

Model Numbering Guide – Crystal Units

Available options

Type	package (mm)	Load Capacitance (pF)	Freq. Tol. @25°C (ppm)	Freq. Stability (ppm)	Temp. Range(°C)	Special Requirement	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
X: X'tal (MHz series)	3: 1.6x1.2 Z: 2.0x1.6 Y: 2.5x2.0 X: 3.2x2.5 V: 5.0x3.2 (4Pads) R: 6.0x3.5 2: 3.2x2.5 S: 5.0x3.2 (2Pads) Q: 8.0x4.5 I: 11.1x4.68 (U4) J: 13.0x4.85 (U4B)	L: 6 O: 7 A: 8 B: 9 C: 10 D: 12 E: 15 F: 16 G: 18 H: 20 P: 22 Q: 25 I: 30 J: 32 K: 50 N: No Standard S: Series	A: ±5 B: ±10 P: ±15 C: ±20 D: ±25 E: ±30 F: ±40 G: ±50 H: ±100 I: ±150	A: ±5 B: ±10 P: ±15 C: ±20 D: ±25 E: ±30 F: ±40 G: ±50 H: ±100 I: ±150 Z: ±150 above	A: +10~+40 B: +0~-55 E: +0~+85 I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+95 M: -40~+105 J: -40~+125 H: -40~+150 G: -40~+150 F: -55~+125	A: For Automotive B: Spurious D: DLD N: No Special P: Pullability S: Several	A: AT Fundamental T: AT 3 rd Overtone	O: Laser Seal N: Normal	F: RoHS Compliant	-	XX.XXXXX
X: X'tal (32.768 kHz series)	A: 3.0x8.0 (Dip) B: 1.0x4.0 (Dip) /2.0x6.0 (Dip) D: 2.0x1.2 (2Pads) 3.2x1.5 (2Pads) /4.1x1.5 (2Pads) N: 6.9x1.4 (4Pads) /8.0x3.8 (4Pads)	L: 6 O: 7 B: 9 M: 12.5	C: ±20	H: ±100 I: ±150 Z: ±150 above	C: -20~+70 L: -40~+85	N: No Special	D: Tuning Fork	N: Normal (XA 3.0x8.0 size XB 2.0x6.0 size) J: XB 1.0x4.0 size C: XD 4.1x1.5 size D: XD 3.2x1.5 size MXD 2.0x1.2 size E: XN 8.0x3.8 size H: XN 6.9x1.4 size	D: RoHS Compliant B: Non-RoHS Compliant	-	0.032768

X Y C D D L N A N F – 40.000000

*Not all combinations of options are available.

Example: XYCDDLNANF-40.000000

Type	X'tal
Package	2.5 x 2.0 mm
Load Capacitance	10 pF
Freq. Tol.	±25ppm
Freq. Stability	±25ppm
Temp Range	-40~+85 °C
Special Requirement	No Special
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHS Compliant
Frequency	40.000000 MHz

