

## 21.4MHz Series

### MCF

The units have been miniaturized for the 21.4MHz range and are ideal for compact devices for portable use.

#### ■ Features

- Compactness and light weight
- An ideal MCF for portable use.

#### ■ Attention on use

- Can be washed except for A, B types.

#### ■ Miniature 21.4MHz Series

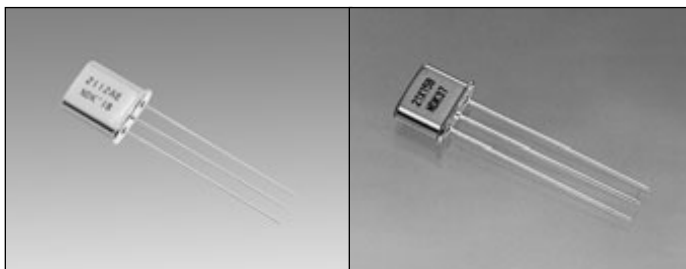
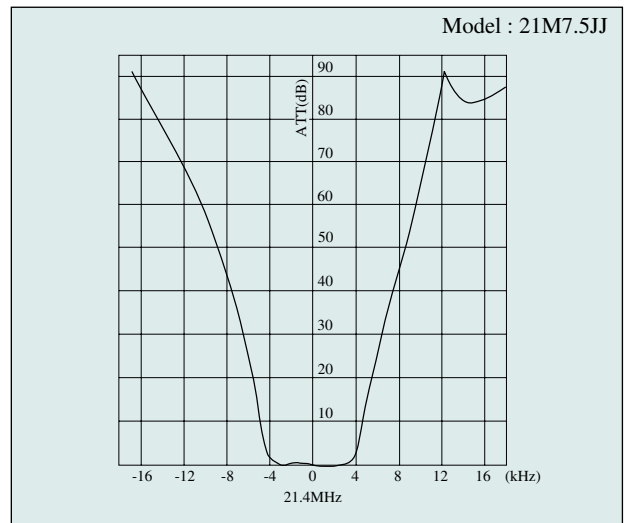
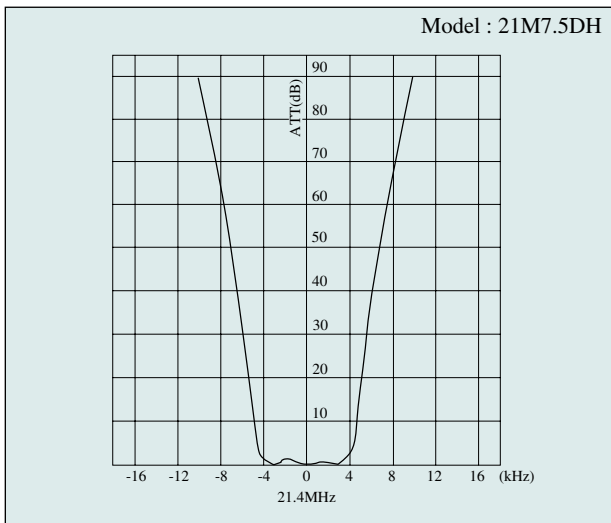
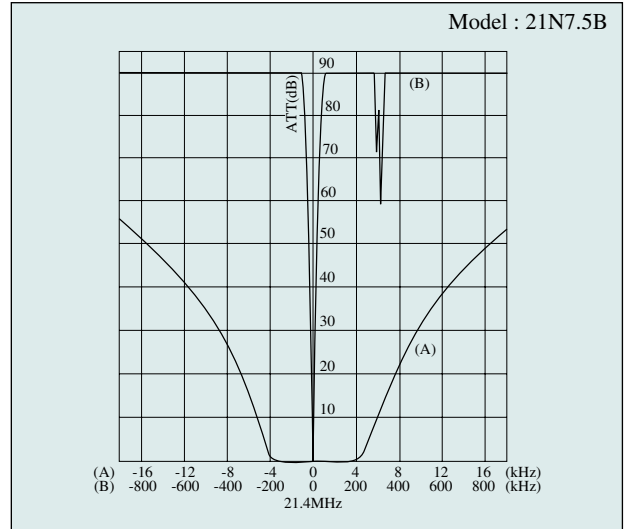
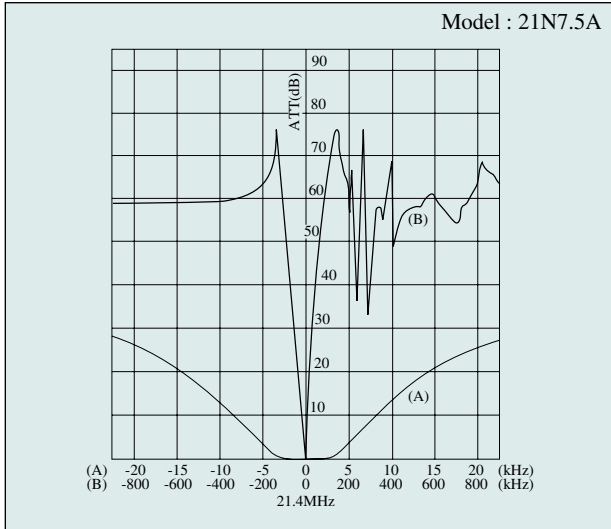
※ -40~+80°C (Available on request)

