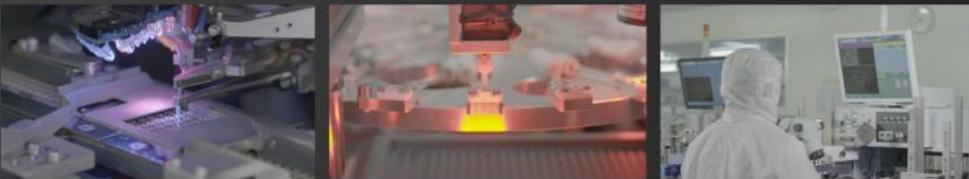


SCTF[®]



VCXO 压控振荡器

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

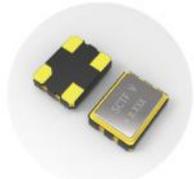
www.sctf-crystal.com

0755-86097105

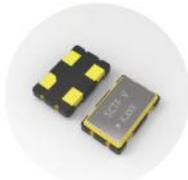
sales@sctf-crystal.com

产品外观

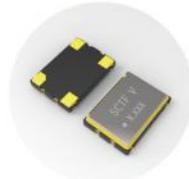
Product Appearance



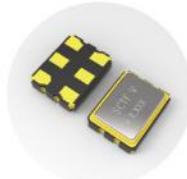
■ 3V Series
3.2×2.5mm



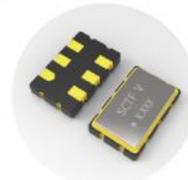
■ 5V Series
5.0×3.2mm



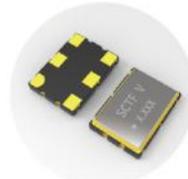
■ 7V Series
7.0×5.0mm



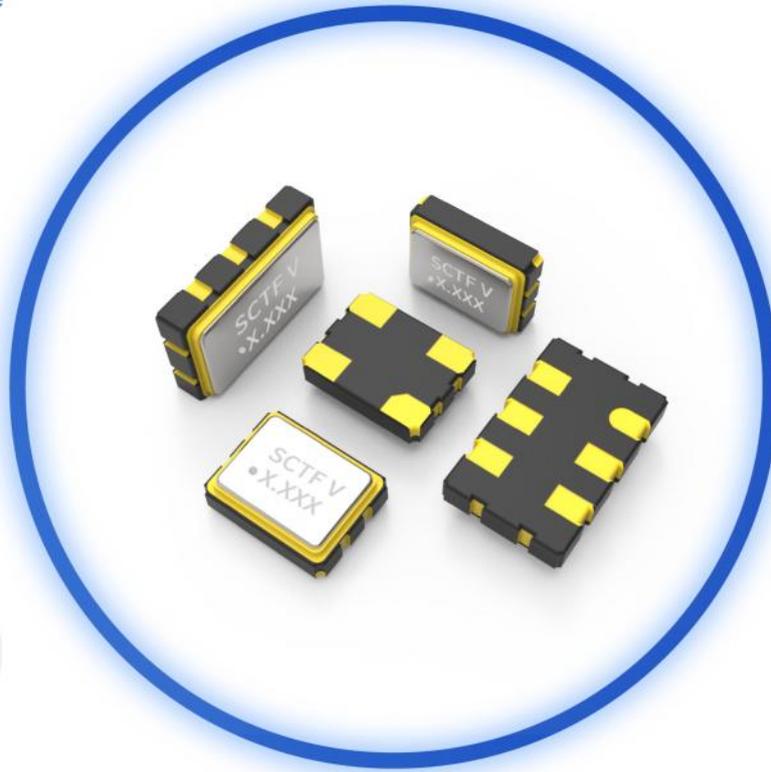
■ 3VA Series
3.2×2.5mm



■ 5VA Series
5.0×3.2mm



■ 7VA Series
7.0×5.0mm



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 Stability [Overall, ±ppm]	Absolute Pull Range [Min, ±ppm]	Current Consumption	Output Control	Operating Temperature
	L	W							
3V	3.2	2.5	2.4 ~ 54	3.3	25 30 50	50	15mA max.	Tri-State	-20°C~+70°C -40°C~+85°C
5V	5.0	3.2							
7V	7.0	5.0							
3VA	3.2	2.5					20mA max.		
5VA	5.0	3.2							
7VA	7.0	5.0							

