

MCF (Dip Series)

Monolithic Crystal Filter

- **Application**
Pager, Cordless telephone, Portable telephone, VHF radio, SSB...
- **Specification**

For normal 10.7MHz series

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
10L071A		2	3 ±3.75	20 ±18.0		0.5	1.5	35 ±300 ~ ±1000	1.8K//5-0	-20 ~ +70	HC-49/U.3S*1
10L072A	10.695	4	3 ±3.75	40 ±14.0		1.0	2.5	65 ±300 ~ ±1000	1.8K//4.5	-20 ~ +70	HC-49/U.3S*2
10L073A	~	6	3 ±3.75	45 ±8.75	65 ±12.5	2.0	3.0	65 ±12.5 ~ ±300	3.3K//2.0	-20 ~ +70	L-1
10L074A	10.700	8	3 ±3.75	65 ±8.75	90 ±12.5	2.0	4.0	90 ±12.5 ~ ±300	3.3K//2.0	-20 ~ +70	L-2
10L075A		10	6 ±3.75	75 ±8.75	90 ±10.5	2.0	5.0	90 ±10.5 ~ ±300	3.3K//2.0	-20 ~ +70	L-3
10L121A		2	3 ±6.0	20 ±25.0		0.5	1.5	35 ±300 ~ ±1000	2.5K//2.5	-20 ~ +70	HC-49/U.3S*1
10L122A	10.695	4	3 ±6.0	40 ±20.0		1.0	2.5	65 ±300 ~ ±1000	2.5K//1.5	-20 ~ +70	HC-49/U.3S*2
10L123A	~	6	3 ±6.0	45 ±14.0	65 ±20.0	2.0	3.0	65 ±20 ~ ±300	2.5K//1.5	-20 ~ +70	L-1
10L124A	10.700	8	3 ±6.0	65 ±14.0	90 ±20.0	2.0	4.0	90 ±20 ~ ±300	2.5K//1.5	-20 ~ +70	L-2
10L125A		10	6 ±6.0	75 ±14.0	90 ±16.0	2.0	5.0	90 ±16 ~ ±300	2.5K//1.5	-20 ~ +70	L-3
10L151A		2	3 ±7.5	18 ±25.0		0.5	1.5	35 ±300 ~ ±1000	3.0K//2.0	-20 ~ +70	HC-49/U.3S*1
10L152A	10.695	4	3 ±7.5	40 ±25.0		1.0	2.5	65 ±300 ~ ±1000	3.0K//1.5	-20 ~ +70	HC-49/U.3S*2
10L153A	~	6	3 ±7.5	45 ±17.5	65 ±25.0	2.0	3.0	65 ±25 ~ ±300	3.3K//1.5	-20 ~ +70	L-1
10L154A	10.700	8	3 ±7.5	65 ±17.5	90 ±25.0	2.0	4.0	90 ±25 ~ ±300	3.3K//1.5	-20 ~ +70	L-2
10L155A		10	6 ±7.5	75 ±16.0	90 ±18.0	2.0	5.0	90 ±18 ~ ±300	3.3K//1.0	-20 ~ +70	L-3
10L301A		2	3 ±15.0	15 ±50.0		0.5	1.5	30 ±300 ~ ±1000	5.0K//0	-20 ~ +70	HC-49/U.3S*1
10L302A	10.695	4	3 ±15.0	30 ±40.0		1.0	2.5	65 ±300 ~ ±1000	5.5K//-1.0	-20 ~ +70	HC-49/U.3S*2
10L303A	~	6	3 ±15.0	60 ±45.0		2.0	3.0	65 ±45 ~ ±300	5.5K//-1.0	-20 ~ +70	L-1
10L304A	10.700	8	3 ±15.0	60 ±30.0	90 ±50.0	2.0	4.0	90 ±50 ~ ±300	5.5K//-1.0	-20 ~ +70	L-2

