



Pb Free

RoHS Compliant

**Features**

- Low Voltage 2.5V
- Low Jitter
- LVDS output
- Operation at Fundamental high frequency

**How to Order**

**KC7050T 312.500 L 2 1 E 00**  
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (7.0×5.0mm SMD)
- ② Output Frequency
- ③ Output Type (LVDS)
- ④ Supply Voltage (2.5V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ Enable Function (45/ 55%, Stand-by)
- ⑦ Customer Special Model Suffix (STD Specification is "00")

**Table 1**

Freq. Tol. Code	Tol. × 10 <sup>-6</sup>	Operating Temperature Range (°C)	Note
0	± 50	0 to +70	
1	±100	0 to +70	Standard specifications
A	±100	-5 to +85	

Packaging (Tape & Reel 1000 pcs./ reel)

**Specifications**

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range (Note1)	fo		125	700	MHz	
Frequency Tolerance	f <sub>tol</sub>	Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration	Op. Temp.: 0 to +70°C	-50	+50	×10 <sup>-6</sup>
			Op. Temp.: 0 to +70°C	-100	+100	
			Op. Temp.: -5 to +85°C	-100	+100	
Storage Temperature Range	T <sub>stg</sub>		-55	+125	°C	
Operating Temperature Range	T <sub>use</sub>	Standard Specifications	0	+70	°C	
Max. Supply Voltage	—		-0.5	+5	V	
Supply Voltage	V <sub>cc</sub>	2.5V	2.38	2.63	V	
Current Consumption (Standard Loaded)	I <sub>cc</sub>		—	70	mA	
Symmetry	SYM		45	55	%	
Rise/ Fall Time (20% to 80% Output Level Standard Loaded)	tr/ tf		—	600	pS	
Low Level Output Voltage (Note2)	V <sub>OL</sub>	Typ. 1.1V	0.9	—	V	
High Level Output Voltage (Note2)	V <sub>OH</sub>	Typ. 1.43V	—	1.6	V	
Differential Output Voltage (Note2)	V <sub>OD</sub>	Typ. 330mV	247	454	mV	
Differential Output Voltage Error (Note2)	dV <sub>OD</sub>	dV <sub>OD</sub> = V <sub>OD1</sub> -V <sub>OD2</sub>	—	50	mV	
Offset Voltage	V <sub>OS</sub>	Typ. 1.25V	1.125	1.375	V	
Offset Voltage Error	dV <sub>OS</sub>	dV <sub>OS</sub> = V <sub>OS1</sub> -V <sub>OS2</sub>	—	50	mV	
Output Load	RL	LVDS Output	100		ohm	
Input Voltage Range	V <sub>IN</sub>		0	V <sub>cc</sub>	V	
Low Level Input Voltage	V <sub>IL</sub>		—	30% V <sub>cc</sub>	V	
High Level Input Voltage	V <sub>IH</sub>		70% V <sub>cc</sub>	—	V	
Disable Time	t <sub>dis</sub>		—	200	nS	
Enable Time	t <sub>ena</sub>		—	10	mS	
Start-up Time	t <sub>str</sub>	@Minimum operating voltage to be 0 sec.	—	10	mS	
Deterministic Jitter (DJ)	DJ	Measured with Wavecrest DTS-2079 V/S/ 6.3.1	0.2 typ.		pS	
1 Sigma Jitter	J <sub>Sigma</sub>		2 typ.		pS	
Peak to Peak Jitter	J <sub>PK-PK</sub>		20 typ.		pS	

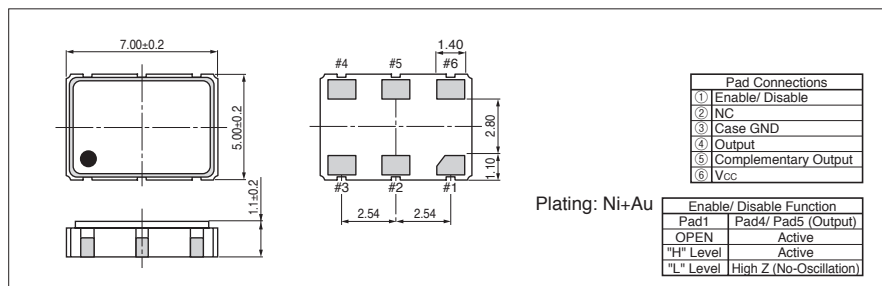
Note : All electrical characteristics are defined at the standard load and operating temperature range.

Note1: Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Note2: DC characteristic

**Dimensions**

(Unit: mm)



**Recommended Land Pattern**

(Unit: mm)

