

APPROVAL SHEET

Customer Name : _____
Customer P/N : _____
Frequency : 32.768000 KHz
Aker Approved P/N : D31N-032768-B-AL-01
Aker MPN : D31N-032768-B-AL-01
REVISION : A0
ISSUED DATE : 2022/8/25

APPROVED	CHECKED	PREPARED
<i>Earnest</i>		<i>Kika</i>
APPROVED BY CUSTOMER		

AKER TECHNOLOGY CO., LTD.

ADDRESS : NO 11-3, Jianguo Rd., Tanzi Dist., Taichung City 427, Taiwan.

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FAX : 886-4-25336011

Web: www.aker.com.tw

MSL:Level 1

RoHS compliant

TUNING FORK CRYSTAL SPECIFICATION

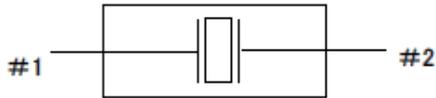
1. ELECTRICAL CHARACTERISTICS

Item	Symbol	Rating	Note
Storage temperature range	T _{stg}	-55~+125°C	
Maximum drive level	DL max.	1.0 μW max.	

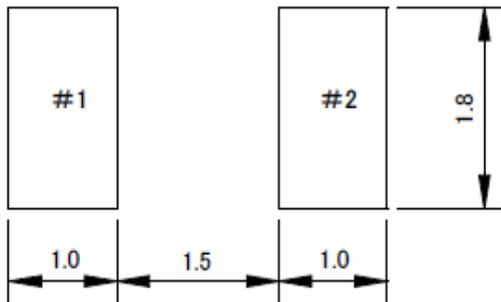
Item	Symbol	Rating	Note
Operating temperature range	T _{use}	-40~+85°C	
Drive level	DL	0.1 μW typ.	

Item	Symbol	Specifications	Conditions
Nominal frequency	f _{nom}	32.768 kHz	
Frequency tolerance	f _{tol}	± 20 × 10 ⁻⁶	
Load capacitance	C _L	12.5 pF	
Motional resistance	R ₁	70 kΩ max.	Measured with ATI 4192A Impedance analyzer OSC LEVEL = 0.1V
Motional capacitance	C ₁	3 fF typ.	
Shunt capacitance	C ₀	1 pF typ.	Measured with ATI 4192A Impedance analyzer OSC LEVEL = 0.1V
Turnover temperature	T _i	25 ± 5°C	Measure this coefficient at 3 points of 10°C, 25°C, 40°C using C-MOS circuit
Parabolic coefficient	B	(-3±1) × 10 ⁻⁸ /°C ²	
Frequency aging	f _{age}	± 3 × 10 ⁻⁶ /year	25±3°C, First year
Insulation resistance	IR	500 MΩ min.	Measured with ATI 4329A Insulation Resistance Meter Apply DC100V

2 . INTERNAL CONNECTION:

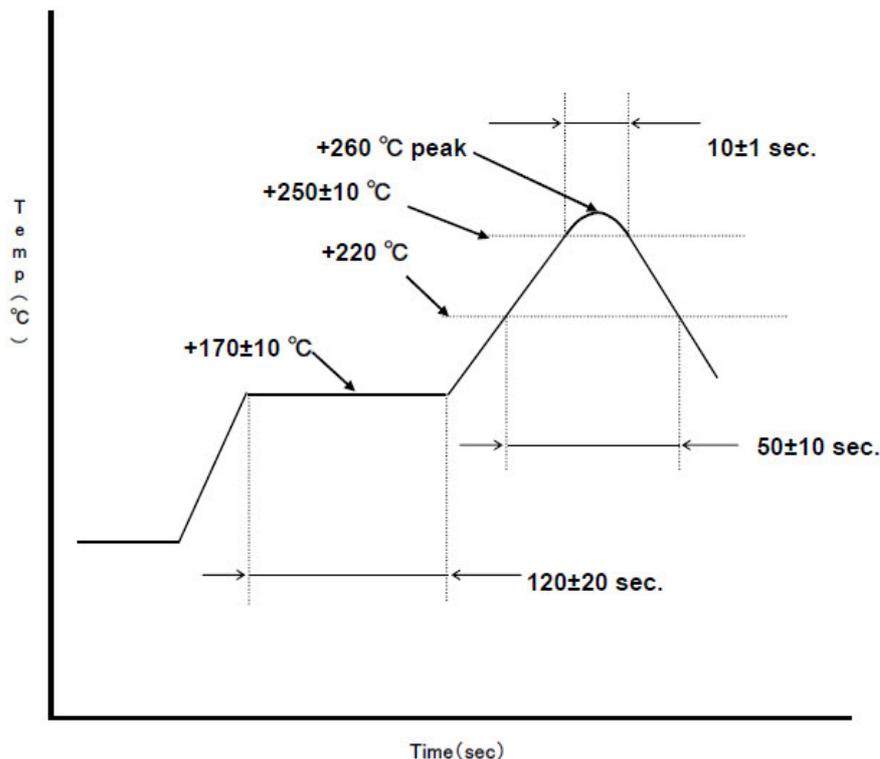


3 . RECOMMENDED SOLDERING PATTERN:(Unit : mm)

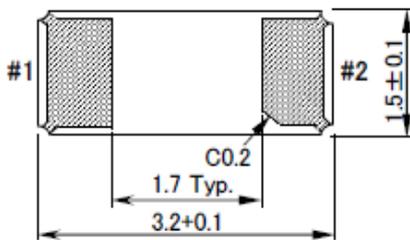
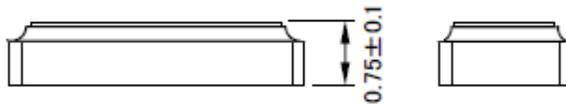
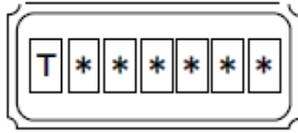


4. SOLDERING REFLOW PROFILE :

Pre-Heating temperature : +170°C Pre-Heating time : 120sec
 Heating temperature : +220°C Heating time : 50sec



5 . DIMENSIONS : (Unit : mm)



Marking

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*1 *2 *3 *4 *5 *6 *7

- *1 Product name
- *2 Type of product
- *3 Specification
- *4 CL (6pF:A, 7pF:B, 9pF:J, 12.5pF:F)
- *5 Year of production (Last digit of year)
- *6,7 Week of production (01 ~ 52)