Model	Nominal Frequency (MHz)	Pole	Pass Bandwidth		Attenuation Bandwidth				Ripple (dB)	Insertion Loss (dB)	Terminating Impedance (Ω// pF)	Operating Temp. Range *(°C)	Type	Weight (g)
			(dB)	(kHz)	(dB)	(kHz)	(dB)	(kHz)						
21N7.5A	21.4	2	3	±3.75	18	±18	—	—	0.5	2	850//6	-20~+70	D-360-A	0.5
21N7.5B	21.4	4	3	±3.75	40	±14	—	—	1	2.5	850//5 Cc=16pF	-20~+70	D-360-B	1.5
21N12A	21.4	2	3	±6	18	±22	—	—	0.5	2	910//5	-20~+70	D-360-A	0.5
21N12B	21.4	4	3	±6	40	±20	—	—	1	2.5	910//5 Cc=13pF	-20~+70	D-360-B	1.5
21N15A	21.4	2	3	±7.5	18	±30	—	—	0.5	2	1.6k//1.3	-20~+70	D-360-A	0.5
21N15B	21.4	4	3	±7.5	40	±25	—	—	1	2.5	1.6k//1 Cc=7pF	-20~+70	D-360-B	1.5
21N20A	21.4	2	3	±10	18	±34	—	—	0.5	2	1.6k//1.3	-20~+70	D-360-A	0.5
21N20B	21.4	4	3	±10	40	±34	—	—	1	2.5	1.6k//1.5 Cc=4pF	-20~+70	D-360-B	1.5
21N30A	21.4	2	3	±15	18	±50	—	—	0.5	2	2.3k//1	-20~+70	D-360-A	0.5
21N30B	21.4	4	3	±15	40	±50	—	—	1	2.5	2.3k//1 Cc=3.5pF	-20~+70	D-360-B	1.5
21M15C	21.4	6	6	±7.5	60	±22.5	—	—	2	3	1k//1	-20~+70	D-161-D	3.5
21M15D	21.4	8	6	±7.5	60	±15	80	±20	2	4	1k//1	-20~+70	D-161-D	4
21M15EB	21.4	10	6	±7.5	65	±15	80	±17.5	2	5	1k//1	-20~+70	D-161-E	4.5
21M7.5JH	21.4	6	3	±3.75	45	±8.75	65	±12.5	2	3.5	910//3	-20~+70	D-161-C	3.5
21M7.5JK	21.4	6	3	±3.75	45	±8.75	65	±12.5	2	3.5	1.6k//1	-20~+70	D-161-C	3.5
21M12JH	21.4	6	3	±6	45	±14	65	±20	2	2.5	1.6k//1	-20~+70	D-161-C	3.5
21M15JH	21.4	6	3	±7.5	45	±17.5	65	±25	2	2.5	1.6k//1	-20~+70	D-161-C	3.5
21M30JH	21.4	6	3	±15	45	±35	65	±50	2	2.5	2.3k//—2	-20~+70	D-161-C	3.5
21M7.5JJ	21.4	6	3	±3.75	45	±8.75	65	±12.5	2	3.5	750//3	-20~+70	D-161-C	3.5
21M12JJ	21.4	6	3	±6	45	±14	65	±20	2	2.5	1.2k//0	-20~+70	D-161-C	3.5
21M15JJ	21.4	6	3	±7.5	45	±17.5	65	±25	2	2.5	1.5k//0	-20~+70	D-161-C	3.5
21M7.5DH	21.4	8	3	±3.75	65	±9	90	±12.5	2	4	910//3	-20~+70	D-161-D	4
21M7.5DK	21.4	8	3	±3.75	65	±9	90	±12.5	2	4	1.6k//1	-20~+70	D-161-D	4
21M12DH	21.4	8	3	±6	65	±14	90	±20	2	3	1.6k//1	-20~+70	D-161-D	4
21M15DH	21.4	8	3	±7.5	65	±17.5	90	±25	2	3	1.6k//1	-20~+70	D-161-D	4
21M30DH	21.4	8	3	±15	65	±35	85	±50	2	3	2.3k//—2	-20~+70	D-161-D	4
21M7.5DJ	21.4	8	3	±3.75	65	±9	90	±12.5	2	4	750//3	-20~+70	D-161-D	4
21M12DJ	21.4	8	3	±6	65	±14	90	±20	2	3	1.2k//0	-20~+70	D-161-D	4
21M15DJ	21.4	8	3	±7.5	65	±17.5	90	±25	2	3	1.5k//0	-20~+70	D-161-D	4
21X7.5A	21.4	2	3	±3.75	20	±20	—	—	1	2.0	850//6	-20~+70	D-362-A	0.5
21X7.5B	21.4	4	3	±3.75	40	±25	—	—	1	3.0	1.5k//2.5 Cc=8pF	-20~+70	D-362-B	1.5
21X15AA	21.4	2	3	±7.5	18	±25	—	—	0.5	2.0	1.5k//2.5pF	-20~+70	D-362-A	0.5
21X15BE	21.4	4	3	±7.5	40	±25	—	—	1	2.5	1.5k//2.5 Cc=7pF	-20~+70	D-362-B	1.5

