

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.

TEL : 886-4-25335978

FAX : 886-4-25336011

Web: www.aker.com.tw

MSL:Level 1

RoHS compliant



Aker Approved P/N : D31N-032768-B-AL-01
APPROVED : Earnest SHEET : 1 of 4
PREPARED : Kiku REV. : A0
Confidential

Rev.	Date	Reviser	Revise contents
A0	2022/8/25	Kiku	Initial Released

Please kindly be noted that AKER DO NOT guarantee parts quality which involves human security application.

TUNING FORK CRYSTAL SPECIFICATION

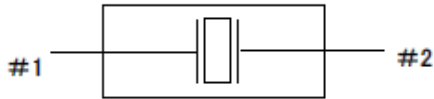
1. ELECTRICAL CHARACTERISTICS

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

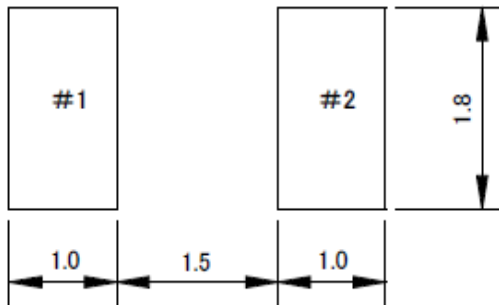
Item	Symbol	Rating	Note
Operating temperature range	T _{use}	-40~+85°C	
Drive level	DL	0.1 μW typ.	

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:

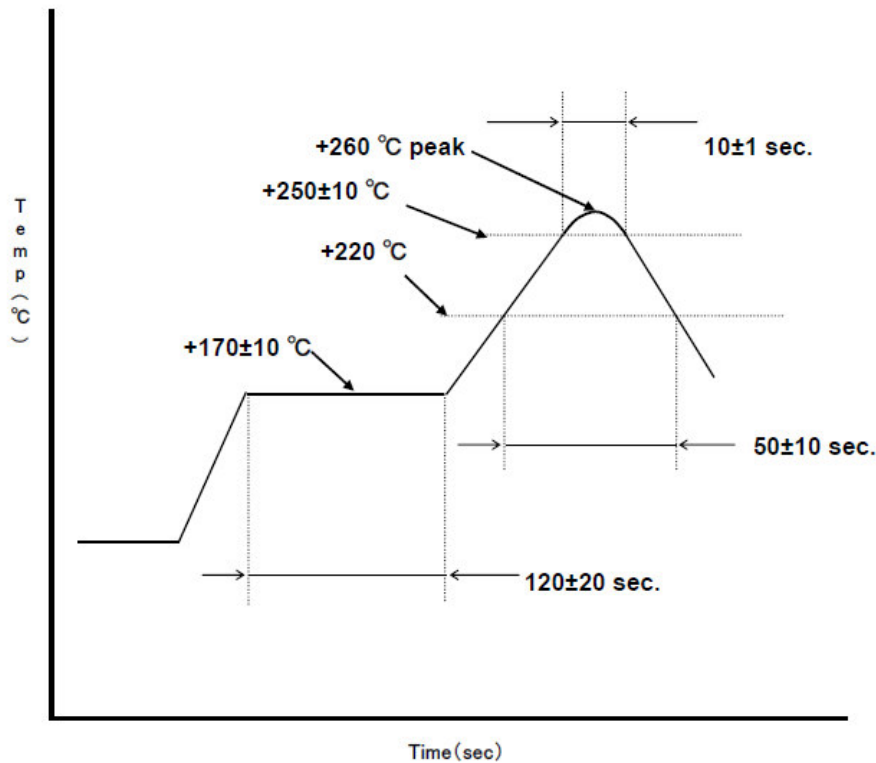


3 . RECOMMENDED SOLDERING PATTERN:(Unit : mm)

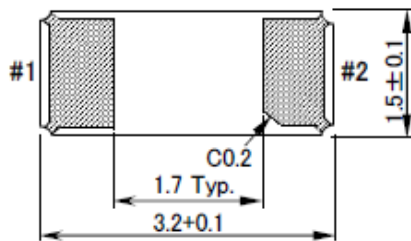
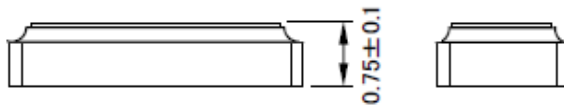
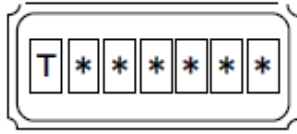


4. SOLDERING REFLOW PROFILE :

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



5 . DIMENSIONS : (Unit : mm)



Marking

T □ □ □ □ □ □
*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)

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