

HG - 2150CA

Preliminary

- Reflowable and high density mounting type SMD. (5×7 mm)
- Using the heat-resisting type AT cut quartz crystal.
allows almost the same temperature soldering as universal SMD IC.
- Using C-MOS IC allows low current consumption.
- Operating supply voltage : 3.3 V ~ 5V.
- Output enable function(OE) can be used for low current consumption applications.

■ Specifications

1. Absolute Maximum Ratings

Item	Symbol	C (3.3 V)	H (5.0 V)	Condition
Supply voltage	V_{DD}	-0.5 V to 7.0 V		V_{DD} -GND
Control voltage	V_{IN}	-0.5 V to $V_{DD}+0.3$ V		OE
Storage temperature	T_{STG}	-40 °C to +125 °C		
Soldering condition	T_{SOL}	Under +240°C within 10 s × 2 times		

2. Operating Condition

Item	Symbol	C	H	Condition
Supply voltage	V_{DD}	3.3 V ~ 3.6 V	4.5 V ~ 5.5 V	V_{DD} -GND
Operating temperature	T_{OPT}	-20 °C to +70 °C		V
		-40 °C to +85 °C		X
Output load	CL	15 pF Max.		C-MOS level

3. Frequency Characteristics

Item	Symbol	C	H	Condition
Output Frequency	f_o	1.0000MHz ~ 80.000MHz		
Frequency stability[×10 ⁻⁶]	$\Delta f/f_o$	±15 Max.		S -20 °C to +70 °C
		±25 Max.		B -40 °C to +85 °C
Aging[×10 ⁻⁶]	f_A	±10 Max.		Ta=+25 °C, 10 year

Note : Frequency stability is including calibration tolerance, reflow soldering drift,
operating temperature range (T_{OPT}), operating voltage range and load change (CL).

4. Electrical Characteristic

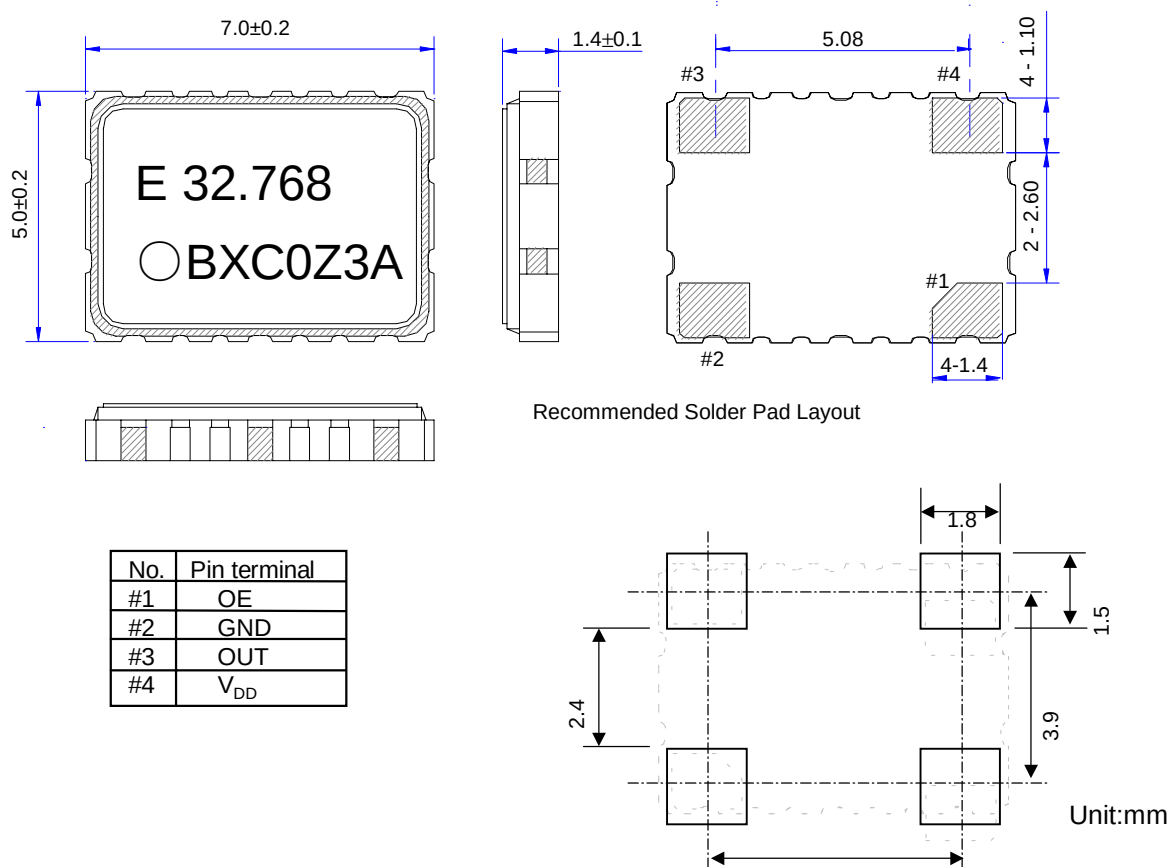
Item	Symbol	C	H	Condition
Supply current	I_{DD}	25 mA Max.	40 mA Max.	No load
Output disable current	I_{OE}	15 mA Max.	30 mA Max.	OE=GND
Start-up time	t_{OSC}	10 ms Max.		90 % V_{DD} to be 0 s

5. Output Characteristics

Item	Symbol	C	H	Condition
OE input voltage	V _{IH}	70 % V _{DD} Min.		OE termination
	V _{IL}	30 % V _{DD} Max.		
Duty	t _W /t	40 % ~ 60 %		1/2V _{DD} level
High output voltage	V _{OH}	V _{DD} -0.4 V Min.		I _{OH} =-8 mA
Low output voltage	V _{OL}	0.4 V Max.		I _{OL} =8 mA
Output rise time	t _{TLH}	4.0 ns Max.		20 %→80 % V _{DD}
Output fall time	t _{THL}	4.0 ns Max.		80 %→20 % V _{DD}

Note : We recommend placing a 0.1 μ F capacitor between V_{DD} and GND to obtain stable operation and protect against power line ripple.

External Dimensions



Numbering Information

<u>E 32.768</u>	1.Symbol	2.Output Frequency (MHz)	5.08
1 2			
<u>BXC 0Z3A</u>	3.Design Code	4.Product number	
3 4			

Design Code

Code	Frequency stability	Operating temperae
SVC / SVH	$\pm 15 \times 10^{-6}$	-20 °C ~ +70 °C
BXC / BXH	$\pm 25 \times 10^{-6}$	-40 °C ~ +85 °C

--C (3.3 V), --H (5.0V)