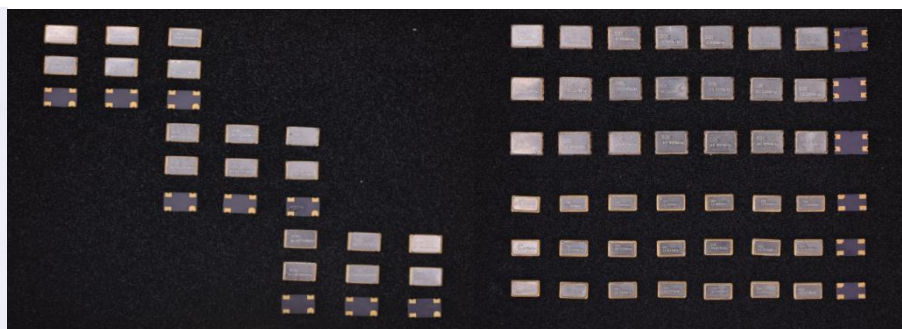
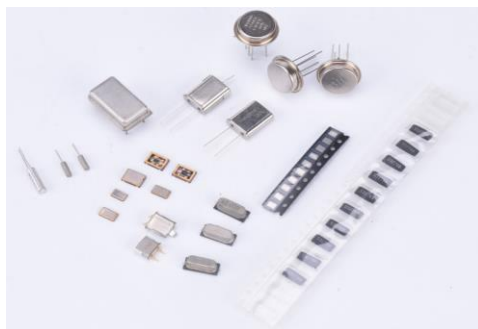
### Features

- CMOS/TTL Compatible Clock Oscillator.
- Typical 5.0 x 3.2 x 1.2 mm ceramic metal SMD package.
- Resistance Seam welding for hermetical seal.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant



### ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	—	Frequency (MHz)
Code: Meaning	Code: Meaning	Code: Meaning	Code: Meaning	Dash	
<b>XS:</b> 5.0X3.2 SMD CMOS/TTL XO	<b>1:</b> 1.8 <b>2:</b> 2.5 <b>3:</b> 3.3 <b>5:</b> 5.0	<b>A:</b> ±25 <b>B:</b> ±50 <b>C:</b> ±100 <b>D:</b> ±20 <b>E:</b> ±10 <b>G:</b> ±15 <b>H:</b> ±30	<b>1:</b> 0~+70 <b>2:</b> -40~+85 <b>3:</b> 0~+85 <b>4:</b> -20~+70 <b>5:</b> -10~+85 <b>6:</b> -10~+70 <b>7:</b> -10~+60 <b>8:</b> 0~+60		XXX.XXXXXX
Ordering example: XS3B1-25.000 5.0x3.2 SMD CMOS/TTL XO, 3.3V, ±50ppm, 0°C~70°C, 25MHz					
Note: If there're any other particular requirements, they should be specified in customers' order.					

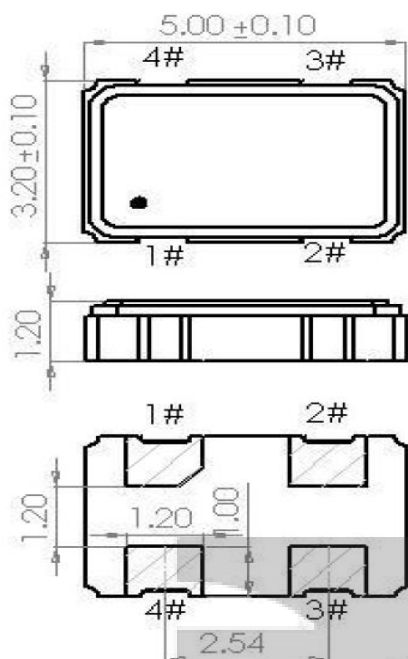


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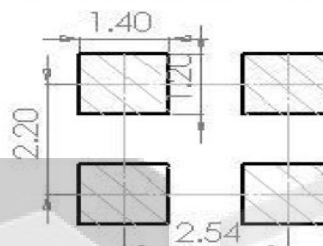


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PAD No.	Connection
1#	E/D or NC
2#	GND
3#	OUTPUT
4#	VDD

**Suggested Solder Pad Layout**



All Dimensions in mm

**Electrical Specification**

Parameter	Min				Max				Unit
Supply Voltage ( $V_{DD}$ ) $\pm 10\%$	1.62	2.25	2.97	4.5	1.98	2.75	3.63	5.5	V
Frequency Range	0.5				135	135	135	110	MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25°C, operating temperature change, $V_{DD}$ variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								°C
Supply Current									mA
0.5MHz =<F <sub>o</sub> <10MHz	-				3	3	5	7	
10MHz =<F <sub>o</sub> <20MHz	-				5	5	10	15	
20MHz =<F <sub>o</sub> <50MHz	-				10	15	20	30	
50MHz =<F <sub>o</sub> <80MHz	-				15	20	25	40	
80MHz =<F <sub>o</sub> <135MHz	-				20	25	40	60	
Duty Cycle (CMOS)	45				55				%
Output High (Voh)	0.9V <sub>DD</sub>				-				V
Output Low (Vol)	-				0.1V <sub>DD</sub>				
Rise Time/Fall Time (tr/TF)	Measured between 10% to 90% of $V_{DD}$ with output load of 15pF								
0.5MHz =<F <sub>o</sub> <5MHz	-				10	8	6	5	nS
5MHz =<F <sub>o</sub> <20MHz	-				8	6	5	4	
20MHz =<F <sub>o</sub> <50MHz	-				6	5	5	4	
50MHz =<F <sub>o</sub> <80MHz	-				5	5	4	3	
80MHz =<F <sub>o</sub> <135MHz	-				5	4	3	2	
Output Load(Fan-out) (CMOS)	15	15	30	50	-				pF
Tristate Function(Input to									
Output Enable	1.26	1.75	2.0	4.0	(With Pin1 floating, Output enabled)				V
Output Disable(Hi-Z)	-				0.5	0.5	0.5	0.8	
Standby Current	-				10				μA
Start Time	-				10				mS
Phase Jitter(RMS, 12KHz to 20MHz)	-				1				pS
Storage Temperature	-55				125				°C

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