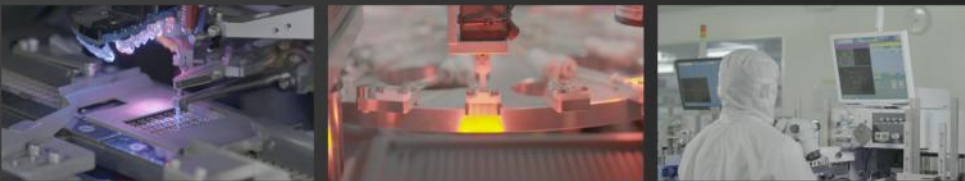


SCTF[®]



低电压 时钟振荡器

值得信赖的专业频率控制元件制造商



www.sctf-crystal.com

值得信赖的专业频率控制元件制造商



企业简介

Company introduction

Since 2003

专业研发、生产、销售系列石英晶体及振荡器产品

推行国际标准质量管理体系：ISO9001:2015、ISO14001: 2015、IATF16949: 2016

国家高新技术企业、专精特新企业、创新型中小型企业

符合ROHS、REACH标准

以客户为中心 视质量为生命

提供晶振及周边电路运用解决方案



SCTF 深圳市星通时频电子有限公司
SHENZHEN SCTF ELECTRONICS CO.,LTD

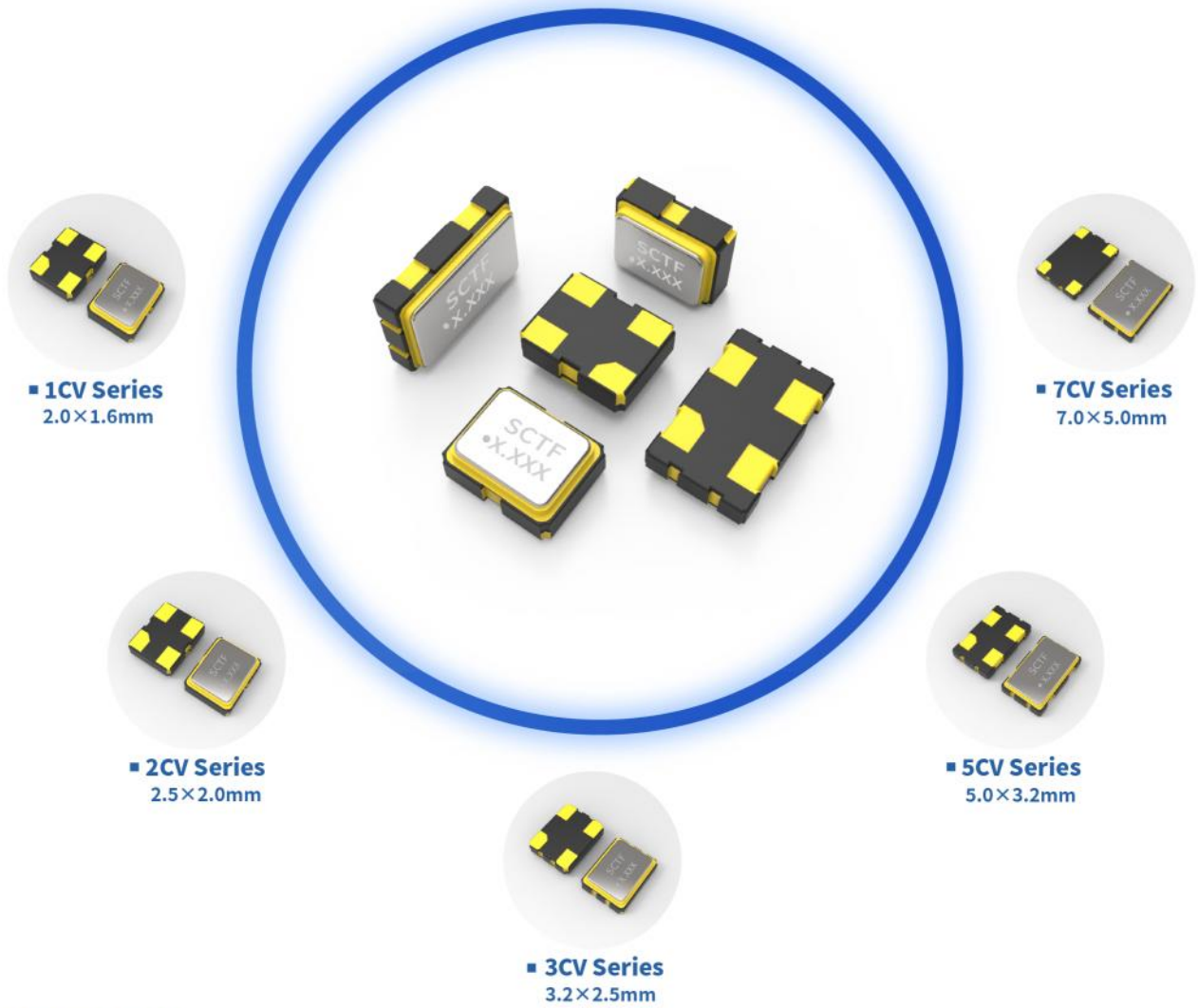
www.sctf-crystal.com

0755-86097105

sales@sctf-crystal.com

产品外观

Product Appearance



产品结构

Product Structure



产品选型指南

Product Selection Guide

Item Series	Size [mm]		Frequency Range [MHz]	Supply Voltage [Typ.V]	Frequency Tolerance [@25°C; ±ppm]	Frequency Drift [±ppm]	Current Consumption	Operating Temperature
	L	W						
1CV	2.0	1.6	0.75 ~ 50	0.8 1.2	10 20	15 20 30	2mA max.	-20°C~+70°C -40°C~+85°C
2CV	2.5	2.0						
3CV	3.2	2.5						
5CV	5.0	3.2						
7CV	7.0	5.0						