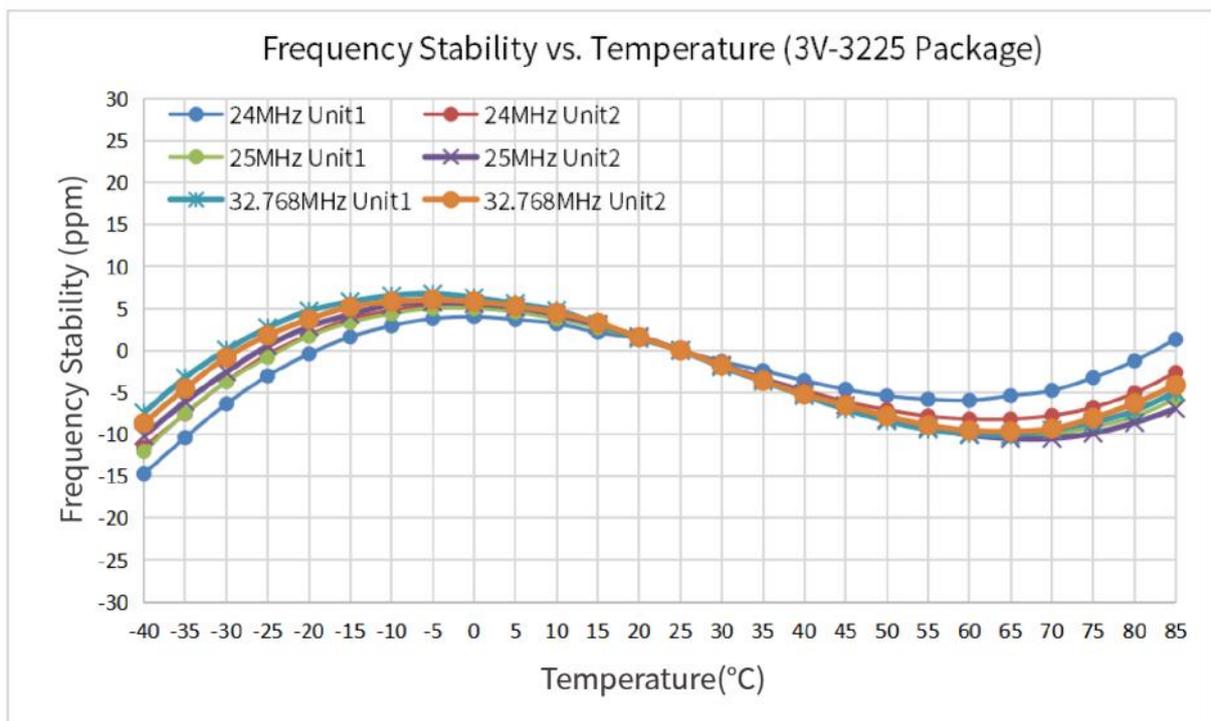
若需要更详细的资料请查询详细规格书或和我们的技术人员联系。

1. 选择需要的封装规格及产品系列: 3.2×2.5mm; 3V Series
2. 选择需要的频率: 25.000MHz
3. 选择需要的工作电压: 3.3V
4. 选择需要的频率稳定度 (@+25°C): ±20ppm
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: 3V Series 25.000MHz 3.3V ±20ppm@25°C ±30ppm@ -40°C~+85°C