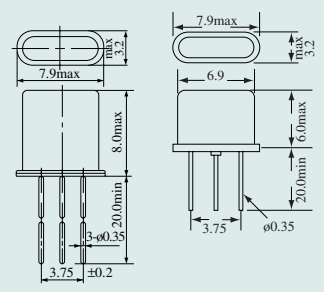
# CRYSTAL FILTERS

## 21.4MHz Series

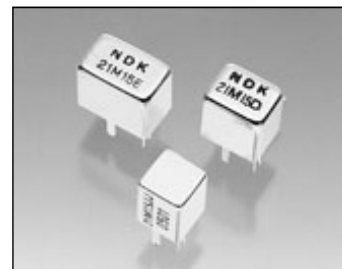
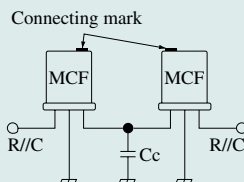
### MCF



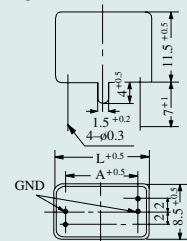
D-360-A ~ B D-362-A ~ B (NR-2C (3) Type) (mm)  
(NR-2B (3) Type)



D-360-B means a pair of D-360-A.  
D-362-B means a pair of D-362-A.  
When D-360-B/D-362-B are used,  
please use a coupling capacitance.  
Cc includes stray capacitance.



D-161-C ~ E (mm)



Type	A	L
D-161-C	5.2	8.5
D-161-D	7.4	11.0
D-161-E	9.8	13.4