

Features

- Typical 13.2 x 13.2 x 5.5mm metal DIP8 package.
- CMOS/TTL Compatible Clock Oscillator.
- High reliability.
- Lead Free and RoHS compliant.

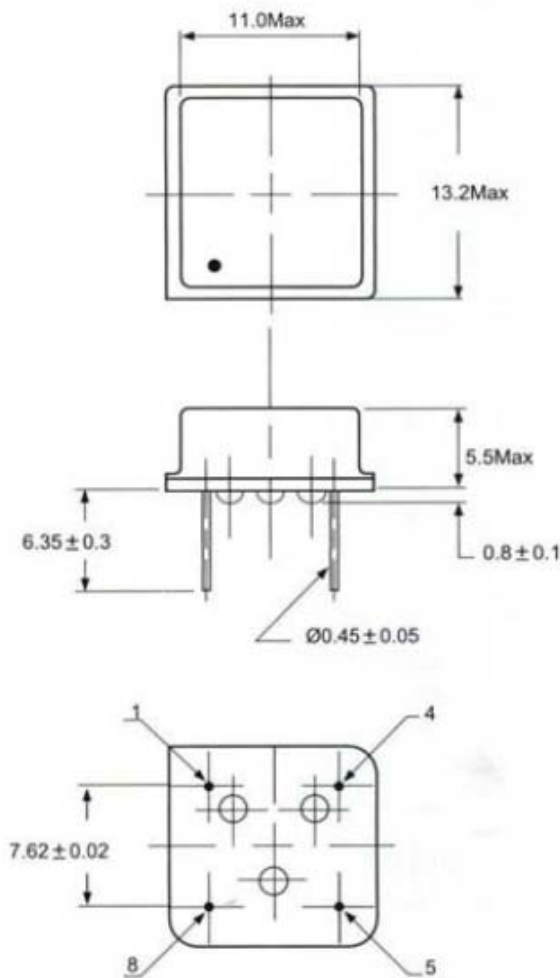


Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3, 5.0)V-10%				Max. (1.8, 2.5, 3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±10%	1.62	2.25	2.97	4.50	1.98	2.75	3.63	5.50	V
Frequency Range	0.4				100	100	100	200	MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.4MHz ≤F ₀ <25MHz	—				25				
25MHz ≤F ₀ <100MHz	—				40				
100MHz ≤F ₀ <200MHz	—				60				
Duty Cycle (CMOS)	45/55 or 40/60 optional								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
T _r	—				8	8	8	10	
T _f	—				8	8	8	10	
Output Load(Fan-out) (CMOS)	TTL or CMOS								pF
Tristate Function									V
Output Enable	Pin 1=H or open, output active at Pin 5								
Output Disable(Hi-Z)	Pin 1=L, high impedance at Pin 5								
Aging (First Year)	< 5								ppm
Start Time	—				10				ms
Storage Temperature	-55				125				℃

ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	Duty Cycle (%)	Output Load (pF)	Frequency (MHz)
JDO13: DIP8 Oscillator CMOS/TTL output	1: 1.8	A: ±10	1: -10~+60	A: 45/55	00:TTL	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70			
	5: 5.0	D: ±30	4: -40~+85	B: 40/60	XX: CMOS Load capacitor	
		F: ±50	5: -10~+70			
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JDO13-3F3B30-50.000 DIP8 OSC 3.3V ±50ppm -20~+70℃ 40/60% 30pF 50.000MHz						
Note: For special requirement, please consult us.						



PIN	FUNCTION
# 1	NC or Tri-state E/D
# 4	GROUND
# 5	OUTPUT
# 8	VDD

Features

- Typical 20.4 x 12.9 x 5.5mm metal DIP14 package.
- CMOS/TTL Compatible Clock Oscillator.
- High reliability.
- Lead Free and RoHS compliant.

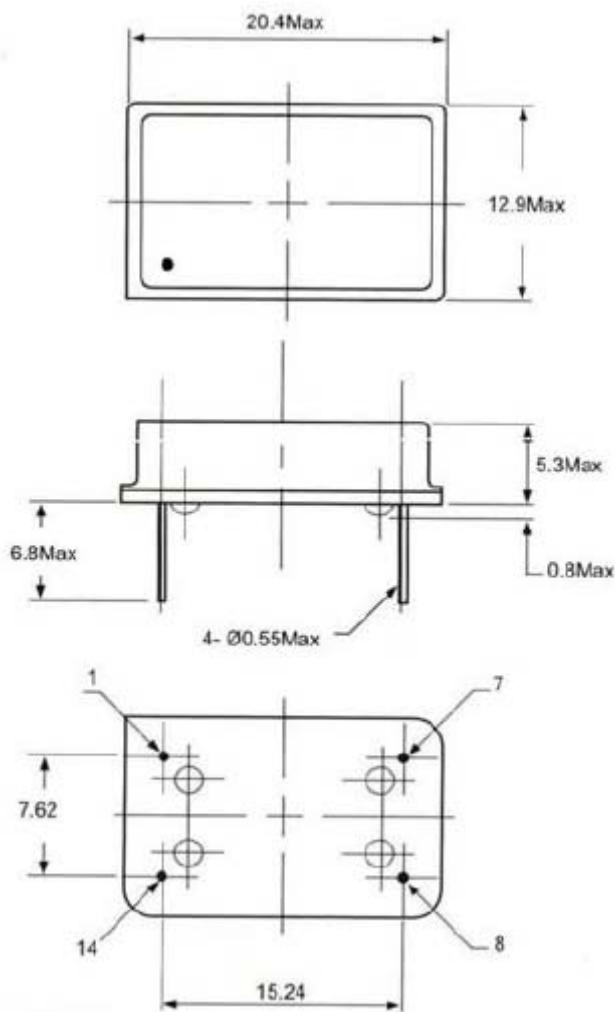


Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3, 5.0)V-10%				Max. (1.8, 2.5, 3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±10%	1.62	2.25	2.97	4.50	1.98	2.75	3.63	5.50	V
Frequency Range	0.4				100	100	100	200	MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.4MHz ≤F ₀ <25MHz	—				25				
25MHz ≤F ₀ <100MHz	—				40				
100MHz ≤F ₀ <200MHz	—				60				
Duty Cycle (CMOS)	45/55 or 40/60 optional								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
T _r	—				8	8	8	10	
T _f	—				8	8	8	10	
Output Load(Fan-out) (CMOS)	TTL or CMOS								pF
Tristate Function									V
Output Enable	Pin 1=H or open, output active at Pin 8								
Output Disable(Hi-Z)	Pin 1=L, high impedance at Pin 8								
Aging (First Year)	< 5								ppm
Start Time	—				10				ms
Storage Temperature	-55				125				℃

