

OT Type

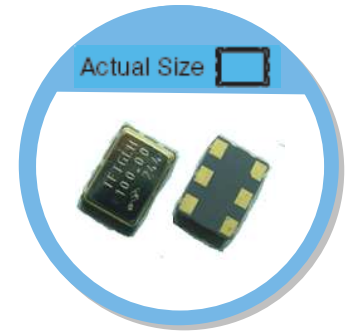
7.0 x 5.0 mm SMD HCSL Crystal Oscillator

FEATURE

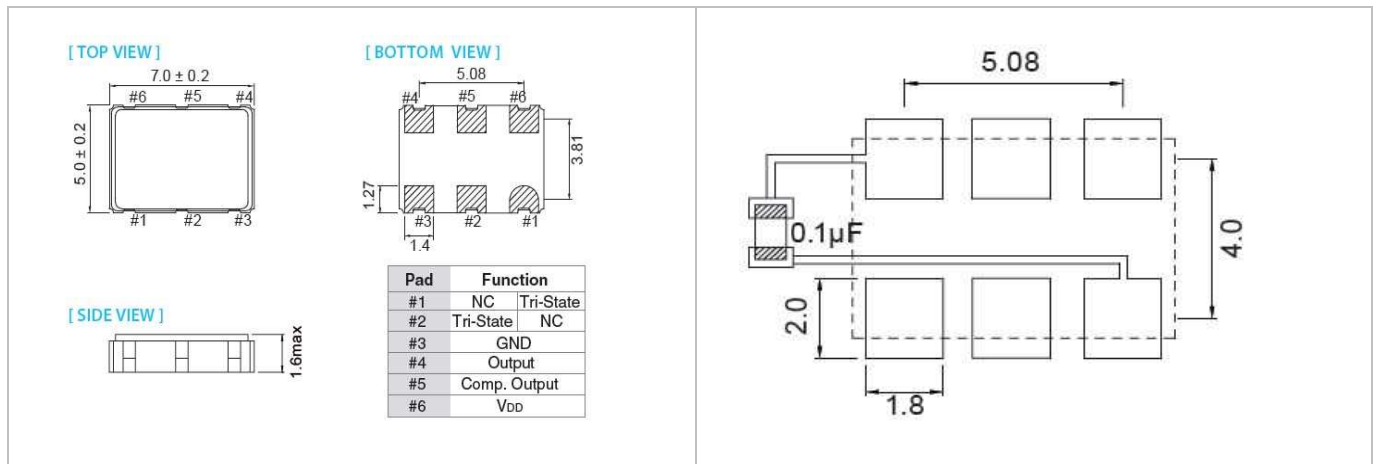
- Typical 7.0 x 5.0 x 1.5 mm hermetically sealed ceramic package.
- Very low jitter performance : Max. 0.5 pS RMS from 12k-20MHz.
- Tight symmetry (45 to 55%) available.
- Tri-state enable/disable.
- High-speed current steering logic (HCSL) output.

TYPICAL APPLICATION

- PCI-Express



RoHS Compliant Standard



ELECTRICAL SPECIFICATION

Parameter	HCSL				Unit
	3.3V		2.5V		
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	90	125	90	125	MHz
Standard Frequency	100				
Supply Current					
90MHz ≤ F0 ≤ 125MHz	-	30	-	30	mA
Output Level					
Output High (Logic "1")	0.6	-	0.58	-	V
Output Low (Logic "0")	-	0.15	-	0.15	
Transition Time: Rise/Fall Time+	-	0.5	-	0.5	nSec
Start Time	-	3	-	3	mSec
Tri-State (Input to Pin 2 or Pin 1)					
Enable	0.7VDD	-	0.7VDD	-	V
Disable	-	0.3VDD	-	0.3VDD	
RMS Phase Jitter (integrated 12KHz ~ 20MHz)					
90MHz ≤ F0 ≤ 125MHz	-	0.5	-	0.5	pSec
Aging	-	±3	-	±3	ppm
Storage Temp. Range	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position
 +Transition times are measured between 20% and 80% of VDD

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	ppm	
		±25	±50
-10~+60	0	0	0
-20~+70	0	0	0
-40~+85	△	0	0

* O: Available △: Conditional X: Not available

*Inclusive of calibration @ 25°C, operating temperature range, input voltage variation,

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 M: 0.9	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	Y: 2.5 x 2.0 X: 3.2 x 2.5	E: 2.8/3.0/3.3 J: 2.5 K: 1.8	T: Fixed-Freq with Tri-State	C: ±20 D: ±25 G: ±50 H: ±100		J: CMOS 15pF / 50±5%	A: AT Fundamental T: AT 3rd Overtone	N :Normal	F: RoHS Compliant	-	XX.XXXXXX
O: Oscillator (Differential Output)	A:3.2x2.5 W:5.0x3.2 T:7.0x5.0	E: 3.3 J: 2.5	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	I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85	L: LVPECL / 50±5% V: LVDS / 50±5% H: HCSL / 50±5%	Not Selectable by Customer				
O: Oscillator (Fast Delivery series)	W:5.0x3.2 T:7.0x5.0	E: 3.3 J: 2.5	M: Multiplier Freq with pin 2 Tri-State N: Multiplier Freq. with PIN 1 Tri-State	D: ±25 G: ±50 H: ±100		J: CMOS 15pF / 50±5% L: LVPECL / 50±5% 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