

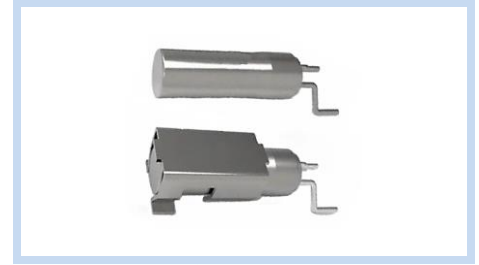
SMD Cylindrical Crystal Unit 6.2x1.9mm KHZ Tuning Fork

MXTO Series

MERITEK

FEATURE

- Industry Standard Cylindrical Package
- Formed Lead SMD Type
- Applications: Measuring Instruments, Clock Source, Communications, A/V Equipment, Bluetooth

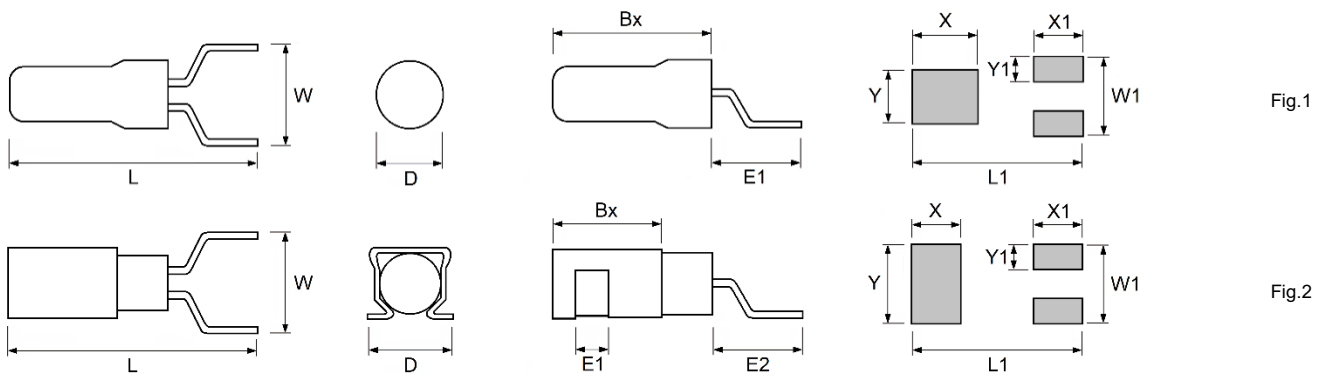


ELECTRICAL CHARACTERISTICS

Item	Min	Typ	Max	Units
Nominal Frequency Range	25.60	-	307.20	KHz
Frequency Tolerance at 25°C ± 3°C	±5	±20	±100	ppm
Frequency Temperature Curve	-0.034 ±0.006			ppm/(°C) ²
Turnover Temperature	20	25	30	°C
Operating Temperature Range	-40	-	+85	
Storage Temperature Range	-55	-	+125	
Load Capacitance, CL	6	12.5	30	pF
Shunt Capacitance, C0	0.9	1.35	2.0	
Motional Capacitance, C1	-	2.3	-	fF
Equivalent Series Resistance	35	-	50	KΩ
Capacitance Ratio	-	450	-	--
Q Value	-	75000	-	--
Drive Level	-	-	1.0	μW
Insulation Resistance, at 100VDC	500	-	-	MΩ
Frequency Aging First Year at 25°C ± 3°C	±3	-	±5	ppm
Moisture Sensitivity Level, MSL	Level 1 (J-STD-033)			--

Note: see the parts number system for other options

DIMENSIONS



Unit: mm

Series	L	W ±0.3	D Max	Bx Max	E1	X	Y	X1	Y1	L1	W1	Fig
MXTO	9.0	2.54	1.9	6.0	3.0	6.0	2.5	2.5	1.0	10.25	3.54	1
MXTO(B)	8.3-9.0	2.54	2.7	4.4	1.55	2.5	3.4	2.5	1.0	10.2	3.54	2

