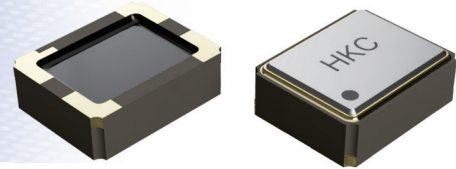




2016 Ceramic SMD TCXO 2016TC Series

Model T2

4 PADS 2.0 x 1.6



Frequency Range : 10.00MHz to 52.00MHz

Features :

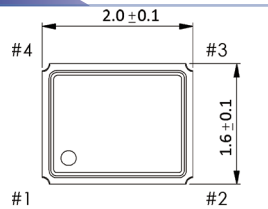
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

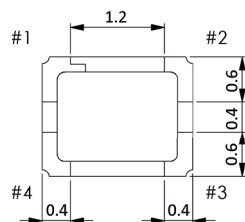
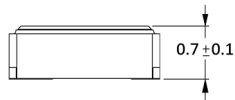
Standard Specifications

Item	Value	
Frequency Range	10.00MHz to 52.00MHz	
Frequency Tolerance at 25°C	±1.5ppm max.	
Frequency Stability	Temperature Range	±2ppm max.
	Input Voltage Change	±0.2ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +85°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (10.00MHz to 29.99MHz)	
	1.7mA max. (30.00MHz to 39.99MHz)	
	2mA max. (40.00MHz to 52.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (Vcon)	+0.9V±0.8V (V _{DD} = 1.8V)
		1/2V _{DD} ± 1V (V _{DD} = 2.5V / 3.3V)
	Frequency Adjustment	±8ppm to ±13ppm (V _{DD} = 1.8V)
SSB Phase Noise		±9ppm to ±15ppm (V _{DD} = 2.5V / 3.3V)
		-135dBc / Hz, Typical at 1kHz offset

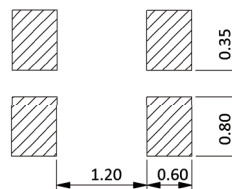
Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND	Vcontrol
#2	GND	
#3	OUTPUT	
#4	V _{DD}	



Soldering Pattern



Note :

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2. Custom specification is welcome. Please contact our sales representative for further details.
3. If the crystal is intended for applications which have direct impact on human life and properties, and require a high degree of reliability and safety concerns, customers must provide full information such as but not limit to the application, electrical and reliability specification at the inquiry beginning stage.
4. Customers have to agree to the "Guideline for handling crystal units" and "Standard Terms and Condition of Sales" which is printed this catalog before placing orders to our company or our distributors. There are also unpredictable factors such as applied condition, oscillation margin and etc and customers must check them beforehand. In case of queries, please do not fail to send inquiry to our company before ordering.

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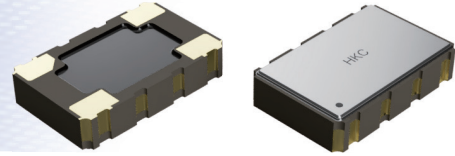




5032 Ceramic SMD TCXO 5032TC Series

Model T3

4 PADS 5.0 x 3.2



Frequency Range : 6.00MHz to 45.00MHz

Features :

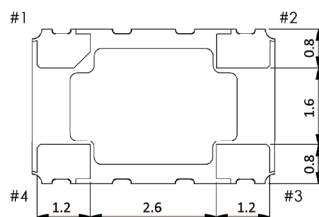
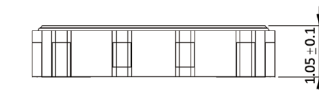
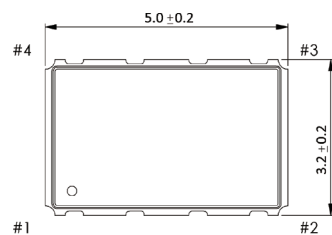
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

Standard Specifications

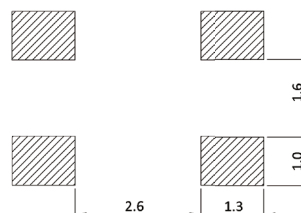
Item	Value	
Frequency Range	6.00MHz to 45.00MHz	
Frequency Tolerance at 25°C	±0.5ppm max.	
Frequency Stability	Temperature Range	±2.5ppm max.
	Input Voltage Change	±0.2ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +75°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (6.00MHz to 19.99MHz)	
	2mA max. (20.00MHz to 31.99MHz)	
	2.5mA max. (32.00MHz to 45.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (Vcon)	1.5V±1V
	Frequency Adjustment	±8ppm min.
SSB Phase Noise	-135dBc / Hz, Typical at 1kHz offset	

Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND	Vcontrol
#2	GND	
#3	OUTPUT	
#4	V _{DD}	

Soldering Pattern



Note :

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Ver 1.1

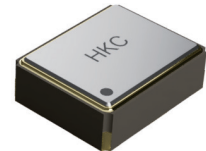
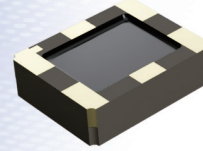




2520 Ceramic SMD TCXO 2520TC Series

Model T4

6 PADS 2.5 x 2.0



Frequency Range : 10.00MHz to 52.00MHz

Features :

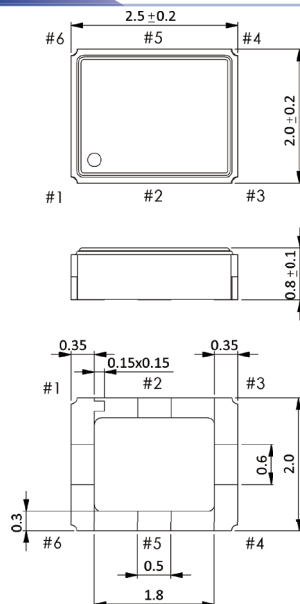
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

Standard Specifications

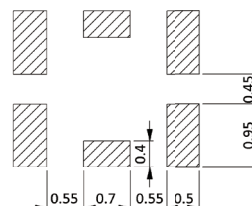
Item	Value	
Frequency Range	10.00MHz to 52.00MHz	
Frequency Tolerance at 25°C	±1.5ppm max.	
Frequency Stability	Temperature Range	±2ppm max.
	Input Voltage Change	±0.2ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +85°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (10.00MHz to 29.99MHz)	
	1.7mA max. (30.00MHz to 39.99MHz)	
	2mA max. (40.00MHz to 52.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (Vcon)	+0.9V±0.8V (V _{DD} = 1.8V)
		1/2V _{DD} ± 1V (V _{DD} = 2.5V / 3.3V)
	Frequency Adjustment	±8ppm to ±13ppm (V _{DD} = 1.8V)
	±9ppm to ±15ppm (V _{DD} = 2.5V / 3.3V)	
SSB Phase Noise	-135dBc / Hz, Typical at 1kHz offset	

Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND	Vcontrol
#2	NC or GND	
#3	GND	
#4	OUTPUT	
#5	NC or GND	
#6	V _{DD}	

Soldering Pattern



Note:

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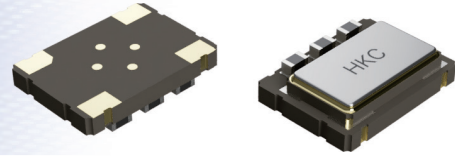




7050 Ceramic SMD TCXO 7050TC Series

Model T5

4 PADS 7.0 x 5.0



Frequency Range : 10.00MHz to 26.00MHz

Features :

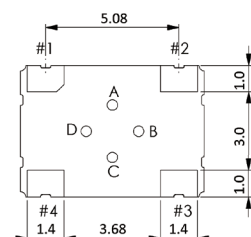
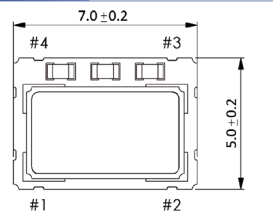
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

Standard Specifications

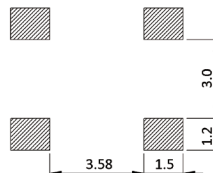
Item	Value	
Frequency Range	10.00MHz to 26.00MHz	
Frequency Tolerance at 25°C	±0.5ppm max.	
Frequency Stability	Temperature Range	±2.5ppm max.
	Input Voltage Change	±0.2ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +75°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (6.00MHz to 19.99MHz)	
	2mA max. (20.00MHz to 31.99MHz)	
	2.5mA max. (32.00MHz to 45.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (Vcon)	1.5V±1V
	Frequency Adjustment	±8ppm min.
SSB Phase Noise	-135dBc / Hz, Typical at 1kHz offset	

Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND	Vcontrol
#2	GND	
#3	OUTPUT	
#4	V _{DD}	

Soldering Pattern



Note :

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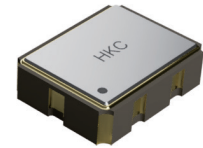
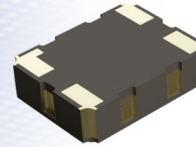