ORDERING GUIDANCE

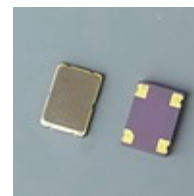
Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JDO14: DIP14 Oscillator CMOS/TTL output	1: 1.8	A: ±10	1: -10~+60	A: E/D+45/55%	00:TTL	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70	B: E/D+40/60%		
	5: 5.0	D: ±30	4: -40~+85		C: NC+45/55%	
		F: ±50	5: -10~+70	D: NC+40/60%		
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JDO14-3F3B30-50.000M DIP14 OSC 3.3V ±50ppm -20~+70℃ Tri-state 40/60% 30pF 50.000MHz						
Note: For special requirement, please consult us.						



PIN	FUNCTION
# 1	NC or Tri-state E/D
# 7	GROUND
# 8	OUTPUT
# 14	VDD

Features

- Typical 7.0 x 5.0 x 1.5 mm ceramic metal SMD package.
- CMOS/TTL Compatible Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.



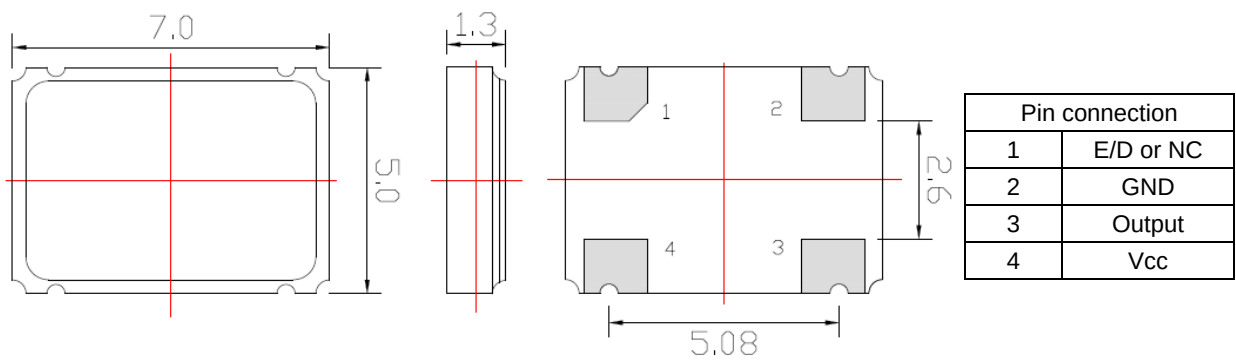
Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3, 5.0)V-10%				Max. (1.8, 2.5, 3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±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℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.5MHz =<F ₀ <10MHz	—				3	3	5	7	
10MHz =< F ₀ <20MHz	—				5	5	10	15	
20MHz =< F ₀ <50MHz	—				10	15	20	30	
50MHz =< F ₀ <80MHz	—				15	20	25	40	
80MHz =< F ₀ <135MHz	—				20	25	40	60	
Symmetry (CMOS)	45/55 or 40/60 optional								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
0.5MHz =< F ₀ <5MHz	—				10	8	6	5	
5MHz =< F ₀ <20MHz	—				8	6	5	4	
20MHz =< F ₀ <50MHz	—				6	5	5	4	
50MHz =< F ₀ <80MHz	—				5	5	4	3	
80MHz =< F ₀ <135MHz	—				5	4	3	2	
Output Load(Fan-out) (CMOS)	15	15	30	50	—				pF
Tristate Function(Input to Pin1)									V
Output Enable	1.26	1.75	2.0	4.0	(With Pin1 floating, Output enabled)				
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				℃

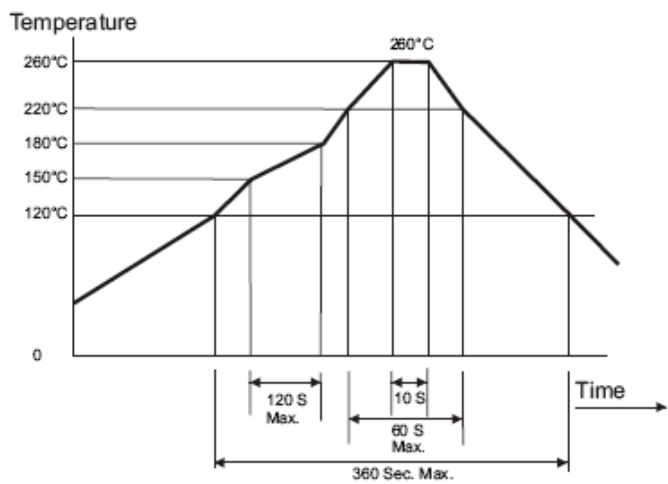
ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (℃)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO01: 7X5 SMD Oscillator CMOS/TTL output	1: 1.8	A: ±10	1: -10~+60	A: E/D+45/55%	00:TTL	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70	B: E/D+40/60%		
	5: 5.0	D: ±30	4: -40~+85		C: NC+45/55%	
		F: ±50	5: -10~+70	D: NC+40/60%		
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JSO01-3F3B30-50.000 7x5 SMD OSC 3.3V ±50ppm -20~+70℃ Tri-state 40/60% 30pF 50.000MHz						
Note: For special requirement, please consult us.						

Package



Solder Profile



Features

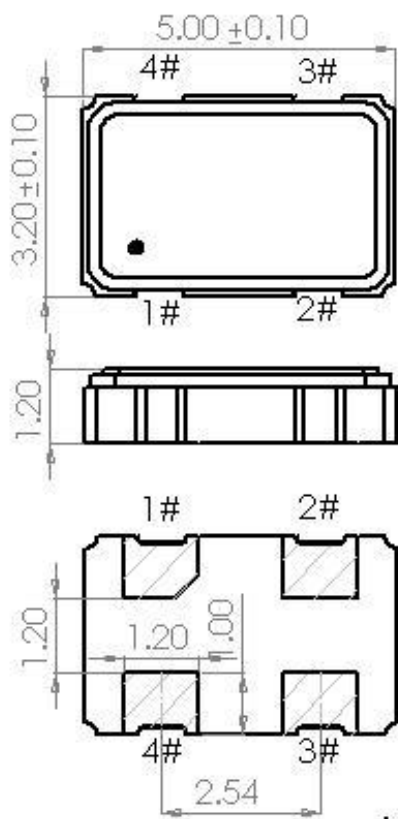
- Typical 5.0 x 3.2 x 1.5 mm ceramic metal SMD package.
- CMOS/TTL Compatible Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.

Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3, 5.0)V-10%				Max. (1.8, 2.5, 3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±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℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.5MHz =<F ₀ <10MHz	—				3	3	5	7	
10MHz =< F ₀ <20MHz	—				5	5	10	15	
20MHz =< F ₀ <50MHz	—				10	15	20	30	
50MHz =< F ₀ <80MHz	—				15	20	25	40	
80MHz =< F ₀ <135MHz	—				20	25	40	60	
Symmetry (CMOS)	45/55 or 40/60 optional								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
0.5MHz =< F ₀ <5MHz	—				10	8	6	5	
5MHz =< F ₀ <20MHz	—				8	6	5	4	
20MHz =< F ₀ <50MHz	—				6	5	5	4	
50MHz =< F ₀ <80MHz	—				5	5	4	3	
80MHz =< F ₀ <135MHz	—				5	4	3	2	
Output Load(Fan-out) (CMOS)	15	15	30	50	—				pF
Tristate Function(Input to Pin1)									V
Output Enable	1.26	1.75	2.0	4.0	(With Pin1 floating, Output enabled)				
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				℃

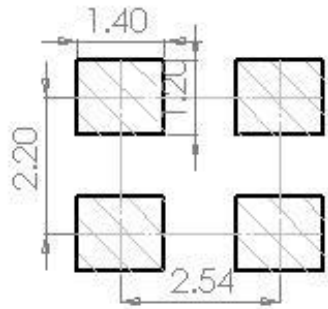
ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (℃)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO03: 5X3.2 SMD Oscillator CMOS/TTL output	1: 1.8	A: ±10	1: -10~+60	A: E/D+45/55%	00:TTL	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70	B: E/D+40/60%		
	5: 5.0	D: ±30	4: -40~+85			
		F: ±50	5: -10~+70	C: NC+45/55%	XX: CMOS Load capacitor	
		H: ±25	6: -45~+125	D: NC+40/60%		
		G: ±100				
Part number rule: JSO03-3H3B15-50.000 5x3.2 SMD OSC 3.3V ±25ppm -20~+70℃ Tri-state 40/60% 15pF 50.000MHz						
Note: For special requirement, please consult us.						



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

Suggested Solder Pad Layout



All Dimensions in mm

Features

- Typical 3.2 x 2.5 x 1.2 mm ceramic metal SMD package.
- CMOS/TTL Compatible Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.

Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3, 5.0)V-10%				Max. (1.8, 2.5, 3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±10%	1.62	2.25	2.97	4.5	1.98	2.75	3.63	5.5	V
Frequency Range	0.5				80	80	80	70	MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.5MHz =<F ₀ <10MHz	—				3	3	5	7	
10MHz =< F ₀ <20MHz	—				5	5	10	15	
20MHz =< F ₀ <50MHz	—				10	15	20	30	
50MHz =< F ₀ <80MHz	—				15	20	25	40	
80MHz =< F ₀ <135MHz	—				20	25	40	60	
Symmetry (CMOS)	45/55 or 40/60 optional								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
0.5MHz =< F ₀ <5MHz	—				10	8	6	5	
5MHz =< F ₀ <20MHz	—				8	6	5	4	
20MHz =< F ₀ <50MHz	—				6	5	5	4	
50MHz =< F ₀ <80MHz	—				5	5	4	3	
80MHz =< F ₀ <135MHz	—				5	4	3	2	
Output Load(Fan-out) (CMOS)	15	15	30	50	—				pF
Tristate Function(Input to Pin1)									V
Output Enable	1.26	1.75	2.0	4.0	(With Pin1 floating, Output enabled)				
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				℃

ORDERING GUIDANCE

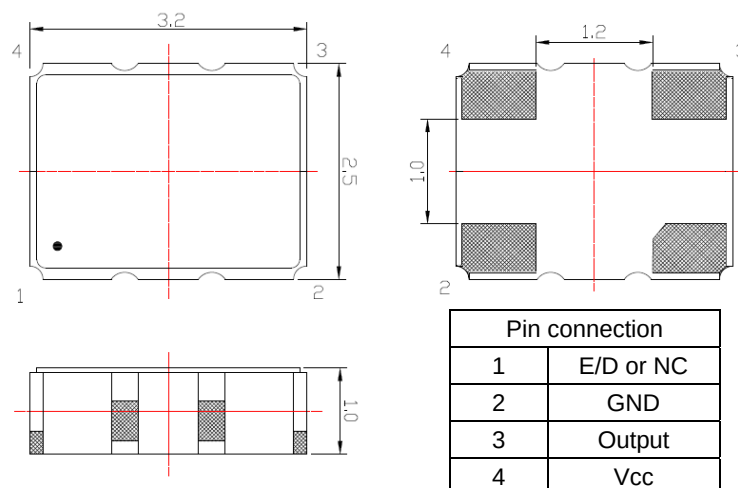
Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO04: 3.2X2.5 SMD Oscillator CMOS/TTL output	1: 1.8	A: ±10	1: -10~+60	A: E/D+45/55%	00:TTL	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70	B: E/D+40/60%		
	5: 5.0	D: ±30	4: -40~+85		C: NC+45/55%	
		F: ±50	5: -10~+70	D: NC+40/60%		
		H: ±25	6: -45~+125			
		G: ±100	7: -30~+85			

Part number rule: JSO04-3H3B15-50.000

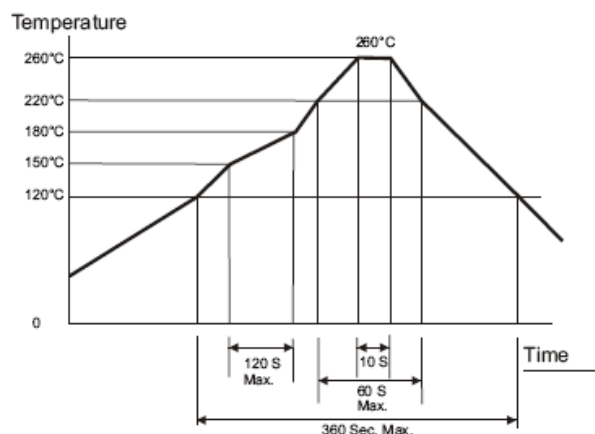
3.2x2.5 SMD OSC 3.3V ±25ppm -20~+70°C Tri-state 40/60% 15pF 50.000MHz

Note: For special requirement, please consult us.

