

32.768 kHz Crystal Unit SMD 4.1 x 1.5mm Type

MXT4 series

MERITEK

FEATURE

- Small Industry Package
- Surface Mount Low Profile
- Seam Sealed Ceramic Package
- Applications: Wired Network, Mobile Communication, WiMAX, WLAN, Test Equipment, Hand-held Electronic Devices



PART NUMBERING SYSTEM

MXT4 B F I 32K768
(1) (2) (3) (4) (5)

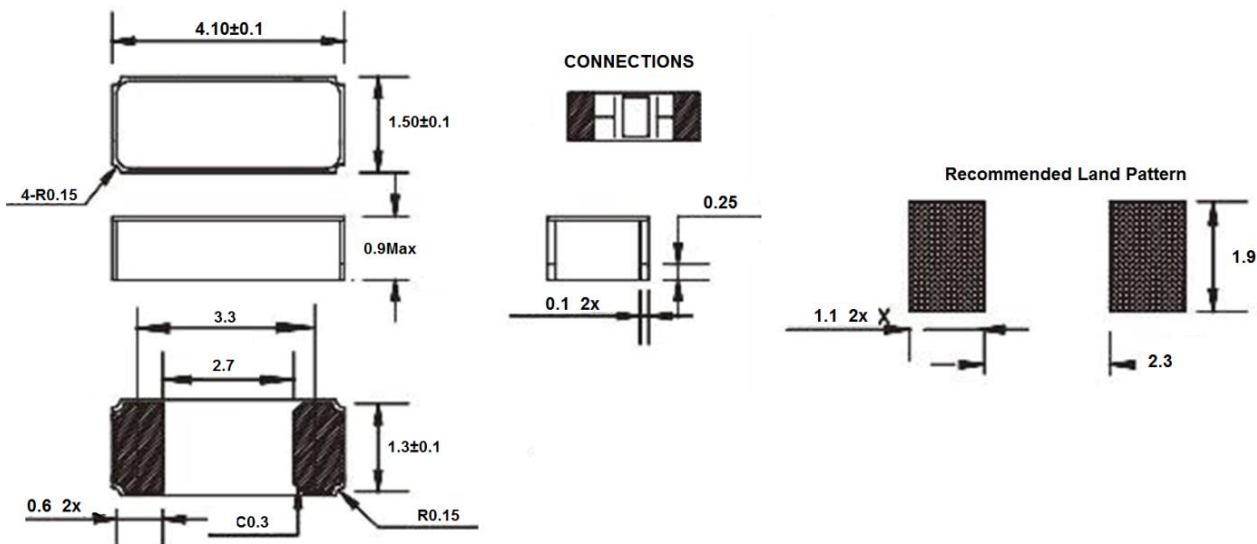


No	Item	Code	Description	Series Reference (Options)
(1)	Meritek Series	MXT4	Crystal Unit	Ceramic SMD Crystal 4.5x1.5mm
(2)	Load Capacitance	B	B: 12.5pF	B: 12.5pF, 9: 9pF, 7: 7pF, 6: 6pF (Note: 1)
(3)	Frequency Tolerance	F	F: ±20ppm	F: ±20ppm, A: ±10ppm, H: ±30ppm
(4)	Operating Temp.	I	I: -40~+85°C	C: -20~+70°C, I: -40~+85°C, Y: -40~+125°C
(5)	Frequency	32K768	32K768: 32.768kHz	32K768 (K denotes decimal point)

Notes:

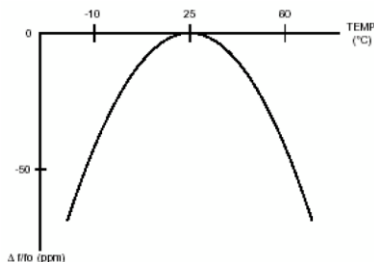
1. Contact Meritek for more info on Custom Load Capacitance

DIMENSIONS AND RECOMMENDED PATTERN



(Unit: mm)

FREQUENCY VS TEMPERATURE and INTERNAL CONNECTION



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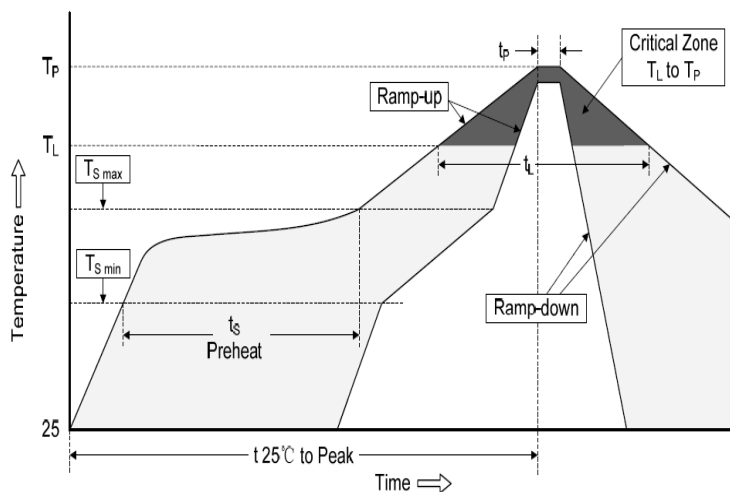
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ELECTRICAL CHARACTERISTICS

Parameters	Characteristic	Unit
Frequency Range	32.768	kHz
Load Capacitance (C _L)	12.5 (see options)	pF
Frequency Tolerance (at 25°C)	±20 (see options)	ppm
Operating Temperature	-40 ~ +85 (see options)	°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. (0.1 typ.)	μW
Aging (at 25°C)	±5 max.	ppm / year
Shunt Capacitance (C ₀)	1.0 typ.	pF
Motional Capacitance (C ₁)	2.0 typ.	fF
Insulation Resistance @100Vdc ±15V	500 min.	MΩ
Equivalent Series Resistance	70 max.	kΩ

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min T _{S(min)}	150°C
	Temp. Max T _{S(max)}	180°C
	Time (min. to max.) (t _s)	60~120 seconds
Average ramp up rate (T _L) to peak		1°C/second max.
T _{S(max)} to T _L (Ramp-up rate)		3°C/second max.
Reflow	Temp. (T _L)	230°C
	Time (min. to max.) (t _L)	30~40 seconds
Peak Temperature (T _P)		260°C
Time within 5°C of actual peak Temperature (t _p)		10 seconds max.
Ramp-down Rate		6°C/second



*Specifications subject to change without notice.