SMD Cylindrical Crystal Unit

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PART NUMBERING SYSTEM

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

No.	Item	Code	Description	
(1)	Meritek Series	MXTO	Cylinder SMD Crystal, KHz TUNING FORK 6.2 x 1.9mm	
(2)	Load Capacitance	B	B: 12.5pF	6~30pF, See option table
(3)	Frequency Tolerance	F	F: ±20ppm	±5~±100ppm, See option table
(4)	Operating Temperature	I	I: -40~+85°C	See option table
(5)	Frequency	32K768	32K768: 32.768KHz	25K6~307K2, K: denotes decimal point
(6)	Mounting Option	Blank	Blank: No Bracket	B: with Mounting Bracket

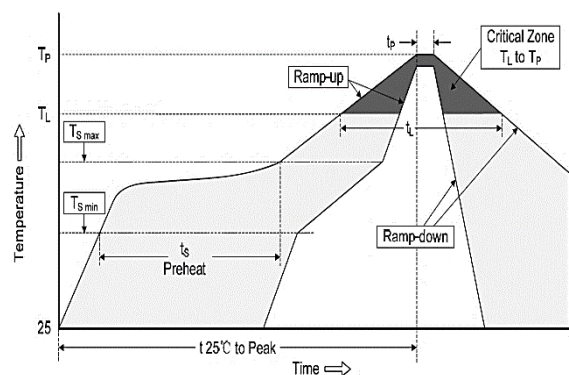
PRODUCTS OPTION CODE

Load Capacitance	(pF) Code	3	4	5	6	7	8	9	10	12.5	15	16	18	20	22	25	30	32	*
		3	4	5	6	7	8	9	A	B	C	D	E	F	K	G	H	L	Z
Frequency Tolerance	(ppm) Code	±10		±15		±20		±25		±30		±50		±100		*			
		A		C		F		G		H		J		K		Z			
Frequency Stability	(ppm) Code	±10		±15		±20		±25		±30		±50		±100		*			
		A		C		F		G		H		J		K		Z			
Operating Temperature	(°C) Code	-40~70		-40~85		-40~105		-40~125		-40~150		-10~60		0~70		*			
		4		3/I		2/R		1/Y		0		A		B		Z			
Operating Temperature	(°C) Code	-55~70		-55~85		-55~105		-55~125		-55~150		-20~70		-30~85		*			
		9		8		7		6		5		C		K		Z			

Note: * Z: None Standard, Custom options available. Contact Meritek for more information.

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	120°C
	Temp. Max $T_{s(max)}$	180°C
	Time (min. to max.) (t_s)	60~120 seconds
Ramp up rate (T_L to T_P)		3°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)	55 seconds max.
Peak Temperature (T_P)		260°C
t_p within 5°C of Peak Temperature (t_p)		10 seconds max.
Ramp-down Rate		6°C/second max.

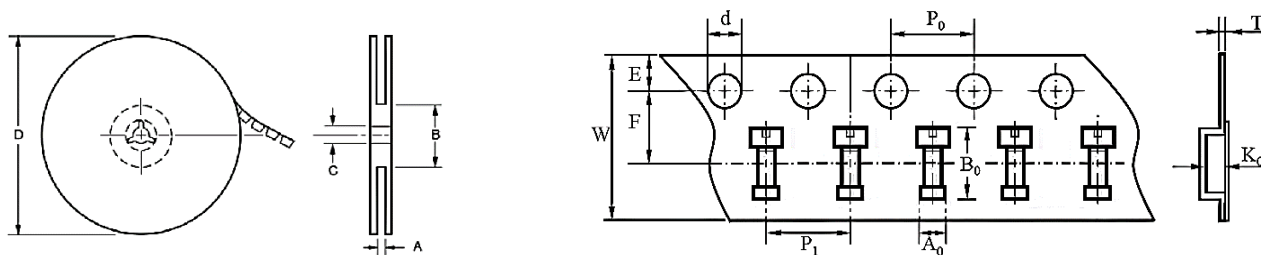


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PACKAGING SPECIFICATION



Unit: mm

Series	Size	Reel Dimension						Tape Dimensions									
		A	B	C	D	Dia	Pcs/Reel	A0	B0	d	E	F	K0	P0	P1	T	W
MXTO	6219	16.5	100	13.5	330	13	3000	4.5	9.6	1.50	1.75	7.5	2.4	4.0	8.0	0.3	16.0