Package



Solder Profile



Features

- Typical 2.5 x 2.0 x 1.0 mm ceramic metal SMD package.
- CMOS Compatible Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.

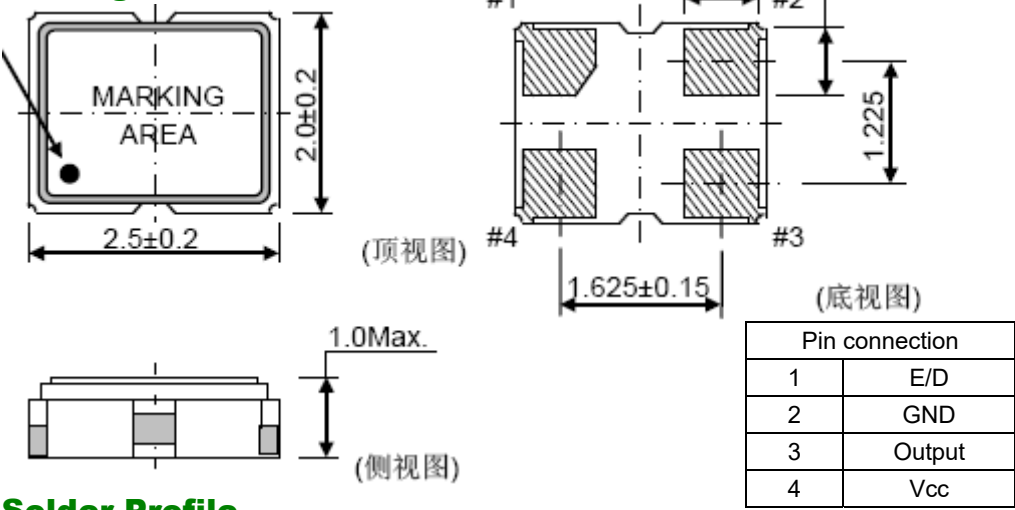
Electrical Specification

Parameter	Min. (1.8, 2.5, 3.3)V-10%				Max. (1.8, 2.5, 3.3)V+10%				Unit
Supply Voltage (V _{DD})±10%	1.62	2.25	2.97		1.98	2.75	3.63		V
Frequency Range	1				133	166	200		MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
1MHz =<F ₀ <30MHz	—				6	8	10		
30MHz =< F ₀ <75MHz	—				8	10	15		
75MHz =< F ₀ <133MHz	—				12	15	20		
133MHz =< F ₀ <166MHz	—				—	15	22		
166MHz =< F ₀ <200MHz	—				—	—	25		
Symmetry (CMOS)	45/55								%
Output High (Voh)	0.9V _{DD}				—				V
Output Low (Vol)	—				0.1V _{DD}				
Rise Time/Fall Time (tr/tf)	Measured between 10% to 90% of V _{DD} with output load of 15pF								ns
1MHz =< F ₀ <10MHz	—				10	8	6		
Output Load(Fan-out) (CMOS)	15	15	15		—				pF
Tristate Function(Input to Pin1)									V
Output Enable	1.26	1.75	2.0		(With Pin1 floating, Output enabled)				
Output Disable(Hi-Z)	—				0.5	0.5	0.5		
Standby Current	—				10				μA
Start Time	—				10				ms
Phase Jitter	—				5				ps
Storage Temperature	-55				125				℃

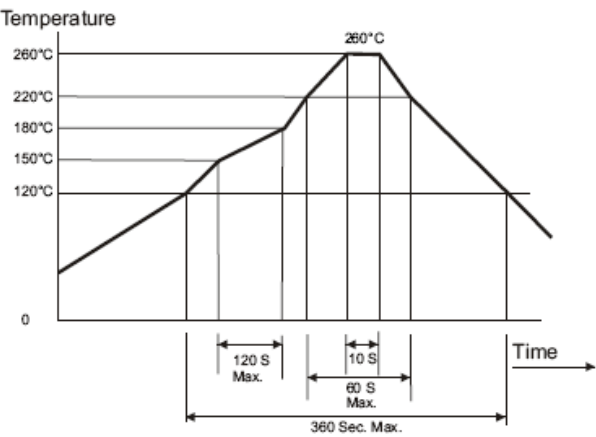
ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO05: 2.5X2.0 SMD Oscillator CMOS output	1: 1.8		1: -10~+60	A: E/D+45/55%	XX: CMOS Load capacitor	XXX.XXX
	2: 2.5		2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70			
		D: ±30	4: -40~+85			
		F: ±50	5: -10~+70			
		H: ±25	6: -45~+125			
		G: ±100	7: -30~+85			
			8: -40~+105			
Part number rule: JSO05-3H3A15-50.000M 2.5x2.0 SMD OSC 3.3V ±25ppm -20~+70°C Tri-state 45/55% 15pF 50.000MHz						
Note: For special requirement, please consult us.						

Package

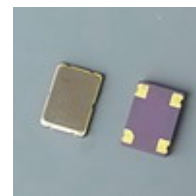


Solder Profile



Features

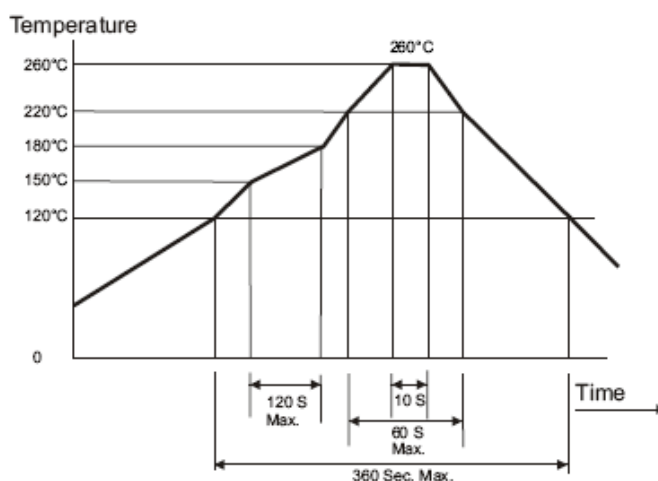
- Typical 7.0 x 5.0 x 2.0 mm ceramic metal SMD package.
- PECL Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.