For normal 21.4MHz series

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
21S081A		2	3 ±3.75	20 ±18.0		0.5	1.5	35 ±300 ~ ±1000	850//6.0	-20 ~ +70	UM-1.3S*1
21S082A	21.400	4	3 ±3.75	40 ±14.0		1.0	2.5	65 ±300 ~ ±1000	850//5.0	-20 ~ +70	UM-1.3S*2
21S083A	~	6	3 ±3.75	45 ±8.75	65 ±12.5	2.0	3.0	65 ±12.5 ~ ±300	850//5.0	-20 ~ +70	S-1, M-1
21S084A	21.800	8	3 ±3.75	65 ±8.75	90 ±12.5	2.0	4.0	90 ±12.5 ~ ±300	850//5.0	-20 ~ +70	S-2, M-2
21S085A		10	6 ±3.75	75 ±8.75	90 ±10.5	2.0	5.0	90 ±10.5 ~ ±300	850//5.0	-20 ~ +70	S-3, M-3
21S121A		2	3 ±6.0	20 ±25.0		0.5	1.5	35 ±300 ~ ±1000	1.2K//3.0	-20 ~ +70	UM-1.3S*1
21S122A	21.400	4	3 ±6.0	40 ±20.0		1.0	2.5	65 ±300 ~ ±1000	1.2K//2.5	-20 ~ +70	UM-1.3S*2
21S123A	~	6	3 ±6.0	45 ±14.0	65 ±20.0	2.0	3.0	65 ±20 ~ ±300	1.2K//2.5	-20 ~ +70	S-1, M-1
21S124A	21.800	8	3 ±6.0	65 ±14.0	90 ±20.0	2.0	4.0	90 ±20 ~ ±300	1.2K//2.5	-20 ~ +70	S-2, M-2
21S125A		10	6 ±6.0	75 ±14.0	90 ±20.0	2.0	5.0	90 ±20 ~ ±300	1.2K//2.5	-20 ~ +70	S-3, M-3
21S151A		2	3 ±7.5	18 ±25.0		0.5	1.5	35 ±300 ~ ±1000	1.5K//2.5	-20 ~ +70	UM-1.3S*1
21S152A	21.400	4	3 ±7.5	40 ±25.0		1.0	2.5	65 ±300 ~ ±1000	1.5K//2.0	-20 ~ +70	UM-1.3S*2
21S153A	~	6	3 ±7.5	45 ±17.5	65 ±25.0	2.0	3.0	65 ±25 ~ ±300	1.5K//2.0	-20 ~ +70	S-1, M-1
21S154A	21.800	8	3 ±7.5	65 ±17.5	90 ±25.0	2.0	4.0	90 ±25 ~ ±300	1.5K//2.0	-20 ~ +70	S-2, M-2
21S155A		10	6 ±7.5	75 ±16.0	90 ±18.0	2.0	5.0	90 ±18 ~ ±300	1.5K//2.0	-20 ~ +70	S-3, M-3
21S301A		2	3 ±15.0	15 ±45.0		0.5	1.5	35 ±300 ~ ±1000	1.5K//1.0	-20 ~ +70	UM-1.3S*1
21S302A	21.400	4	3 ±15.0	40 ±50.0		1.0	2.5	65 ±300 ~ ±1000	2.2K//0.5	-20 ~ +70	UM-1.3S*2
21S303A	~	6	3 ±15.0	45 ±35.0	65 ±50.0	2.0	3.0	65 ±50 ~ ±300	2.2K//0.5	-20 ~ +70	S-1, M-1
21S304A	21.800	8	3 ±15.0	65 ±35.0	90 ±50.0	2.0	4.0	90 ±50 ~ ±300	2.2K//0.5	-20 ~ +70	S-2, M-2

For Pager

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
21S151A	21.400	2	3 ±7.5	18 ±25.0		1.0	1.5	35 ±300 ~ ±1000	1.5K//2.5	-20 ~ +70	UM-1.3S*1
21T151A	~	4	3 ±7.5	18 ±25.0		1.0	1.5	35 ±300 ~ ±1000	1.5K//2.5	-20 ~ +70	UM-5.3S*1
21T201A	21.800	6	3 ±10.0	15 ±30.0		1.0	1.5	35 ±300 ~ ±1000	1.5K//2.5	-20 ~ +70	UM-5.3S*1