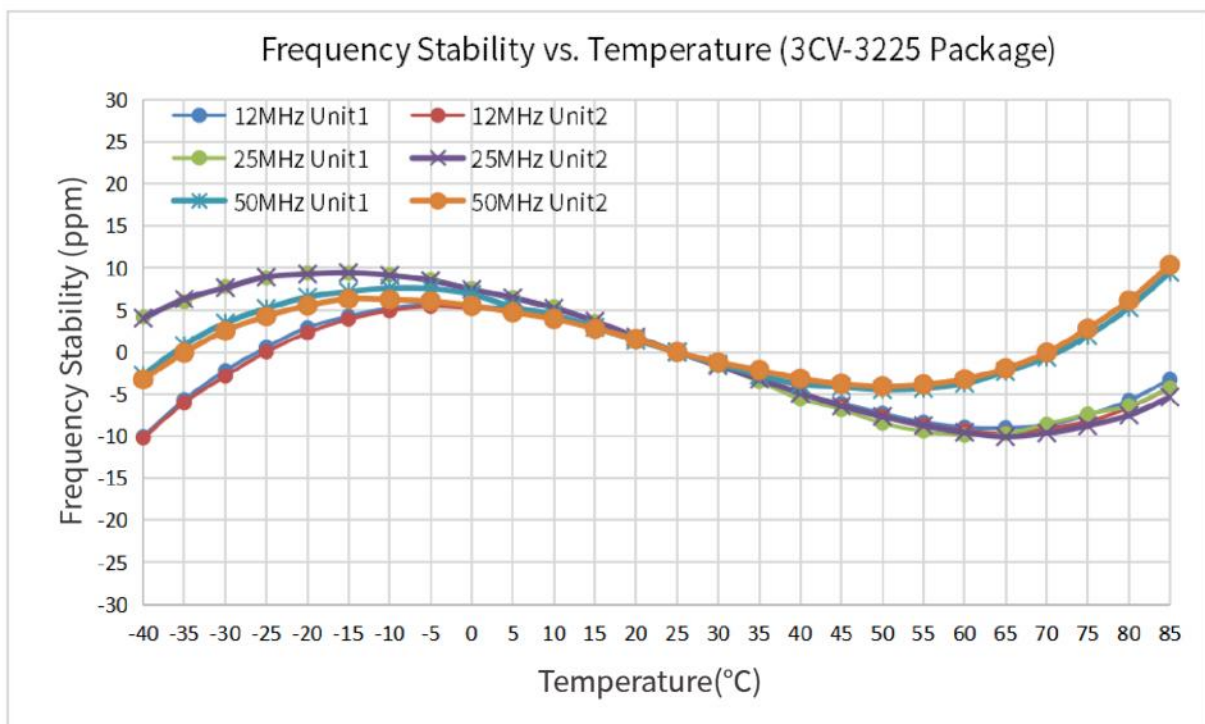
若需要更详细的资料请查询详细规格书或和我们的技术人员联系。

1. 选择需要的封装规格及产品系列: 2.5×2.0mm; 2CV Series
2. 选择需要的频率: 25.000MHz
3. 选择需要的工作电压: 1.2V
4. 选择需要的频率稳定度 (@+25°C): ±10ppm
5. 选择需要的工作温度范围: -40°C ~ +85°C
6. 选择需要的频率&温度特性: ±30ppm

您需要的产品是: 2CV Series 25.000MHz 1.2V ±10ppm@25°C ±30ppm@ -40°C~+85°C

频率温度特性曲线

Frequency Temperature Characteristics



零部件编码示意

Options and Part Identification

Options and Part Identification : Example SX3M25.000E20F30THN

Company	Ceramic Package	Frequency Code [MHz]	Supply Voltage	Frequency Tolerance	Operating Temperature	Frequency Drift	Output	Current Consumption	Phase Noise
SX	3M	X.XXX	E	20	F	30	T	H	N
Code Company	Code Ceramic Package	Frequency	Code Voltage	Code Frequency Tolerance	Code Operating Temperature	Code Frequency Drift	Code Output	Code Current	Code Phase Noise
SX SCTF	7M 7.0×5.0×1.3mm 5M 5.0×3.2×1.2mm 3M 3.2×2.5×0.95mm 2M 2.5×2.0×0.81mm 1M 2.0×1.6×0.75mm	25.000 50.000	G 0.8V F 1.0V E 1.2V	10 ±10ppm 20 ±20ppm	E -20°C ~ +70°C F -40°C ~ +85°C	15 ±15ppm 20 ±20ppm 30 ±30ppm	T Squarewave	H 3mA J 2mA K 1mA	N Standard