Electrical Specification

Parameter	Min. (2.5, 3.3)V-10%				Max. (2.5, 3.3)V+10%				Unit
Supply Voltage (V _{DD})±10%		2.25	2.97			2.75	3.63		V
Frequency Range	0.75					800	800		MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
0.75MHz =<F ₀ <24MHz	—					60	60		
24MHz =< F ₀ <160MHz	—					75	75		
160MHz =< F ₀ <800MHz	—					100	100		
Symmetry	45%-55%								%
Output High (Voh)	2.275V _{DD}				—				V
Output Low (Vol)	—				1.68V _{DD}				
Output Load	50								Ω
Tristate Function(Input to Pin1)									V
Output Enable		1.75	2.0		(With Pin1 floating, Output enabled)				
Output Disable(Hi-Z)	—					0.5	0.5		
Standby Current	—				30				μA
Start Time	—				10				ms
Phase Jitter(RMS, 12KHz to 20MHz)	—				3				ps
Storage Temperature	-55				125				℃

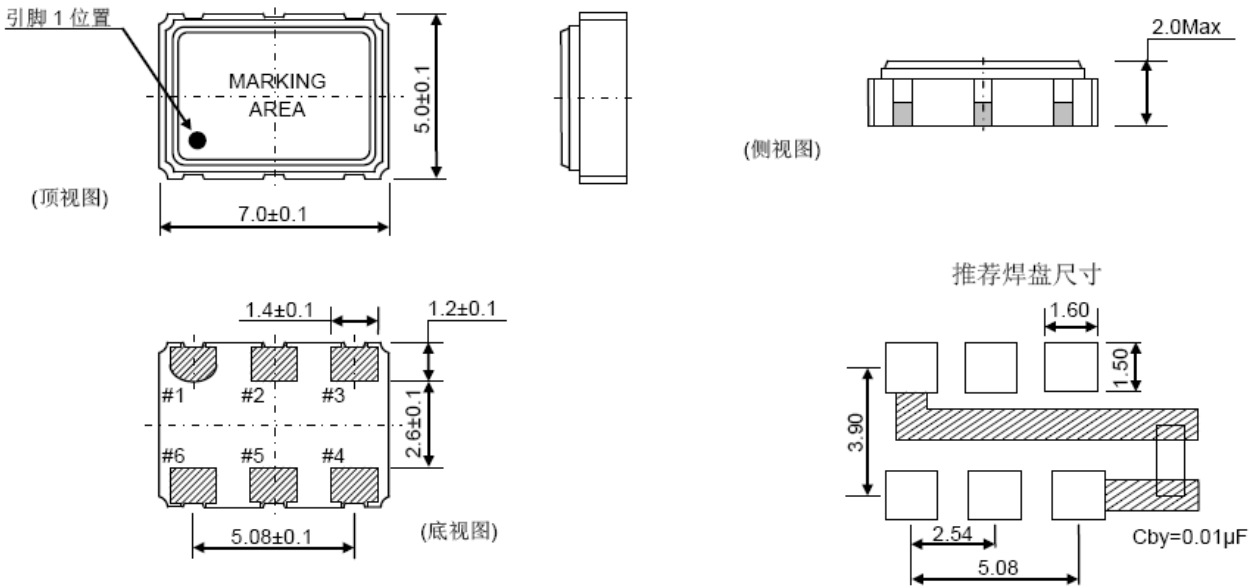
Solder Profile



ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (℃)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO33: 7X5 SMD Oscillator PECL output			1: -10~+60	A: E/D+45/55%	P: 50 Ω PECL	XXX.XXX
	2: 2.5		2: 0~+70			
	3: 3.3		3: -20~+70			
		D: ±30	4: -40~+85			
		F: ±50	5: -10~+70			
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JSO33-3F3AP-50.000 7x5 SMD OSC 3.3V ±50ppm -20~+70℃ Tri-state 45/55% PECL 50.000MHz						
Note: For special requirement, please consult us.						

Package



Pin connection	
1	E/D or NC
2	No connect
3	GND
4	Output
5	Output
6	Vcc

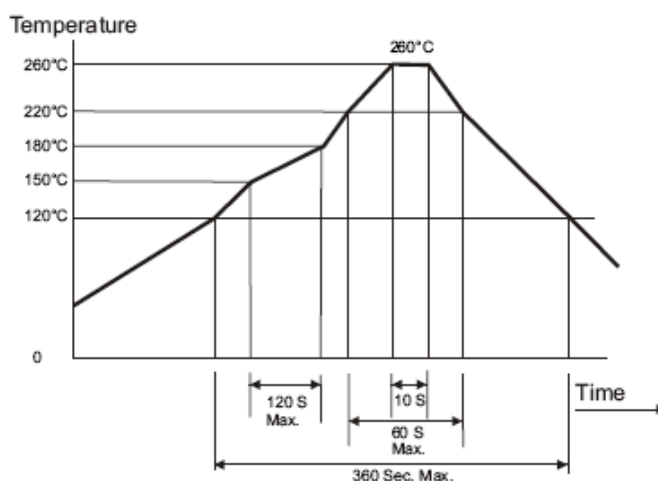
Features

- Typical 14.0 x 9.8 x 4.8 mm plastic SMD package.
- CMOS/TTL Compatible Clock Oscillator.
- Tape & Reel packaging for automatic assembly.
- Lead Free and RoHS compliant.

