

Crystal Unit

Cylindrical Case

Feature & Applications:

- Tuning Fork 2x6mm/3x8mm case
- 25KHz to 100KHz range
- High quality
- SMD package available

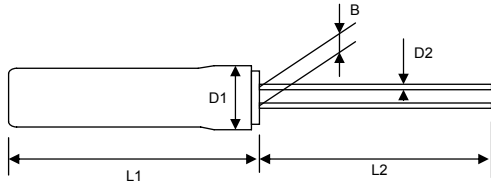
K14, K26, K38

T26, T38, T39, T31

- Tubular 3x9mm/3x10mm case
- AT-Cut thickness shear
- Low weight/cost
- PDA, hand-held applications

Outline Drawing

Dimension (Unit=mm)

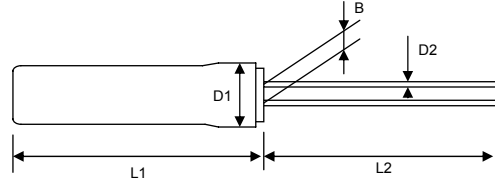


Case	L1	L2	D1	D2	B
K14	5±0.2	4.3±0.2	1.5±0.1	0.20±0.2	0.45±0.2
K26	6±0.2	10±0.2	2±0.1	0.26±0.2	0.70±0.2
K38	8±0.2	10±0.2	3±0.1	0.30±0.2	0.80±0.3

K14

K26

K38



Case	Frequency	L1	L2	D1	D2	B
T26	10~60MHz	6±0.2	10±0.2	2.0	0.26±0.2	0.70±0.2
T38	>8MHz	8.0±0.2	10±0.2	3.1	0.32	0.8±0.3
T39	6~8MHz	9.0±0.2	10±0.2	3.1	0.32	0.8±0.3
T31	<6MHz	10±0.2	10±0.2	3.1	0.32	0.8±0.3

T26

T38

T39

T31

General Characteristics

Parameter	Case	K14	K26	K38	T31	T39	T38	T26
Frequency Range		25KHz to 100KHz			3.5 to 6 MHz	6 to 8 MHz	8 to 60 MHz	12 to 60 MHz
Frequency Tolerance @25°C		± 30 or ± 20 ppm			± 30 ppm			
Parabolic Curvature Constant		-0.038ppm/°C ² max			-			
Frequency Drift vs Operating Temperature		-			± 50 ppm refer to 25°C			
Operating Temperature		-10°C to +60°C						
Storage Temperature		-20°C to +70°C						
Load Capacitance		12.5pF typical			8pF to 33pF or Series (∞)			
Equivalent Series of Resistance		20K-50KΩ			see Table 1			
Shunt Capacitance		2pF max			7pF max			
Drive Level		1μW max			100μW max			
Insulation Resistance		500MΩ min / 100VDC						
Aging @25°C		±5ppm per year						

TABLE 1

Equivalent Series of Resistance Table

Case	Vibration Mode	T26 ΩMax	T31 ΩMax	T38 ΩMax	T39 ΩMax
Frequency					
3.579 ~ 3.699 MHz	F	-	200	-	-
3.700 ~ 3.999 MHz	F	-	180	-	-
4.000 ~ 4.099 MHz	F	-	150	-	-
4.100 ~ 4.999 MHz	F	-	120	-	-
5.000 ~ 5.999 MHz	F	-	100	-	-
7.000 ~ 9.999 MHz	F	-	-	80	80
10.000 ~ 11.999 MHz	F	-	-	70	-
12.000 ~ 13.999 MHz	F	60	-	60	-
14.000 ~ 15.999 MHz	F	50	-	50	-
16.000 ~ 30.000 MHz	F	40	-	40	-
27.000 ~ 60.000 MHz	3	100	-	100	-

Part Number Guide:

X	-	13.1465	-	T39	-	18	-	30	-	50A	-	40	-	100	-	A1	-	5	-	N
Xtal	Frequency	Case Type	CL(pF)	Freq.Tol	Drift/Temp	ESR	DL	Osc.Mode	Shunt Cap	Option										
	(KHz)	K26=K26 case	18=18pF	(ppm)	(ppm)	(Ω max)	(μWmax)	A1=Fund.	(pFmax)	N=None										
	(MHz)	T39=T39 case	00=∞		A=-10~+60°C			A3=3 O/T		LL5.0 = Lead Length										
					B=-20~+70°C			D1=DT-cut												