If you have other parameter requirements, you can contact **SCTF** at any time.

1CV Series

2.0 x 1.6 mm SMD Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 0.8V ~ 2.0V(1.2V typ.)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Fibre Channel
- Ethernet/Gigabit Ethernet
- Portable Electronics



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	0.75		50.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	0.8	1.2	2.0	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			1.5	mA	No load condition, V _{dd} =1.2V 0.75MHz ≤ Freq. < 12MHz
				1.7		No load condition, V _{dd} =1.2V 12MHz ≤ Freq. < 24MHz
				2.0		No load condition, V _{dd} =1.2V 24MHz ≤ Freq. < 50MHz
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			5	mS	To 90% of Final Amplitude
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Enable Voltage High (Logic 1)	V _{IH}	0.7V _{dd}			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V _{IL}			0.3V _{dd}	V	
Aging	f _{age}			3	ppm	1st. Year at 25°C

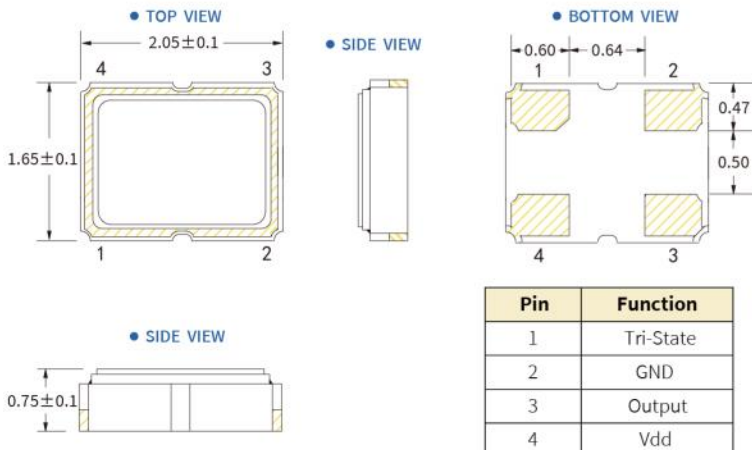
Frequency Stability & Operating Temperature Range

