



PRODUCTS

Crystal Filter (Through Hole)

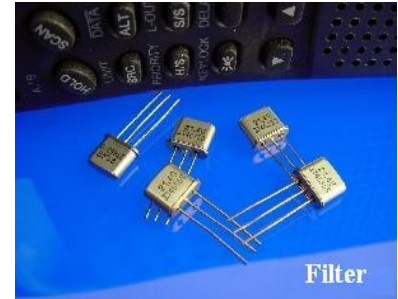
Typical Applications:

- FM Receivers
- Digital Transmission Systems
- Communication Applications

Crystal Filter (Through Hole Crystal Filter)

■ Specification

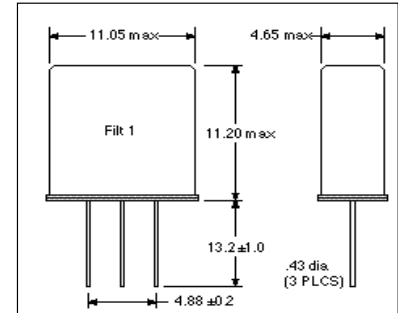
Model	Nominal Freq. (MHz)	Pole	Pass Bandwidth		Attenuation Bandwidth		Ripple (dB)	Insertion Loss (dB)	Guaranteed Attenuation (dB)	Terminating Impedance (KOhm/pF)	Operating temp. range (°C)	Height (mm)
			(dB)	(KHz)	(dB)	(KHz)						
45FA	45	4	3	±7.5	25	±22	1	4	80	650/3 Cc=9pF	-20 to +70	H6.0
45FB	45	4	3	±10	25	±25	1	3	80	800/2 Cc=6.5pF	-20 to +70	H6.0
45FC	45	2	3	±15	15	±50	1	2	40	1200/4.5	-20 to +70	H6.0
45FD	45	4	3	±15	35	±50	1	4	80	800/1.8Cc=6.5pF	-20 to +70	H6.0
45FE	45	2	3	±17	15	±60	1	2.5	65	870/-0.2	-20 to +70	H6.0



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			(dB)	(KHz)	(dB)	(KHz)							
10.7A	10.7	4	3	±3.75	18	±15	-	0.7	2	1.5/5	-20 to +70	H11.0	
10.7B	10.7	4	3	±3.75	40	±12.5	-	1	2.5	1.5//4.5Cc=17pF	-20 to +70	H11.0	
10.7C	10.7	2	3	±7.5	18	±25	-	0.5	2	3//2.5	-20 to +70	H11.0	
10.7D	10.7	4	3	±7.5	40	±25	-	1	2.5	3//1.5Cc=5pF	-20 to +70	H11.0	
10.7E	10.7	6	3	±7.5	60	±22.5	-	2	3	3//0	-20 to +70	H11.0	
10.7F	10.7	8	3	±7.5	60	±15	80	±20	2	4	3//0	-20 to +70	H11.0
10.7G	10.7	2	3	±15	18	±50	-	0.5	2	5//1	-20 to +70	H11.0	
10.7H	10.7	4	3	±15	40	±50	-	1	2.5	5//1.8 Cc=1pF	-20 to +70	H11.0	
21.4A	21.4	8	3	±3.75	65	±9	90	±12.5	2	4	0.91/3	-20 to +70	H6.0
21.4B	21.4	8	3	±3.75	65	±9	90	±12.5	2	4	1.6/1	-20 to +70	H6.0
21.4C	21.4	8	3	±6	65	±14.5	90	±20	2	3	1.6/1	-20 to +70	H6.0
21.4D	21.4	8	3	±7.5	65	±17	90	±25	2	3	1.6/1	-20 to +70	H6.0
21.4E	21.4	8	3	±15	60	±35	90	±50	2	3	2.4//2	-20 to +70	H6.0

■ Dimension (Unit:mm)

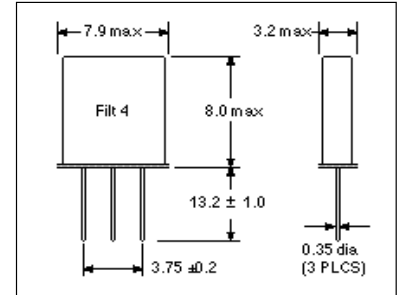
Filter-H11.0



* Note: Requires two matched filters of this package type.