频率温度特性曲线

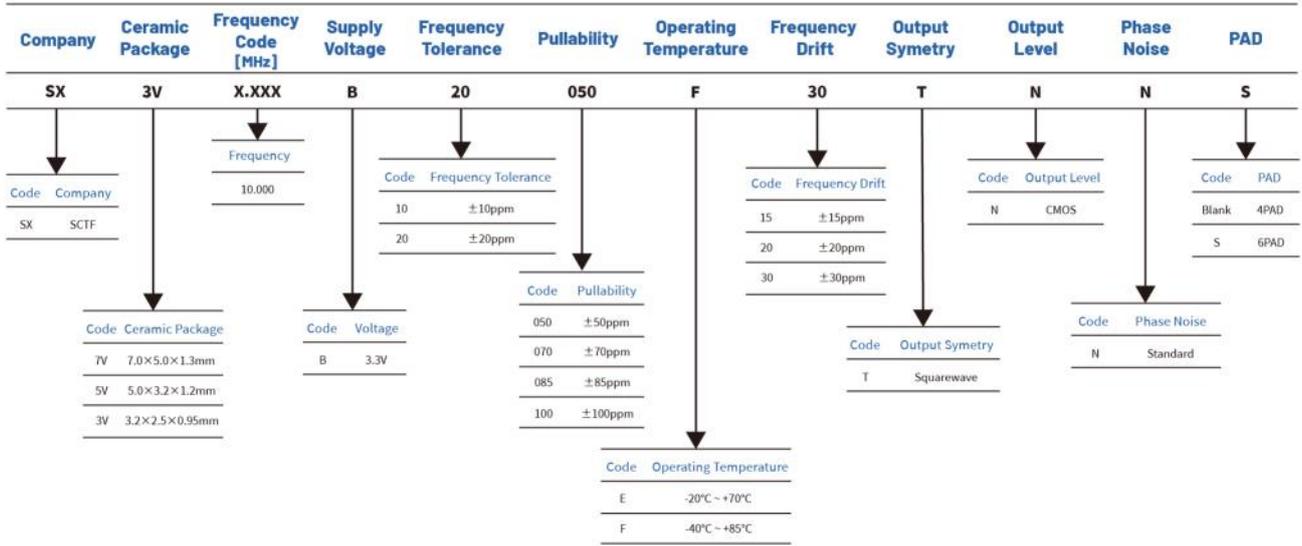
Frequency Temperature Characteristics



零部件编码示意

Options and Part Identification

Options and Part Identification : Example SX3V10.000B20050F30TNS



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

3V Series 3.2 x 2.5 mm VCXO Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz ≤ Freq. < 36MHz 36MHz ≤ Freq. < 54MHz
				15		
Absolute Pull Range	APR	±50			ppm	
Center Voltage	V _{cont}		1.65		V	
Control Voltage Range	V _c	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			MΩ	
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C

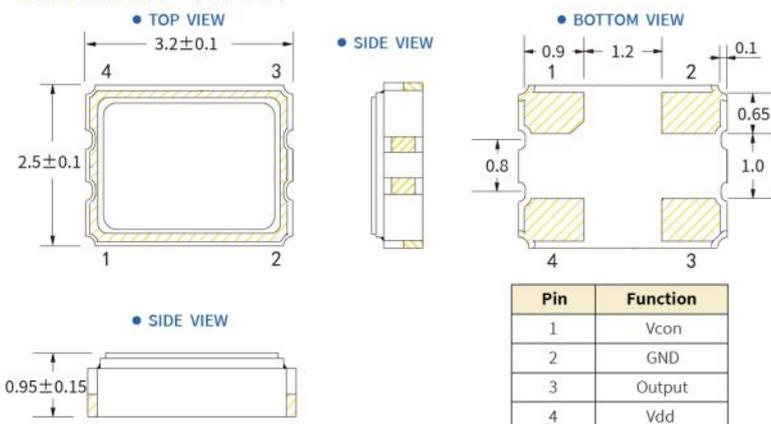
Frequency Stability & Operating Temperature Range

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

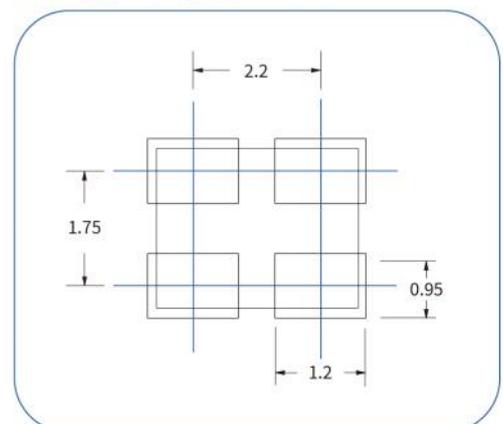
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