Temp.	FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C		△	★	★	★
-40°C to +85°C			△	★	★

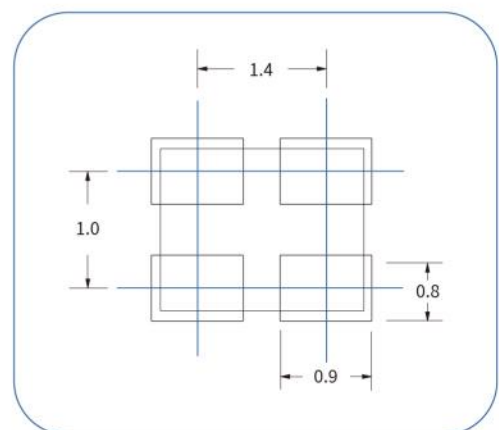
★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range, input voltage change, aging, load change.

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



2CV Series

2.5 x 2.0 mm SMD Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 0.8V ~ 2.0V(1.2V typ.)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Fibre Channel
- Ethernet/Gigabit Ethernet
- Portable Electronics



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	0.75		50.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	0.8	1.2	2.0	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			1.5	mA	No load condition, V _{dd} =1.2V 0.75MHz ≤ Freq. < 12MHz
				1.7		No load condition, V _{dd} =1.2V 12MHz ≤ Freq. < 24MHz
				2.0		No load condition, V _{dd} =1.2V 24MHz ≤ Freq. < 50MHz
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			5	mS	To 90% of Final Amplitude
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Enable Voltage High (Logic 1)	V _{IH}	0.7V _{dd}			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V _{IL}			0.3V _{dd}	V	
Aging	f _{age}			3	ppm	1st. Year at 25°C

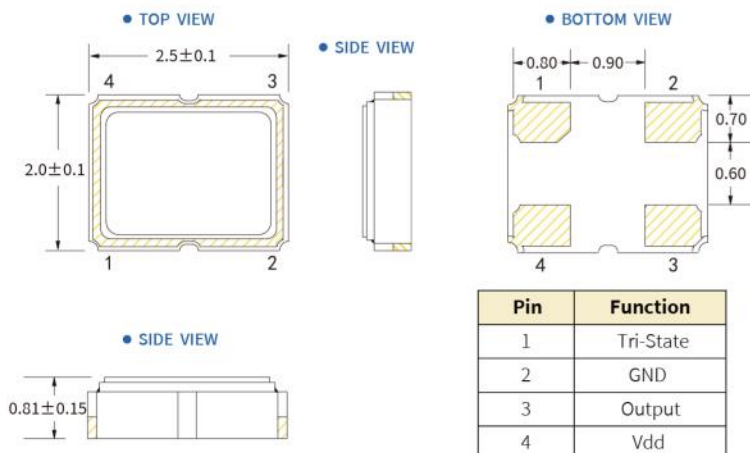
Frequency Stability & Operating Temperature Range

Temp.	FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C	△	★	★	★	★
-40°C to +85°C		△	★	★	★

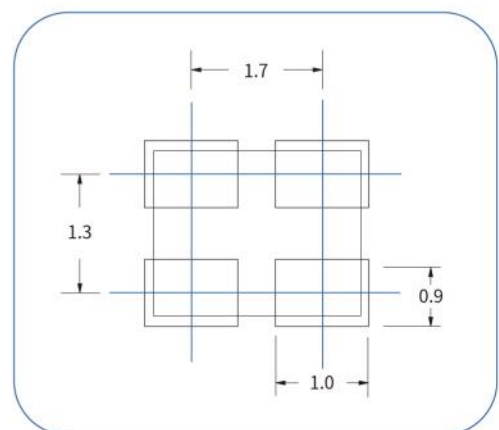
★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range, input voltage change, aging, load change.

