

kHz Range Crystal Devices

Clock Crystal Oscillators

Clock Oscillators Surface Mount Type KC3215A Series



CMOS/ 3.3V Typ./ 3.2×1.5mm



RoHS Compliant

Features

- Output frequency: 32.768kHz
- Miniature and Low profile ceramic package
- Low current consumption: 0.35μA Typ (3.3V, Disable)
- Wide operating voltage range 1.5V to 3.6V
- CMOS output
- Output enable

Applications

- W-LAN•WiMAX etc.

How to Order

KC3215A 32768 C 33 A A E 00
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

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

Packaging (Tape & Reel 3000 pcs./ reel)

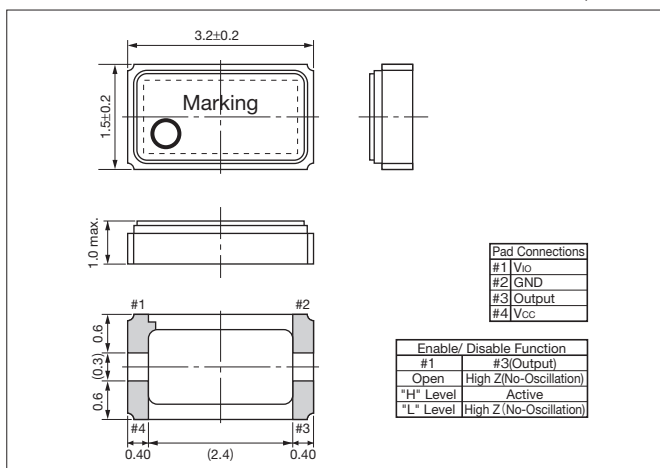
Specifications

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} =3.3V, 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	—	0.8	1.5	μA
		load: 15pF, V _{io} : 3.3V	—	2.45	3.5	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.
Please contact us for other specifications.

Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