For Cordless Phone

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
10L151A	10.700	2	3 ±7.5	18 ±25.0		0.5	2.0	35 ±300 ~ ±1000	3.0K//2.0	-20 ~ +70	HC-49/U.3S*1
21S071A	21.400	2	3 ±3.75	18 ±12.5		1.0	2.0	60 ±(910±10)	1.5K//6.0	-20 ~ +70	UM-1.3S*2
21S122A	~	4	3 ±6.0	40 ±20.0		1.5	3.0	80 ±(910±10)	1.2K//2.5	-20 ~ +70	UM-1.3S*2
21S152A	21.800		3 ±7.5	40 ±25.0		1.5	3.0	80 ±(910±10)	1.5K//2.0	-20 ~ +70	UM-1.3S*2
58S072AT	58.075	4	3 ±3.75	35 ±14.0		2.0	4.0	80 ±(910±10)	3.0K//0.4	-20 ~ +70	UM-1.3S*2
58S122AT	58.1125	4	3 ±6.0	35 ±20.0		2.0	3.0	80 ±(910±10)	3.0K//0.4	-20 ~ +70	UM-1.3S*2
58S152AT	58.1625	4	3 ±7.5	28 ±25.0		2.0	3.0	80 ±(910±10)	3.0K//1.0	-20 ~ +70	UM-1.3S*2
83S302AT	83.160		3 ±15.0	20 ±60.0		1.5	6.0	65 ±(910±10)	2.5K//1.0	-20 ~ +70	UM-1.3S*2

For Portable Telephone

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
45S301AF		2	3 ±15.0	15 ±50.0		1.0	2.0	50 -(910±10)	600//1.5	-20 ~ +70	UM-1.3S*1
45T301AF	45.000	2	3 ±15.0	15 ±50.0		1.0	2.0	50 -(910±10)	600//1.5	-20 ~ +70	UM-5.3S*1
45N401AF		2	2 ±20.0	15 ±60.0		1.0	2.0	50 -(910±10)	860//1.7	-20 ~ +70	UM-4.3S*1
45T151AF	45.050	2	3 ±7.5	15 ±22.0		1.0	2.0	66 -(910±10)	470//6.0	-20 ~ +70	UM-5.3S*1
45S152AF		4	3 ±7.5	40 ±30.0		1.0	3.0	80 ±300 ~ ±1000	560//3.0	-20 ~ +70	UM-1.3S*2
45T152AF	45.100	4	3 ±7.5	40 ±30.0		1.0	3.0	80 ±300 ~ ±1000	560//3.0	-20 ~ +70	UM-5.3S*2
45T302AF		4	3 ±15.0	30 ±60.0		1.0	3.0	80 ±910	1.6K//0	-20 ~ +70	UM-5.3S*2
70T202AT	70.000	4	3 ±10.0	35 ±40.0		2.0	6.0	70 ±300 ~ ±1000	2.5K//1.0	-20 ~ +70	UM-5.3S*2
90T092AT	90.000	4	3 ±4.5	13 ±12.5		2.0	6.0	70 ±(910±10)	2.5K//1.0	-20 ~ +70	UM-5.3S*2

For VHF Radio

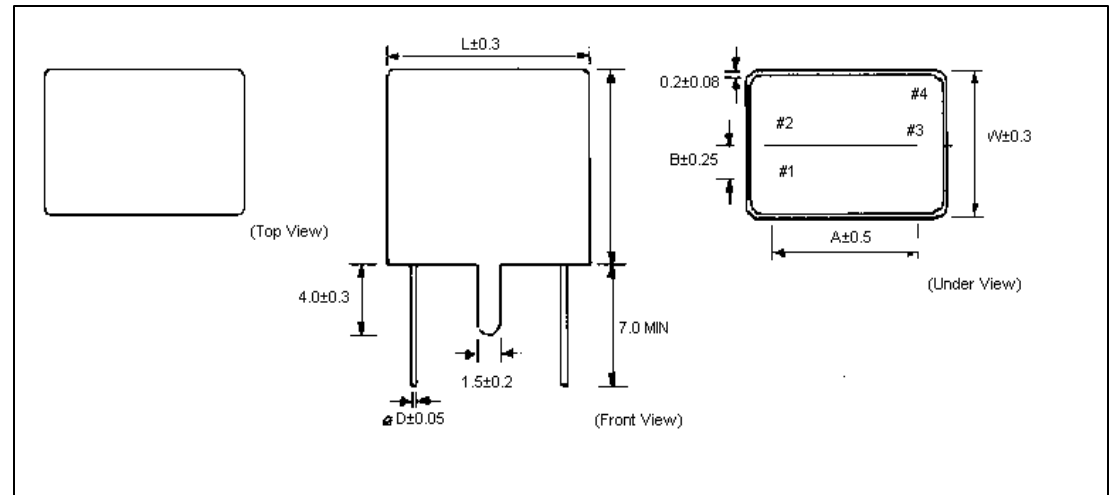
Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
45L152AT		4	3 ±7.5	40 ±30.0		2.0	3.0	70 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	HC-49/U.3S*2
45S152AT	45.000	4	3 ±7.5	40 ±30.0		2.0	3.0	70 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	UM-1.3S*2
55L171AT	55.845	2	3 ±8.5	18 ±34.0		2.0	3.0	35 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	HC-49/U.3S*1
55S171AT		2	3 ±8.5	18 ±34.0		2.0	3.0	35 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	UM-1.3S*1
55S172AT	55.025	4	3 ±8-5	25 ±25.0		2.0	3.0	70 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	UM-1.3S*2
58S172AT	58.1125	4	3 ±8.5	25 ±25.0		2.0	4.0	70 ±300 ~ ±1000	3.0K//-1.0	-20 ~ +70	UM-1.3S*2
70S152AT	70.000	4	3 ±7.5	40 ±30.0		2.0	6.0	70 ±300 ~ ±1000	2.5K//-1.0	-20 ~ +70	UM-1.3S*2
90S202AT	90.000	4	3 ±10.0	35 ±40.0		2.0	6.0	70 ±300 ~ ±1000	2.5K//-1.0	-20 ~ +70	UM-1.3S*2