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



3CV Series

3.2 x 2.5 mm SMD Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 0.8V ~ 2.0V(1.2V typ.)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Fibre Channel
- Ethernet/Gigabit Ethernet
- Portable Electronics



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	0.75		50.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	0.8	1.2	2.0	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			1.5	mA	No load condition, V _{dd} =1.2V 0.75MHz ≤ Freq. < 12MHz
				1.7		No load condition, V _{dd} =1.2V 12MHz ≤ Freq. < 24MHz
				2.0		No load condition, V _{dd} =1.2V 24MHz ≤ Freq. < 50MHz
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			5	mS	To 90% of Final Amplitude
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Enable Voltage High (Logic 1)	V _{IH}	0.7V _{dd}			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V _{IL}			0.3V _{dd}	V	
Aging	f _{age}			3	ppm	1st. Year at 25°C

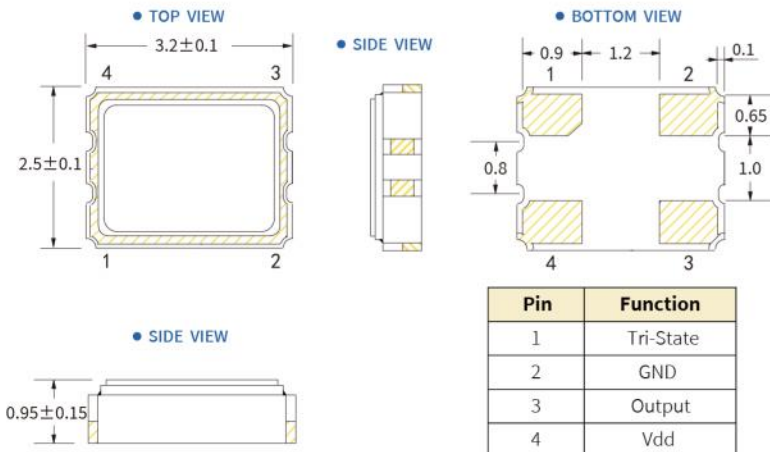
Frequency Stability & Operating Temperature Range

Temp.	FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C		△	★	★	★
-40°C to +85°C			△	★	★

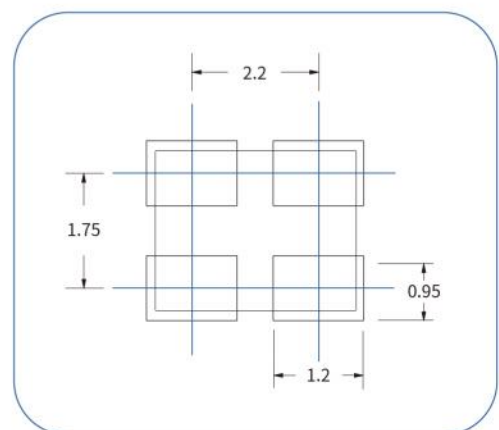
★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range, input voltage change, aging, load change.

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



5CV Series

5.0 x 3.2 mm SMD Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 0.8V ~ 2.0V(1.2V typ.)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Fibre Channel
- Ethernet/Gigabit Ethernet
- Portable Electronics



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	0.75		50.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	0.8	1.2	2.0	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			1.5	mA	No load condition, V _{dd} =1.2V 0.75MHz ≤ Freq. < 12MHz
				1.7		No load condition, V _{dd} =1.2V 12MHz ≤ Freq. < 24MHz
				2.0		No load condition, V _{dd} =1.2V 24MHz ≤ Freq. < 50MHz
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			5	mS	To 90% of Final Amplitude
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Enable Voltage High (Logic 1)	V _{IH}	0.7V _{dd}			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V _{IL}			0.3V _{dd}	V	
Aging	f _{age}			3	ppm	1st. Year at 25°C