Model Numbering Guide – Crystal Oscillator

Available options

Type	package (mm)	Supply Voltage(V)	Tri-State Function	Freq. Stability (ppm)	Temp. Range(°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
O: Oscillator	Z:2.0 x 1.6 Y:2.5 x 2.0 X:3.2 x 2.5 V:5.0 x 3.2 C:7.0 x 5.0	E: 2.8/3.0/3.3 J :2.5 K:1.8 P:1.5 L:1.2/1.25 M:0.9 Q:1.0 X:Un programmed	I: Low Power or Low Current T: Fixed-Freq with Tri-State M: Multiplier Freq with Tri-State(only for V/C package) U: Ultra Low Noise design	A: ±5 B: ±10 P: ±15 C: ±20 D: ±25 E: ±30 F: ±40 G: ±50 H: ±100	E: 0~+85 I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85 J: -40~+105 H: -40~+125 F: -55~+125	J: CMOS 15pF / 50±5% K: CMOS 15pF / 50±10%					
P: Programmable Oscillator	Z:2.05 x 1.65 Y:2.5 x 2.0 X:3.2 x 2.5 V:5.0 x 3.2 C:7.0 x 5.0	E:2.8/3.0/3.3 J:2.5 K:1.8 X:Un-programmed	P: Un-programmed T: Fixed-Freq with Tri-State U: Low Noise	C: ±20 D: ±25 G: ±50 H: ±100 Z: over 150ppm	I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85 J: -40~+105	J: CMOS 15pF / 50±5%	A: AT Fundamental T: AT 3rd Overtone Not Selectable by Customer	N :Normal	F: RoHS Compliant O: No Marking	-	XX.XXXXXX
O: Oscillator (Differential Output)	A:3.2 x 2.5 W:5.0x3.2 T:7.0x5.0	E:3.3 J:2.5 X:Un-programmed	T: Input to pin 2 (std.) R: Input to pin 1 (case by case) U: Ultra Low Jitter design (Only for T package)	D: ±25 G: ±50 H: ±100 Z: over 150ppm		L: LVPECL / 50±5% V: LVDS / 50±5% H: HCSSL / 50±5%					
O: Oscillator (Fast Delivery series)	A:3.2 x 2.5 J:5.0x3.2 W:5.0x3.2 D:7.0x5.0 T:7.0x5.0	E:3.3 J:2.5 K:1.8 X:Un-programmed	M: Multiplier Freq with pin 2 Tri-State N: Multiplier Freq. with PIN 1 Tri-State P: With Tri-State Frequency Selection Function	D: ±25 G: ±50 H: ±100		H: HCSSL / 50±5% J: CMOS 15pF / 50±5% L: LVPECL / 50±5% M: CML V: LVDS / 50±5%					

O Y E T C C J A N F - 13.000000

*Not all combinations of options are available.

Example: OYETCCJANF-13.000000

Type	Oscillator
Package	2.5 x 2.0 mm
Supply Voltage(V)	3.3 V
Tri-State .	Fixed-Freq.
Freq. Stability	±20ppm
Temp Range	-20~+70 °C
Output	CMOS 15 pF / Symmetry 50±5%
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	13.000000 MHz

Model Numbering Guide – VCXO

Available options

Type	package (mm)	Supply Voltage(V)	Tri-State Function	Freq.Stability/APR (ppm)	Temp. Range(°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
V: VCXO	A: 3.2x2.5 W: 5.0x3.2 (6 Pads) T: 7.0x5.0 (6 Pads) K: 14.2x9.3 (6 Pads) L: 14.0x9.0 (4 Pads)	C: 5 (Only for L Package) E: 3.3 J: 2.5 K: 1.8 (Only for CMOS and Frequency < 60MHz)	U: Relative Pulling (Refer to Center Voltage) with Tri-State to pin 2 M: Multiplier Frequency with Tri-State to pin 2 S: Enable Low R: Input to pin 5 F: Without Tri-State	M: ±25/±50 (VC=10%Vdd ~90%Vdd) P: ±50/±50 (VC=10%Vdd ~90%Vdd) A: ±50/±50 (VC=0V~Vdd) B: ±25/±50 (VC=0V~Vdd) V: ±30/±30 W: ±25/±30	I: -10~+60 C: -20~+70 L: -40~+85 J: -40~+105	J: CMOS 15pF / 50±5% F: CMOS 50pF / 50±5% L: LVPECL / 50±5% V: LVDS / 50±5% W: Sine Wave M: CML	A: AT Fundamental T: AT 3 rd Overtone Not selectable by Customer	N: Normal F: Option A G: Option B J: Option C	F: RoHs Compliant	-	XX.XXXXXX

V T E S P C L A N F – 10.000000

*Not all combinations of options are available.