Electrical Specification

Parameter	Min. (3.3, 5.0)V-10%				Max. (3.3, 5.0)V+10%				Unit
Supply Voltage (V _{DD})±10%		2.97	4.50			3.63	5.50		V
Frequency Range	1.0000				70.0000				MHz
Frequency Stability	Refer to Ordering Guidance (Overall condition Inclusive of calibration @ 25℃, operating temperature change, V _{DD} variation, load variation, aging, etc.)								ppm
Operating Temperature Range	Refer to Ordering Guidance								℃
Supply Current									mA
1MHz =<F ₀ <26MHz	—					15	15		
26MHz =< F ₀ <50MHz	—					25	30		
50MHz =< F ₀ <70MHz	—					25	45		
Symmetry	45%-55%								%
Output High (Voh)	2.4V _{DD}				—				V
Output Low (Vol)	—				0.4V _{DD}				
Output Load	TTL 50pF / CMOS 30pF or 50pF								pF
Tristate Function(Input to Pin1)									V
Output Enable		2.1	3.5		(With Pin1 floating, Output enabled)				
Output Disable(Hi-Z)	—					0.9	1.5		
Standby Current	—				30				μA
Start Time	—				10				ms
Phase Jitter(RMS, 12KHz to 20MHz)	—				5				ps
Storage Temperature	-55				125				℃

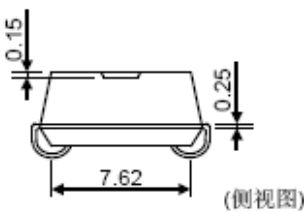
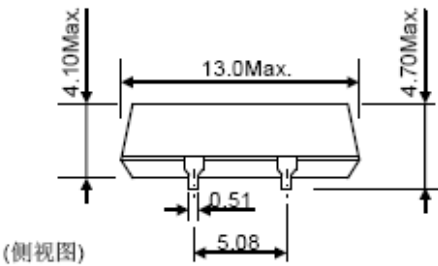
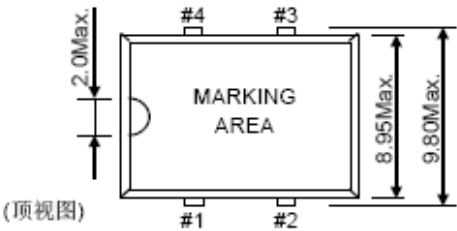
Solder Profile



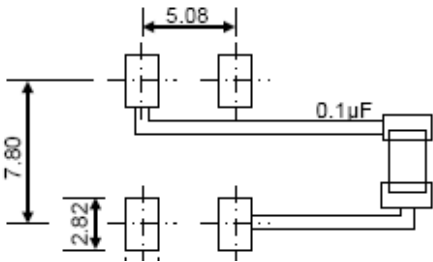
ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (°C)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JSO34: 14x9.8 SMD Oscillator TTL/CMOS output			1: -10~+60	A: E/D+45/55%	1: TTL 50pF	XXX.XXX
	3: 3.3		2: 0~+70		2: CMOS 30pF	
	5: 5.0		3: -20~+70		3: CMOS 50pF	
		D: ±30	4: -40~+85			
		F: ±50	5: -10~+70			
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JSO34-3F3A2-50.000M 14x9.8 SMD OSC 3.3V ±50ppm -20~+70°C Tri-state 45/55% CMOS 50pF 50.000MHz						
Note: For special requirement, please consult us.						

Package



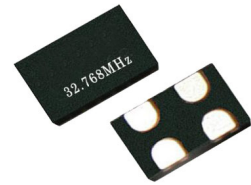
推荐焊盘尺寸



Pin connection	
1	E/D or NC
2	GND
3	Output
4	Vcc

Features

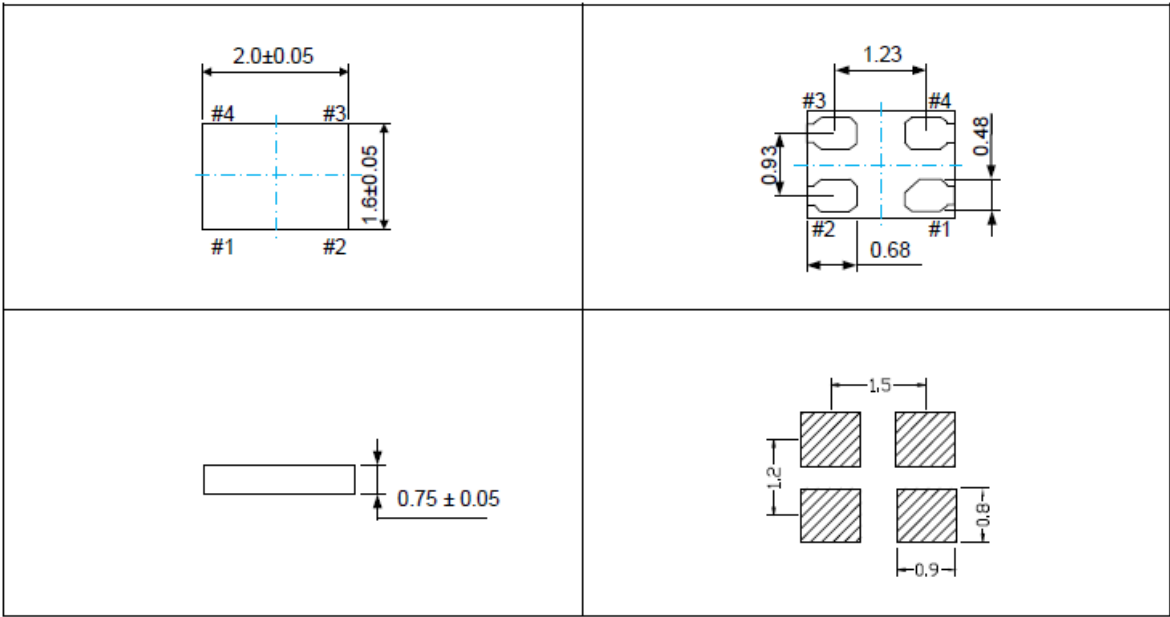
- Low Power Consumption.
- Lead Free and RoHS compliant.