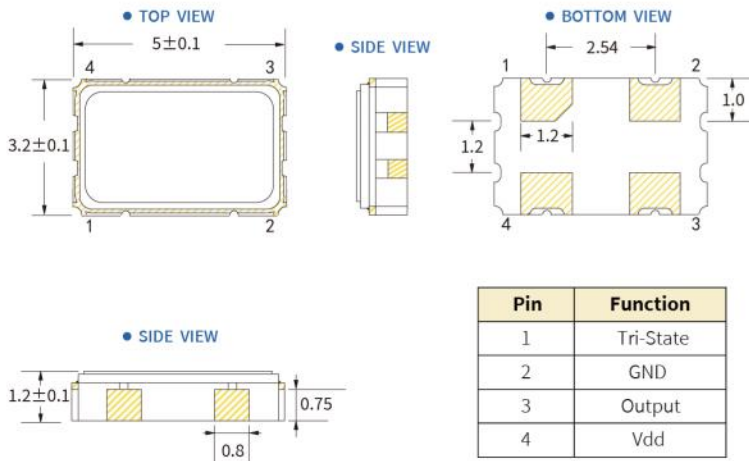
Frequency Stability & Operating Temperature Range

Temp.	FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C		△	★	★	★
-40°C to +85°C			△	★	★

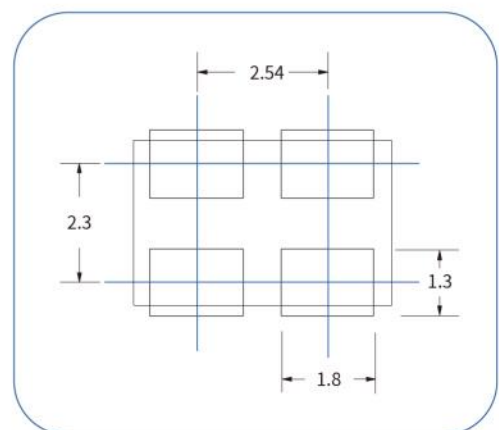
★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range, input voltage change, aging, load change.

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



7CV Series

7.0 x 5.0 mm SMD Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 0.8V ~ 2.0V(1.2V typ.)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Fibre Channel
- Ethernet/Gigabit Ethernet
- Portable Electronics



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	0.75		50.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	0.8	1.2	2.0	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			1.5	mA	No load condition, V _{dd} =1.2V 0.75MHz ≤ Freq. < 12MHz
				1.7		No load condition, V _{dd} =1.2V 12MHz ≤ Freq. < 24MHz
				2.0		No load condition, V _{dd} =1.2V 24MHz ≤ Freq. < 50MHz
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			5	mS	To 90% of Final Amplitude
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Enable Voltage High (Logic 1)	V _{IH}	0.7V _{dd}			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V _{IL}			0.3V _{dd}	V	
Aging	f _{age}			3	ppm	1st. Year at 25°C

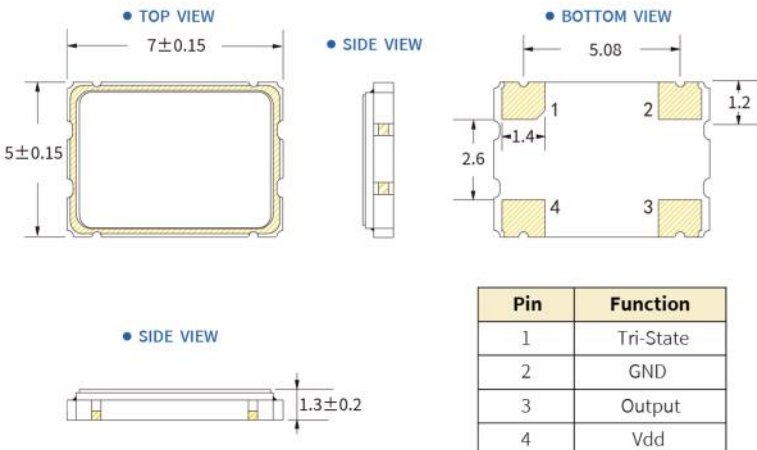
Frequency Stability & Operating Temperature Range

Temp. \ FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C	△	★	★	★
-40°C to +85°C		△	★	★

★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range, input voltage change, aging, load change.

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)