3VA Series

3.2 x 2.5 mm VCXO Crystal Oscillator



Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations

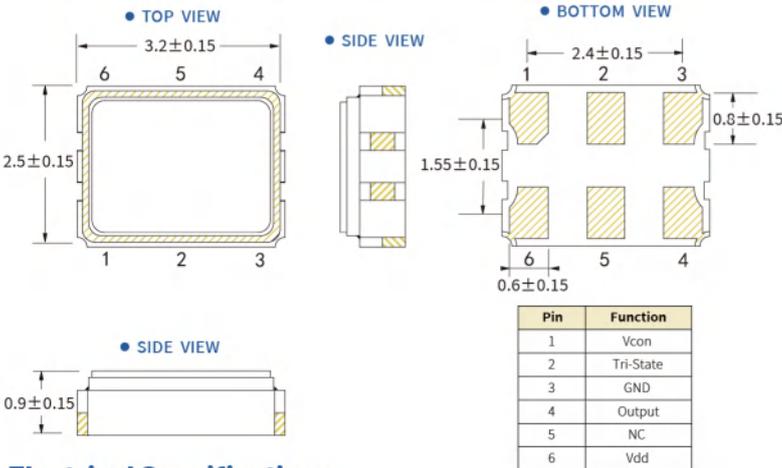
Frequency Stability & Operating Temperature Range

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

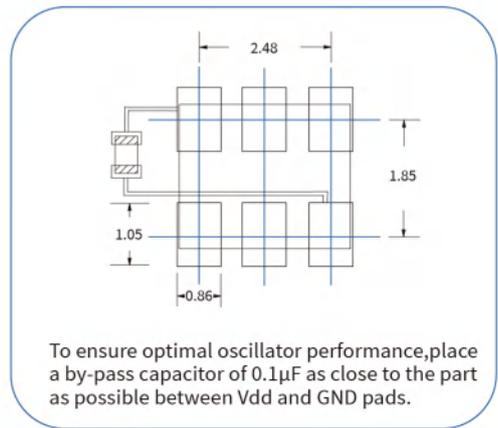
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	Vdd	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz \leq Freq. < 36MHz
				15		36MHz \leq Freq. < 54MHz
Absolute Pull Range	APR	± 50			ppm	
Center Voltage	Vcont		1.65		V	
Control Voltage Range	Vc	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			M Ω	
Duty Cycle	SYM	45		55	%	50 % Vdd level, L _{CMOS} \leq 15 pF
High output voltage	V _{OH}	0.9Vdd			V	
Low output voltage	V _{OL}			0.1Vdd	V	
Enable Voltage High(Logic 1)	V _{IH}	0.7Vdd			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}			0.3Vdd	V	
Rise / Fall Time	T _R / T _F			5	nS	10% Vdd to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C

5V Series

5.0 x 3.2 mm VCXO Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz ≤ Freq. < 36MHz 36MHz ≤ Freq. < 54MHz
				15		
Absolute Pull Range	APR	±50			ppm	
Center Voltage	V _{cont}		1.65		V	
Control Voltage Range	V _c	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			MΩ	
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C

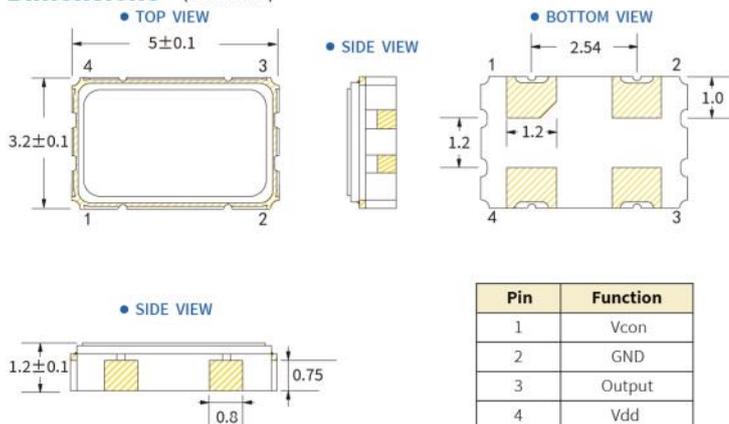
Frequency Stability & Operating Temperature Range

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

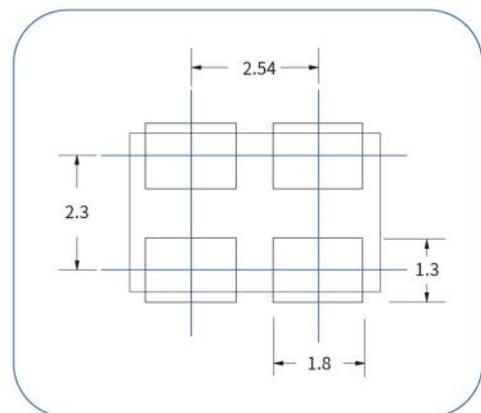
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



