



kHz Range Crystal Devices

Clock Crystal Oscillators

Clock Oscillators Surface Mount Type KC3215A Series



CMOS/ 1.8V Typ./ 3.2×1.5mm



RoHS Compliant

Features

- Output Frequency: 32.768kHz
- Miniature and Low Profile ceramic package
- Low Current Consumption: 0.55μ A Typ (1.8V, No load condition)
- Wide Operating Voltage Range 1.5V to 3.6V
- CMOS output
- Output enable

Applications

- W-LAN•WiFi•WiMAX etc.

How to Order

KC3215A 32768 C 18 A A E 00
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series	② Output Frequency
③ Output type	④ Supply Voltage
C CMOS output	18 1.8V 33 3.3V
⑤ Frequency Tolerance	⑥ Freq. Temp. Chrst.
A 5±23×10 ⁻⁶	A +10/ -120×10 ⁻⁶
⑦ Output Waveform Symmetric	⑧ Customer Special Model Suffix
E 45 to 55%	00 STD Specification

Packaging (Tape & Reel 3000 pcs./ reel)

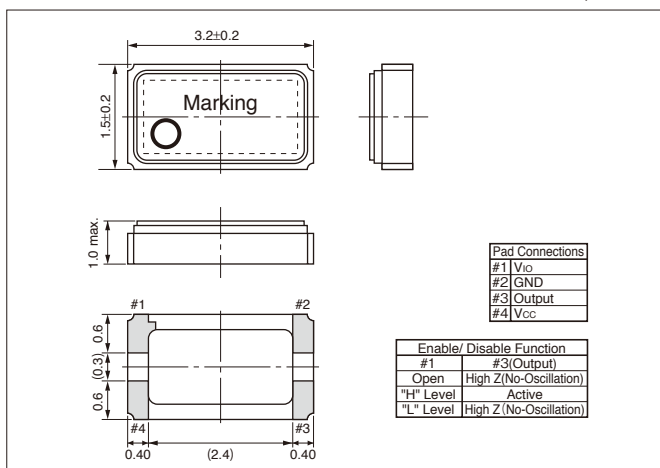
Specifications

Item	Symbol	Conditions	Specifications			Units
			Min.	Typ.	Max.	
Output Frequency Range	f _o	Standard Frequency	—	32.768	—	kHz
Frequency Tolerance	f _o	after 2times Reflow, V _{CC} =1.8V, T _a =25±2°C	-18	+5	+28	×10 ⁻⁶
Frequency Temperature Characteristics	f _o -T _c	T _a =-20 to +70°C (+25°C is reference)	-120	—	+10	×10 ⁻⁶
Frequency Voltage Coefficient	f _o -V	T _a =+25±2°C	-2.0	—	2.0	×10 ⁻⁶ /V
Frequency Aging	F _{age}	Per Year	-3.0	—	3.0	×10 ⁻⁶
Storage Temperature	T _{stg}		-55	—	+125	°C
Operating Temperature	T _{use}		-40	—	+85	°C
Supply Voltage	V _{CC}		1.5	—	3.6	V
Interface Power Supply Voltage	V _{IO}		1.5	—	3.6	V
Current Consumption	I _{CC}	No load, V _{IO} : 3.3V	—	—	1.5	μA
		load: 15pF, V _{IO} : 3.3V	—	—	4.2	μA
Symmetry	SYM	@50% V _{IO}	45	—	55	%
Rise/ Fall Time	tr/ tf	load: 15pF, 20%V _{IO} to 80%V _{IO}	—	—	50	ns
Low Output Voltage	V _{OL}	I _{OL} =+0.4mA	—	—	0.4	V
High Output Voltage	V _{OH}	I _{OH} =-0.4mA	V _{IO} -0.4	—	—	V
CMOS Load	L _{CMOS}	CMOS Output	—	—	15	pF
Disable Delay Time	t _{dis}		—	—	1.0	μs
Start-up Time	t _{str}	Time at minimum Supply voltage to be 0 s	—	—	0.6	sec

Unless otherwise stated, characteristics(specifications) shown in the above table are based on the rated operating temperature and voltage condition.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