Model	Nominal Freq. (MHz)	Pole	Pass Bandwidth		Attenuation Bandwidth		Ripple (dB)	Insertion Loss (dB)	Guaranteed Attenuation (dB)	Terminating Impedance (KOhm/pF)	Operating temp. range (°C)	Height (mm)
			(dB)	(KHz)	(dB)	(KHz)						
45TA	45	2	3	±3.75	18	±18	0.5	2	40	3//0.5	-20 to +70	H8.0
45TB	45	4	3	±3.75	40	±15	1	4	80	3//0.5Cc=0pF	-20 to +70	H8.0
45TC	45	2	3	±7.5	15	±22	0.5	1.5	40	2.5//1.2	-20 to +70	H8.0
45TD	45	4	3	±7.5	25	±22	1	3	80	3//1Cc=1.2pF	-20 to +70	H8.0
45TE	45	2	3	±10	15	±28	0.5	1.5	40	3//1	-20 to +70	H8.0
45TF	45	4	3	±10	25	±25	1	3	75	3//1.3Cc=1.5pF	-20 to +70	H8.0
45TG	45	2	3	±15	15	±50	1	2	30	8.5//0	-20 to +70	H8.0
45TH	45	4	6	±15	30	±50	1	3	67	6//1.2Cc=2pF	-20 to +70	H8.0

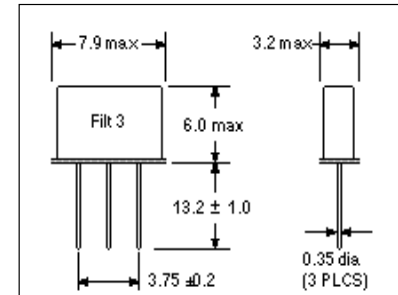
Filter-H8.0



* Note: Requires two matched filters of this package type.

Model	Nominal Freq. (MHz)	Pole	Pass Bandwidth		Attenuation Bandwidth		Ripple (dB)	Insertion Loss (dB)	Guaranteed Attenuation (dB)	Terminating Impedance (KOhm/pF)	Operating temp. range (°C)	Height (mm)
			(dB)	(KHz)	(dB)	(KHz)						
70A	70	2	3	±7.5	18	±30	1	2	40	2.5//0.5	-20 to +70	H8.0
70B	70	4	3	±7.5	30	±25	1	3	80	2.5//1 Cc=0.5pF	-20 to +70	H8.0
70C	70	2	3	±10	13	±25	0.5	1.5	35	2.5//1	-20 to +70	H8.0
70D	70	4	3	±10	25	±25	1	3	70	2.5//1 Cc=1pF	-20 to +70	H8.0
70E	70	2	3	±15	13	±50	1	2	3	4.0//1	-20 to +70	H8.0
70F	70	4	3	±15	25	±50	1	3	70	4.1//1 Cc=1.4pF	-20 to +70	H8.0
90A	90	4	3	±4.0	13	±12.5	1	5	70	1.5//0.5Cc=0.5pF	-20 to +70	H8.0
90B	90	2	3	±10	13	±25	0.5	1.5	35	2.3//0.2	-20 to +70	H8.0
90C	90	4	3	±10	25	±25	1	3	80	2.0//0.8Cc=1pF	-20 to +70	H8.0
90D	90	4	3	±13	18	±25	1	3	80	2.3//0.7Cc=0.5pF	-20 to +70	H8.0

Filter-H6.0



RESONATOR & FILTER