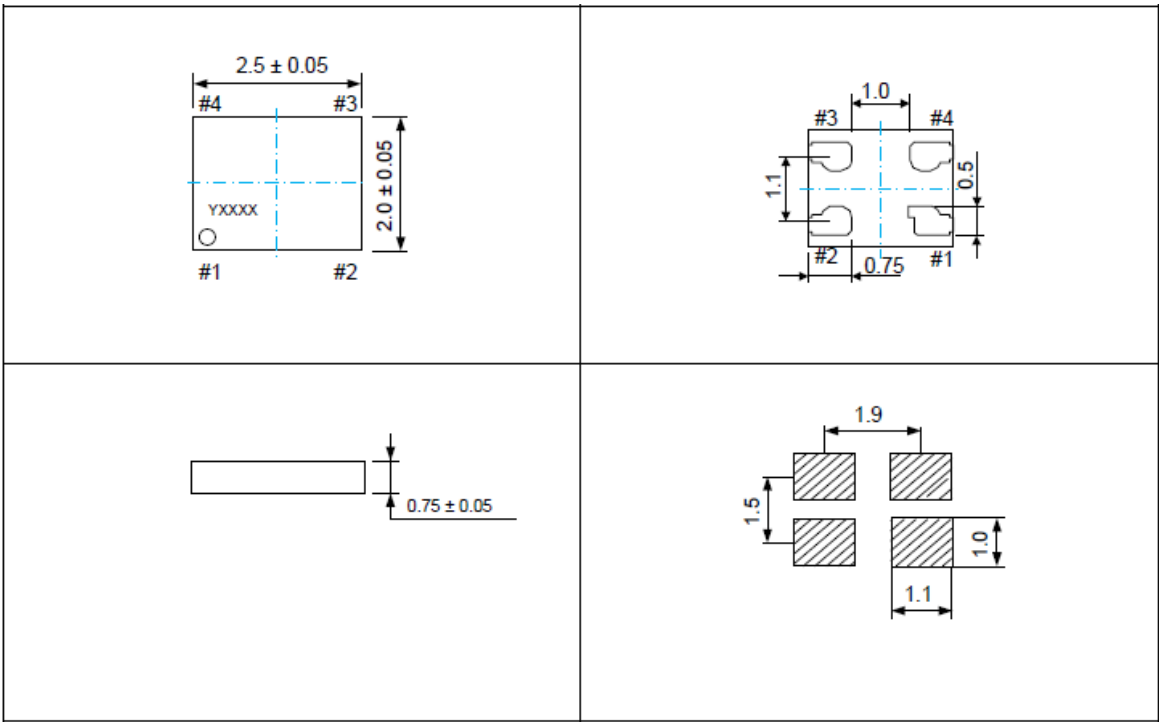
Electrical Specification

Parameter		Condition								
Frequency Range	F ₀			1 ~ 110.000 MHz			115 ~ 137.000 MHz			
Frequency Stability	F ₀ _T _c			See below						
Operating Temperature Range	T _{OPR}			See below						
Supply Voltage	V _{DD}	No load @ 20 MHz @ 125 MHz	+1.8	4.1 mA Max		5.6 mA Max				
			+2.25			7.5 mA Max				
			+2.5	4.2 mA Max		6.4 mA Max				
			+2.8	4.5 mA Max		7.5 mA Max				
			+3.0	4.5 mA Max		7.5 mA Max				
			+3.3	4.5 mA Max		7.5 mA Max				
Standby Current	I _{std}	$\overline{ST}$ = GND	1.8 V		1.3 μA Max					
			2.5 V		2.5 μA Max					
			2.8V~ 3.3 V		4.3 μA Max					
LVCMOS Output										
Symmetry				45% ~ 55%						
Rise Time	T _r ,T _f	V _{dd} (20% ~ 80%)		1.8	2.5	2.8	3.0	3.3	2.25~3.36	V
Fall Time				2.5	2	2	2	2	2	ns
Output High	V _{OH}	90%	1.8 V		-2 mA					
			2.5 / 2.8		-3 mA					
			3.0 / 3.3		-4 mA		-4 mA			
Output Low	V _{OL}	10%	1.8 V		2 mA					
			2.5 / 2.8		3 mA					
			3.0 / 3.3		4 mA		4 mA			
Tristate Function		“1” or Open: Oscillation “0”: Hi Z								
Start Time	T _{start}			5 ms			5 ms			
Disable Time	T _{oe}			130 ns			122 ns			
RMS	T _{jitt}	75 MHz, V _{dd} = 2.5V, 2.8V, 3.0V or 3.3V					3 ps			
		75 MHz, V _{dd} = 1.8V					3 ps			

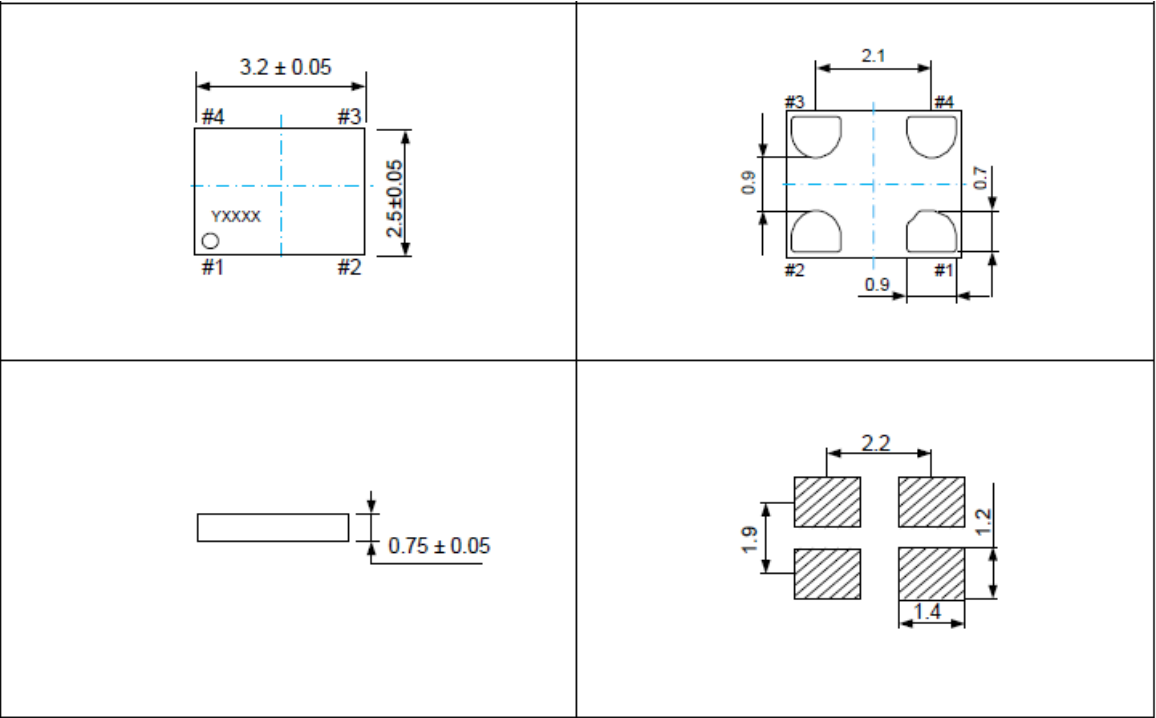
21 (2.0 x 1.6 x 0.75mm)