Example: VTESPCLANF-10.000000

Type	VCXO
Package	7.0 x 5.0 mm
Supply Voltage(V)	3.3 V
Tri-State	Enable Low
Freq. Stability / APR	±50ppm / ±50ppm
Temp Range	-20~+70 °C
Output	LVPECL/Symmetry 50±5%
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	10.000000 MHz

Model Numbering Guide – VCTCXO / TCXO

Available options

Type	package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppm)	Temp. Range(°C)	Output Logic And Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
T: TCXO	Z: 2.0x1.6 Y: 2.5x2.0 X: 3.2x2.5 V: 5.0x3.2 S: 7.0x5.0 (10Pads) A: 7.0x5.0 (4Pads) K: 14.3x9.6 F: 20.4x12.8 (Dip)	C: 5.0 E: 2.8/3.0/3.3 J: 2.5 K: 1.8 (TX / TY)	A: ± 5 B: ± 8 C: ±10 T: TCXO Vcon range: 0.5V to 2.5V	A: ±0.5 B: ±1.0 P: ±1.5 C: ±2.0 D: ±2.5	B: 0~+55 I: -10~+60 J: -10~+70 C: -20~+70 H: -30~+75 D: -30~+85 L: -40~+85 M: -40~+95 K: -40~+105						
T: TCXO (High Precision /Stratum 3)	W: 5.0x3.2 L: 5.0x3.2 (10Pads) S: 7.0x5.0 (10Pads) T: 7.0x5.0 (4Pads)	C: 5.0 E: 3.3 J: 2.5		Q: ±0.05 M: ±0.1 J: ±0.14 R: ±0.2 K: ±0.28 L: ±0.37 T: ±4.6 (Including 20 Years Aging)		A: TTL 15pF / 50±5% J: CMOS 15pF / 50±5% K: CMOS 15pF / 50±10% S: Clipped sine wave 10KΩ//10pF	A: AT Fundamental Not selectable by customer	F: Option A G: Option B L: Low G Sensitivity N: Normal P: Programmable TCXO T: Normal with Tri-State	F: RoHs Compliant	-	XX.XXXXXX

T X E C D D S A N F – 26.000000

*Not all combinations of options are available.

Example: TXECDDSANF-26.000000

Type	VCTCXO
Package	3.2 x 2.5 mm
Supply Voltage(V)	3.0 V
Pulling Range	±10 ppm
Freq. Stability	±2.5 ppm
Temp Range	-30~+85 °C
Output	Clipped sine wave
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	26.000000 MHz

Model Numbering Guide – OCXO

Available options

Type	Package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppb)	Temp. Range(°C)	Output Logic and Symmetry	Oscillator Mode	Pin out	Lead Free	Dash	Freq. (MHz)
N: OCXO	N: 9.7x7.5 K: 14x9.6 (SMD) F: 20.3x12.7 P: 20.6x20.6 J: 25.4x22.1 (SMD) A: 25.4x25.4 I: 36.3x27.2	E: 3.3 T: 5 A: 12	K: ±0.2 H: ±0.4 D: ±1 G: ±3 E: ±5 N: No Voltage Control Function	R: ±2 A: ±5 B: ±10 C: ±20 E: ±30 G: ±50	B: 0~+50 E: 0~+70 D: -30~+70 L: -40~+85	W: Sine wave J: CMOS15pF / 50±5% S: Clipped Sine Wave	N: IT Fundamental H: SC 3rd overtone	N : Normal (Please refer to "outline drawing")	F: RoHs Compliant	-	XX.XXXXXX

N	A	T	H	C	E	W	H	N	F	-	10.000000
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*Not all combinations of options are available.

Example: NATHCEWHNF-10.000000

Type	OCXO
Package	25.4 x 25.4 mm
Supply Voltage(V)	5 V
Pulling Range	±0.4 ppm
Freq. Stability	±20 ppb
Temp Range	0~+70 °C
Output	Sine wave
Pin Out	Normal
Lead Free	RoHs Compliant
Frequency	10.000000 MHz