For SSB

Type	Nominal Frequency	Pole	Pass Band	Stop Band		Ripple (dB)	Loss (dB)	Guaranteed Attenuation	Terminating impedance (Ohm / pF)	Operating Temp. Range (°C)	Case
			dB / KHz	dB / KHz	dB / KHz			fo ± KHz			
10L023A	10.695	6	6 ±1.1	20 ±1.7		2.0	3.0	70 ±4 ~ ±1000	600//15.0	-20 ~ +70	L-1, L-5
10L024A	~	8	6 ±1.1	20 ±1.5		2.0	4.0	80 ±3 ~ ±1000	600//15.0	-20 ~ +70	L-2, L-6
10L044A	10.700	8	6 ±2.1	15 ±2.45		2.0	4.0	80 ±6 ~ ±1000	1.0K//8.0	-20 ~ +70	L-2, L-6

Dimension (Unit:mm)

Case	L	W	H	A	8	φD
S-1	8.5	8.5	11.5	5.0	2.0	0.35
S-2	11.0	8.5	11.5	7.4	2.0	0.35
S-3	13.4	8.5	11.5	9.8	2.0	0.35
M-1	10.0	8.5	11.5	6.0	2.0	0.35
M-2	13.4	8.5	11.5	8.6	2.0	0.35
M-3	16.0	8.5	11.5	11.8	2.0	0.35
L-1	15.0	12.0	15.0	9.0	2.5	0.43
L-2	18.5	12.0	15.0	13.4	2.5	0.43
L-3	23.0	12.0	15.0	17.8	2.5	0.43
L-4	28.0	12.0	15.0	22.2	2.5	0.43
L-5	15.0	12.0	20.0	9.0	2.5	0.43
L-6	18.5	12.0	20.0	13.4	2.5	0.43



Holder	a	b	t	M	h	e(min)	c	φd
UM-1 -3S	7.9	7.0	2.4	3.2	8.2	18.0	1.9	0.35
UM-13S Slim	7.9	7.0	2.0	2.6	8.2	18.0	1.9	0.33
UM-4.3S	7.9	7.0	2.4	3.2	4.7	18.0	1.9	0.35
UM-5.3S	7.9	7.0	2.4	3.2	6.0	18.0	1.9	0.35
UM-5.3S Slim	7.9	7.0	2.0	2.6	6.0	18.0	1.9	0.35
HC-49/U.3S	11.05	10.3	3.8	4.65	13.1	13.2	2.44	0.43
HC-49/U1.3S	11.05	10.3	3.8	4.65	9.5	13.2	2.44	0.43
HC-49/U2.3S	11.05	10.3	3.8	4.65	11.0	13.2	2.44	0.43
HC-49/U3.3S	11.05	10.3	3.8	4.65	11.4	13.2	2.44	0.43

