32.768 KHz Crystal Unit
SMD 8.0x3.8x2.5mm Type

MXTQBFI32K768

MERITEK

FEATURE

- Industry Standard Package
- Surface Mount Low Profile
- Suitable for RoHS Compliant Reflow
- Applications: Wired Network, Mobile Communication, WiMAX, WLAN, DSC, Set-Top Box, HDTV

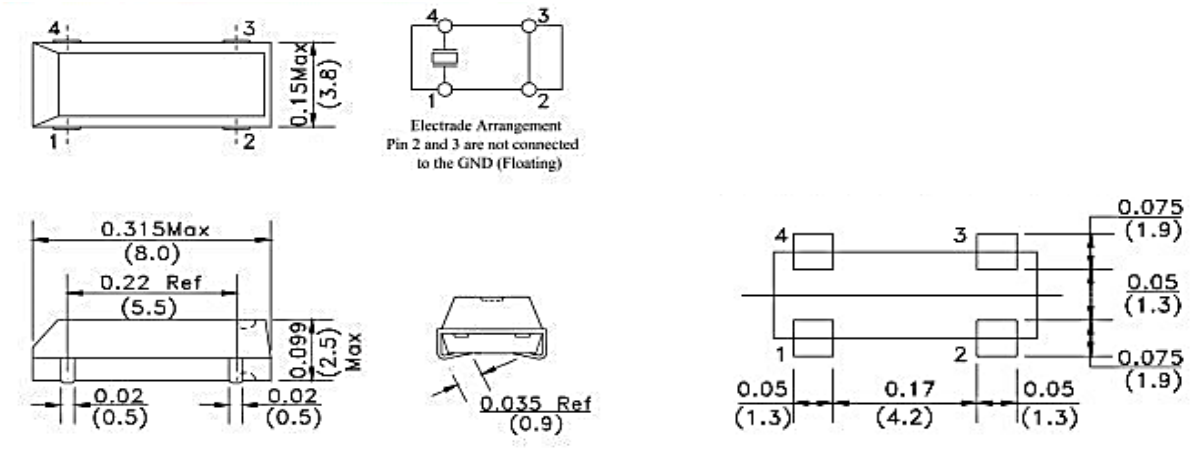
RoHS

ELECTRICAL CHARACTERISTICS

No.	Item		Min.	Typ.	Max.	Units	Remark
1	Nominal Frequency	F_0		32.768		KHz	--
2	Frequency Tolerance	$\Delta f/f_o$	-	±20	-	PPM	Ref to 25°C
3	Temperature Coefficient	K	-0.040	-0.034	-0.026	PPM/°C^2	--
4	Turnover Temperature	T_{TO}	5	25	5	°C	--
5	Operating Temperature	T_{OP}	-40	-	+85	°C	--
6	Storage Temperature	T_{ST}	-55	-	125	°C	--
7	Quality Factor	Q	-	75000	-	-	--
8	Series Resistance	R1	-	50	-	KΩ	Ref to 25°C
9	Shunt Capacitance	C_0	0.9	1.35	2.0	PF	--
10	Motional Capacitance	C_1	-	2.3	-	FF	--
11	Load Capacitance	C_L	-	12.5	-	PF	--
12	Insulator Resistance	IR	-	500	-	MΩ	100±15VDC
13	Drive Level	DL	-	1	-	μW	--
14	Capacitance Ratio	R	-	450	-	-	--
15	Aging Rate	Δf	-3	-	3	PPM	At 25±3°C

Note: T_A=25°C, V_{CC}=+3.3V, L_CMOS=15pF, unless otherwise noted

DIMENSIONS AND RECOMMENDED PATTERN



Unit: inch(mm)

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PART NUMBERING SYSTEM

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

No	Item	Code	Description	
(1)	**Meritek Series**	MXTQ	Ceramic SMD Crystal Unit 8.0x3.8x2.5mm	
(2)	**Load Capacitance**	B	B:12.5pF	B:12.5pF, 6:6pF
(3)	**Frequency Tolerance**	K	F: ±20ppm	A: ±10ppm, F: ±20ppm, H: ±30ppm, K: ±100ppm
(4)	**Operating Temperature**	I	I: -40~+85ºC	A: -10~+60ºC, B: 0~+70ºC, C: -20~+70ºC
(5)	**Nominal Frequency**	32K768	32K768: 32.768KHz	K denotes decimal point

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