5VA Series

5.0 x 3.2 mm VCXO Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



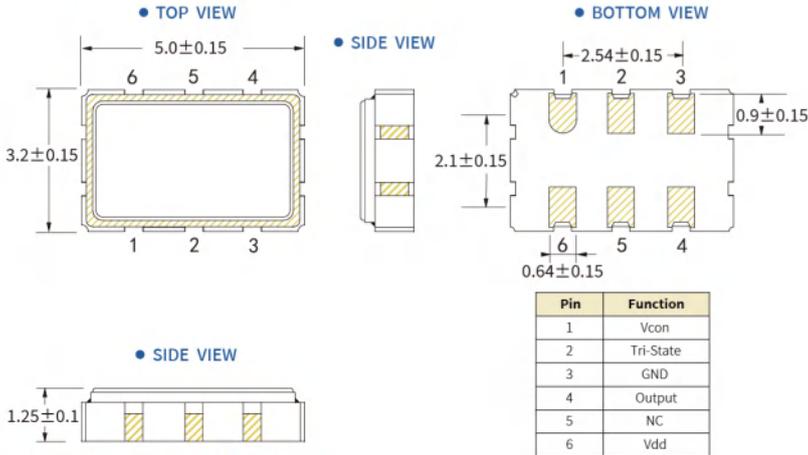
Frequency Stability & Operating Temperature Range

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

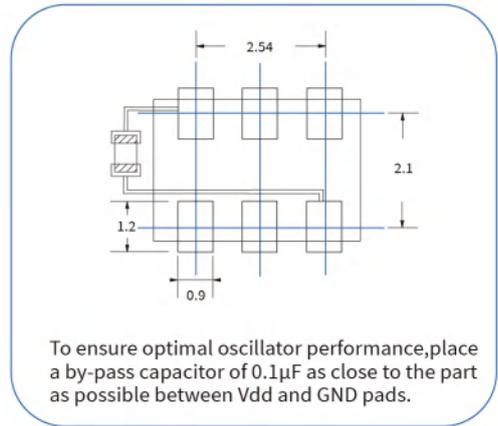
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz ≤ Freq. < 36MHz
				15		36MHz ≤ Freq. < 54MHz
Absolute Pull Range	APR	±50			ppm	
Center Voltage	V _{cont}		1.65		V	
Control Voltage Range	V _c	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			MΩ	
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
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	
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C

7V Series 7.0 x 5.0 mm VCXO Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz ≤ Freq. < 36MHz
				15		36MHz ≤ Freq. < 54MHz
Absolute Pull Range	APR	±50			ppm	
Center Voltage	V _{cont}		1.65		V	
Control Voltage Range	V _c	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			MΩ	
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
High output voltage	V _{OH}	0.9V _{dd}			V	
Low output voltage	V _{OL}			0.1V _{dd}	V	
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C

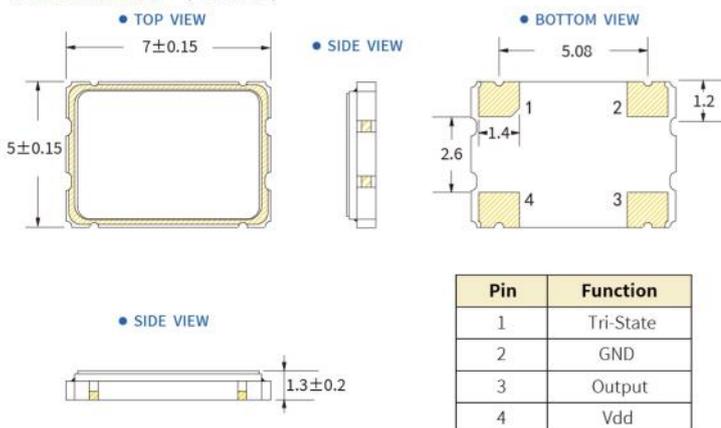
Frequency Stability & Operating Temperature Range

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

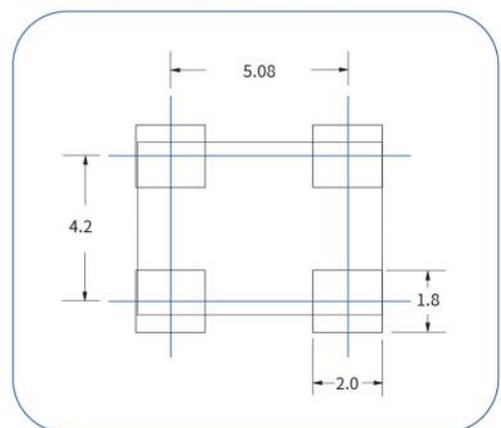
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



