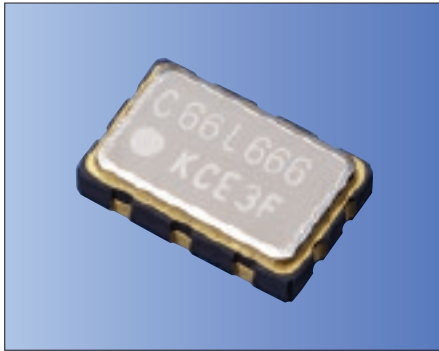


Spread Spectrum Clock Oscillators Surface Mount Type

KC5032E-C3 Series



CMOS/ 3.3V/ 5.0×3.2mm



RoHS Compliant

Features

- Built-in Spread Spectrum function
- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage $V_{CC}=3.3V$
- External control pad for Modulation Selectable (For initial testing purpose only)

Table 1

Spread Type			
Center Spread		Down Spread	
Code	Spread %	Code	Spread %
C2	±0.5%	D2	-1.0%
C4	±1.0%	D4	-2.0%
C6	±1.5%	D6	-3.0%
C0*	External Control*	D0*	External Control*

* For initial testing purpose only

How to Order

KC5032E 25.0000 C 3 F E C2
 ① ② ③ ④ ⑤ ⑥ ⑦

- ① Type (5.0×3.2mm SMD)
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (±100ppm)
- ⑥ Symmetry/ INH Function (45/ 55%, Stand-by)
- ⑦ Spread Type and Spread Percent or Customer Special Model Suffix (See Table 1)

Packaging (Tape & Reel 1000 pcs./ reel)

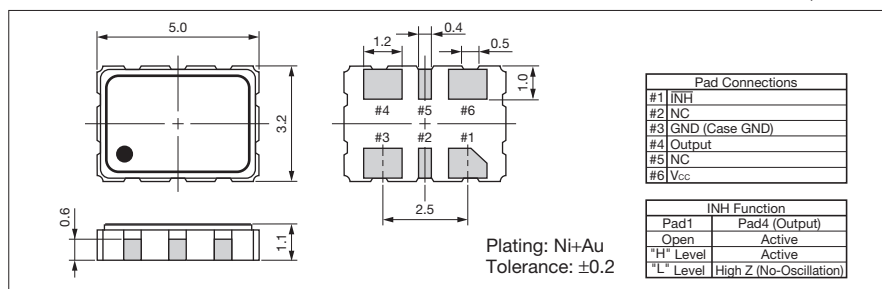
Specifications

Item	Symbol	Conditions	Min.	Max.	Units	
Output Frequency Range	f_o		14.31818	166	MHz	
Frequency Tolerance	f_{tol}	Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration Op. Temp.: -40 to +85°C	-100	+100	$\times 10^{-6}$	
Storage Temperature Range	T_{stg}		-55	+125	°C	
Operating Temperature Range	T_{use}		-40	+85	°C	
Max. Supply Voltage	—		-0.5	+4.6	V	
Supply Voltage	V_{CC}		+2.97	+3.63	V	
Current Consumption (Maximum Loaded)	I_{CC}	$f_o \leq 40MHz$	—	20	mA	
		$40 < f_o \leq 100MHz$	—	25		
		$100 < f_o \leq 166MHz$	—	35		
Stand-by Current	I_{std}		—	30	μA	
Symmetry	SYM	@50% V_{CC}	45	55	%	
Rise/ Fall Time (10% V_{CC} to 90% V_{CC} Maximum Loaded)	t_r / t_f	$14.31818 \leq f_o \leq 40MHz$	—	10	ns	
		$40 < f_o \leq 100MHz$	—	5		
		$100 < f_o \leq 166MHz$	—	3		
Low Level Output Voltage	V_{OL}	$I_{OL} = 13mA$ ($f_o < 40MHz$), $I_{OL} = 19mA$ ($40 \leq f_o < 100MHz$) $I_{OL} = 44mA$ ($100 \leq f_o \leq 166MHz$)	—	10% V_{CC}	V	
High Level Output Voltage	V_{OH}	$I_{OH} = -13mA$ ($f_o < 40MHz$), $I_{OH} = -19mA$ ($40 \leq f_o < 100MHz$) $I_{OH} = -44mA$ ($100 \leq f_o \leq 166MHz$)	90% V_{CC}	—	V	
CMOS Load	L_{CMOS}	CMOS Output	—	15	pF	
Input Voltage Range	V_{IN}		0	V_{CC}	V	
Low Level Input Voltage	V_{IL}		—	30% V_{CC}	V	
High Level Input Voltage	V_{IH}		70% V_{CC}	—	V	
Disable Time	t_{dis}		—	200	ns	
Enable Time	t_{ena}		—	10	ms	
Start-up Time	t_{str}	@Minimum operating voltage to be 0 sec.	—	20	ms	
Peak to Peak Jitter (Cycle to Cycle Jitter)	JPK-PK	Measured with @50% V_{CC} 10,000 cyc. min. Lecroy Wavepro 950	$14.31818 \leq f_o < 40MHz$	—	±250	ps
			$40 \leq f_o < 80MHz$	—	±175	
			$80 \leq f_o \leq 166MHz$	—	±150	

Note: All electrical characteristics are defined at the maximum load and operating temperature range.
 Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

