

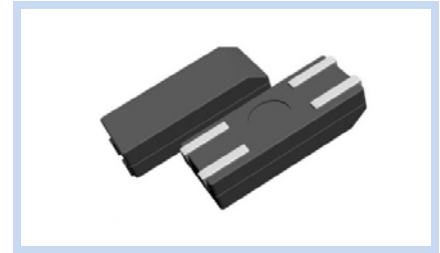
# 32.768 kHz Crystal Unit SMD 10.4x4.06x3.6mm Type

MXTV Series

**MERITEK**

## FEATURE

- Heat Resistant
- Surface Mount Low Profile
- Plastic Molded Construction
- Applications: Wired Network, Mobile Communication, Wearables, Hand-held Electronic Devices, Computer Clock



## PART NUMBERING SYSTEM

**MXTV** **B** **F** **I** **32K768** **B**  
(1) (2) (3) (4) (5) (6)

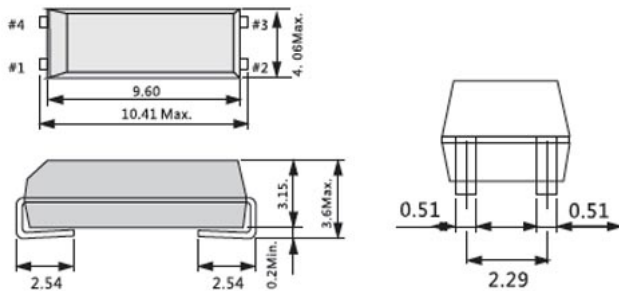


No	Item	Code	Description	Series Reference (Options)
(1)	Meritek Series	MXTV	Crystal Unit	Ceramic SMD Crystal 10.4 X 4.06 X 3.6mm
(2)	Load Capacitance	B	B: 12.5pF	B: 12.5pF
(3)	Frequency Tolerance	F	F: ±20ppm	H: ±30ppm
(4)	Operating Temp.	I	I: -40~+85°C	C: -20~+70°C, A: -10~+60°C
(5)	Frequency	32K768	32K768: 32.768kHz	32K768 (K denotes decimal point)
(6)	Internal Connection	B	B: Option B	Blank: Standard, B: Option B (See drawing)

Notes:

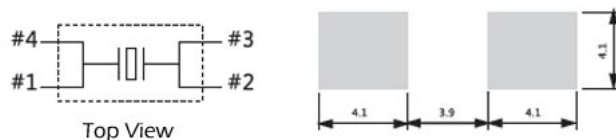
1. Contact Meritek for more info for additional options

## DIMENSIONS AND RECOMMENDED PATTERN

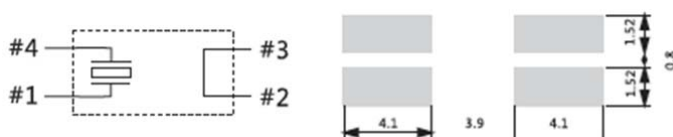


Internal Connection

(Standard)



(Option B)



Unit: mm

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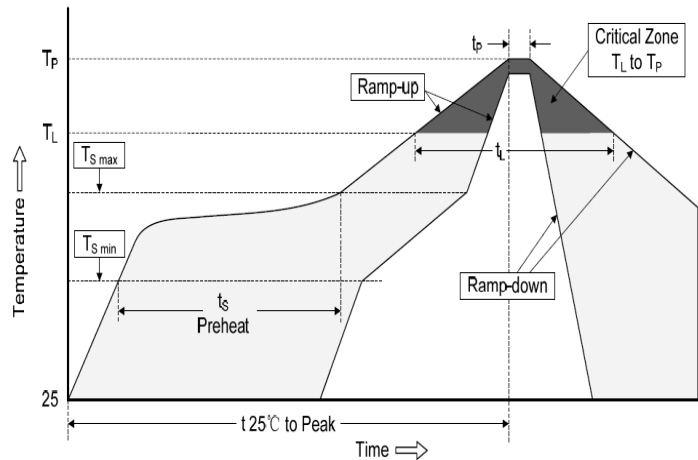
**MERITEK**

## ELECTRICAL CHARACTERISTICS

Parameters	Characteristic	Unit
Frequency Range	32.768	kHz
Load Capacitance (C <sub>L</sub> )	12.5	pF
Frequency Tolerance (at 25°C)	±20	ppm
Operating Temperature	-40 ~ +85	°C
Storage Temperature	-55 ~ +125	°C
Turnover Temperature	25 ±5	°C
Frequency Temperature Curve	-0.035 ±0.006	ppm/°C
Drive Level	1.0 max.	μW
Aging (at 25°C)	±3 max.	ppm / year
Shunt Capacitance (C <sub>0</sub> )	1.9 typ.	pF
Capacitance Ratio (C <sub>0</sub> /C <sub>1</sub> )	450	-
Insulation Resistance @100Vdc ±15V	500 min.	MΩ
Equivalent Series Resistance	50 max.	kΩ
Quality Factor	60000 typ.	-

## RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min T <sub>s(min)</sub>	150°C
	Temp. Max T <sub>s(max)</sub>	180°C
	Time (min. to max.) (t <sub>s</sub> )	60~120 seconds
Average ramp up rate (T <sub>L</sub> ) to peak		1°C/second max.
T <sub>s(max)</sub> to T <sub>L</sub> (Ramp-up rate)		3°C/second max.
Reflow	Temp. (T <sub>L</sub> )	230°C
	Time (min. to max.) (t <sub>L</sub> )	30~40 seconds
Peak Temperature (T <sub>P</sub> )		260°C
Time within 5°C of actual peak Temperature (t <sub>p</sub> )		10 seconds max.
Ramp-down Rate		6°C/second



\*Specifications subject to change without notice.