7VA Series

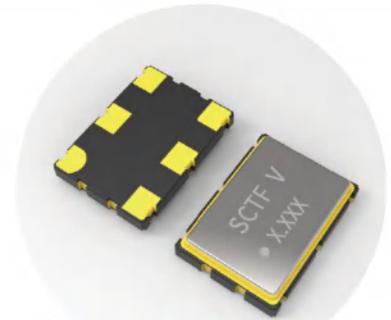
7.0 x 5.0 mm VCXO Crystal Oscillator

Feature

- Ceramic surface mount with Metal Lid
- Wide Absolute pulling range: ± 50 ppm min.
- CMOS compatible logic levels
- RoHS Compliant / Pb Free

Applications

- Networking, SONET/SDH
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations



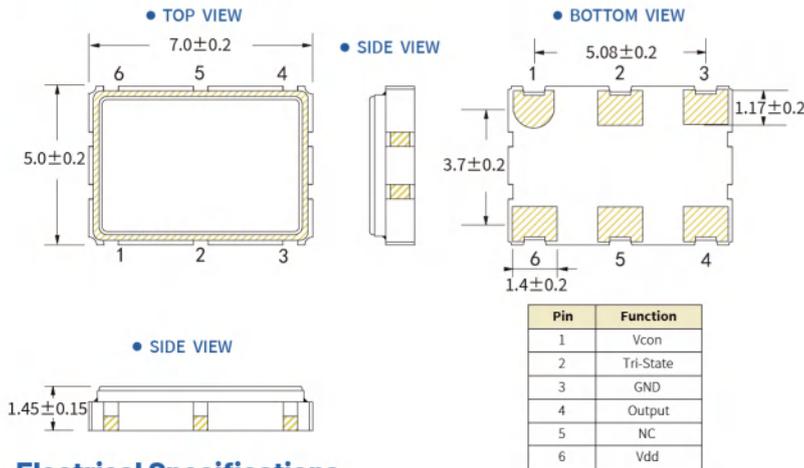
Frequency Stability & Operating Temperature Range

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

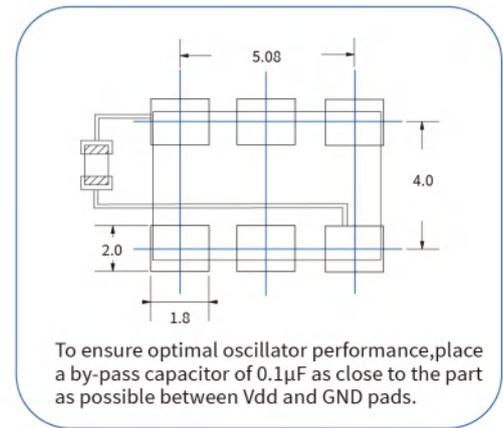
★: Available △: Conditional

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

Dimensions (UNIT:mm)



Solder pad layout (UNIT:mm)



Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	2.400		54.000	MHz	
Operating Temperature	T _{use}	-20		+70	°C	
		-40		+85	°C	
Storage Temperature Range	T _{stg}	-55		+125	°C	
Supply Voltage	V _{dd}	2.97	3.3	3.63	V	
Output Load	L _{CMOS}		15		pF	
Current Consumption	I _{cc}			10	mA	2.4MHz ≤ Freq. < 36MHz
				15		36MHz ≤ Freq. < 54MHz
Absolute Pull Range	APR	±50			ppm	
Center Voltage	V _{cont}		1.65		V	
Control Voltage Range	V _c	0.3		3.0	V	
Linearity	L			10	%	
Modulation Band Width	MBW	15			KHz	
VC Input Impedance	R _{in}	5			MΩ	
Duty Cycle	SYM	45		55	%	50 % V _{dd} level, L _{CMOS} ≤ 15 pF
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	
Rise / Fall Time	T _R / T _F			5	nS	10% V _{dd} to 90% Level
Start-up Time	T _{str}			2	mS	To 90% of Final Amplitude
Aging	f _{age}			3	ppm	1st. Year at 25°C