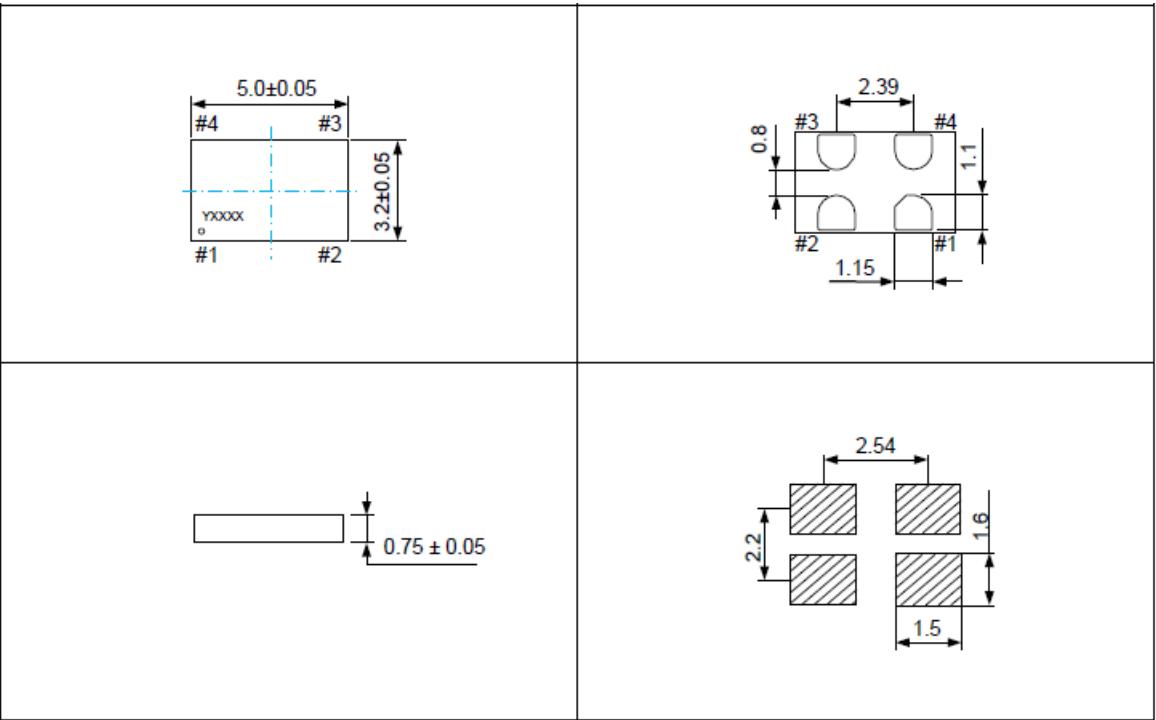
25 (2.5 x 2.0 x 0.75mm)



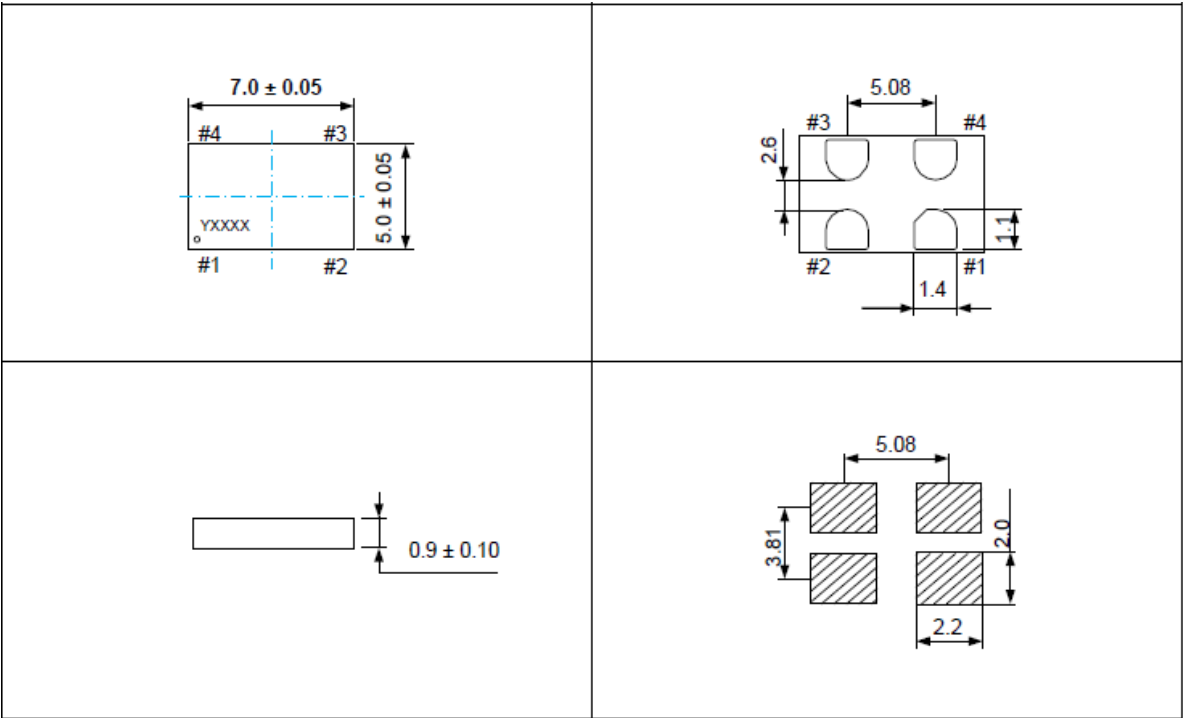
32 (3.2 x 2.5 x 0.75mm)



53 (5.0 x 3.2 x 0.75mm)



75 (7.0 x 5.0 x 0.90mm)



ORDERING GUIDANCE

Product Type	Supply Voltage (V)	Frequency Stability (ppm)	Operating Temp. Range (℃)	Tri-state and Symmetry	Output Load (pF)	Frequency (MHz)
JMO: 21 25 32 53 75	1: 1.8	A: ±10	1: -10~+60	A: E/D+45/55%	XX: CMOS Load capacitor	XXX.XXX
	2: 2.5	B: ±15	2: 0~+70			
	3: 3.3	C: ±20	3: -20~+70			
		D: ±30	4: -40~+85			
		F: ±50	5: -10~+70			
		H: ±25	6: -45~+125			
		G: ±100				
Part number rule: JMO01-3A4A15-80.000 7x5 MEMS OSC 3.3V ±10ppm -40~+85℃ Tri-state 45/55% 15pF 80.000MHz						
Note: For special requirement, please consult us.						