3225 Ceramic SMD TCXO 3225TC Series

Model T7

4 PADS 3.2 x 2.5



Frequency Range : 10.00MHz to 40.00MHz

Features :

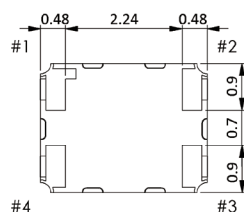
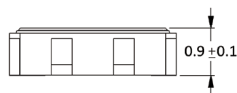
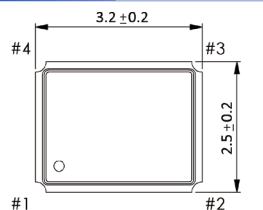
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

Standard Specifications

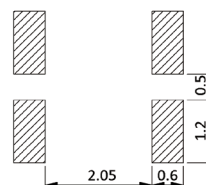
Item	Value	
Frequency Range	10.00MHz to 40.00MHz	
Frequency Tolerance at 25°C	±1.5ppm max.	
Frequency Stability	Temperature Range	±2.5ppm max.
	Input Voltage Change	±0.3ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +75°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (10.00MHz to 29.99MHz)	
	1.7mA max. (30.00MHz to 40.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (Vcon)	+0.9V±0.8V (V _{DD} = 1.8V)
		1/2V _{DD} ± 1V (V _{DD} = 2.5V / 3.3V)
	Frequency Adjustment	±8ppm to ±13ppm (V _{DD} = 1.8V)
	±9ppm to ±15ppm (V _{DD} = 2.5V / 3.3V)	
SSB Phase Noise	-135dBc / Hz, Typical at 1kHz offset	

Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND(recommended) or NC	Vcontrol
#2	GND	
#3	OUTPUT	
#4	V _{DD}	

Soldering Pattern



Note:

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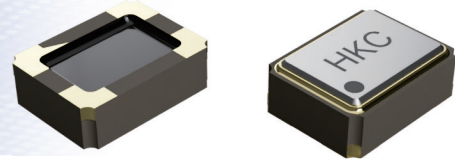




1612 Ceramic SMD TCXO 1612TC Series

Model TX

4 PADS 1.6 x 1.2



Frequency Range : 26.00MHz and 52.00MHz

Features :

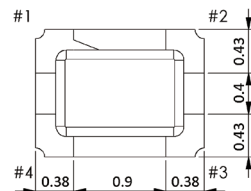
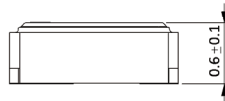
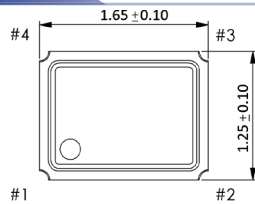
- High precision oscillator unit
- Lead-free type

QUARTZ
CRYSTALS

Standard Specifications

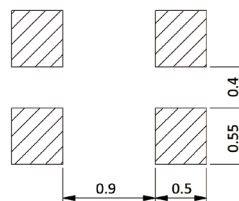
Item	Value	
Frequency Range	26.00MHz and 52.00MHz	
Frequency Tolerance at 25°C	±1.5ppm max.	
Frequency Stability	Temperature Range	±2ppm max.
	Input Voltage Change	±0.2ppm max.
	Output Load Change	±0.2ppm max.
	Ageing	±1ppm max.
Operating Temperature Range	-30°C to +85°C	
Storage Temperature Range	-40°C to +85°C	
Output	Clipped Sine Wave	
Output Load	10kOhm // 10pF	
Output Level	0.8 Vp-p min.	
Input Current	1.5mA max. (26.00MHz to 29.99MHz)	
	1.7mA max. (30.00MHz to 52.00MHz)	
Supply Voltage (V _{DD})	1.8V, 2.5V, 3.3V	
Voltage Control (Optional)	Control Voltage (V _{con})	+0.9V±0.8V (V _{DD} = 1.8V)
		1/2V _{DD} ± 1V (V _{DD} = 2.5V / 3.3V)
	Frequency Adjustment	±8ppm to ±13ppm (V _{DD} = 1.8V)
	±9ppm to ±15ppm (V _{DD} = 2.5V / 3.3V)	
SSB Phase Noise	-135dBc / Hz, Typical at 1kHz offset	

Dimension



PIN	CONNECTION	
	TCXO	VC-TCXO
#1	GND	V _{control}
#2	GND	
#3	OUTPUT	
#4	V _{DD}	

Soldering Pattern



Note :

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Ver 1.1

