

HC-49U, UM

MONOLITHIC CRYSTAL FILTER

DIP



TYPICAL APPLICATIONS

Pager, Cordless Telephone, Portable Telephone, VHF Radio, SSB....

TYPICAL SPECIFICATIONS

For Normal 10.7MHz Series

Type	Nominal Frequency (MHz)	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	fo±KHz			
10L071A	10.695	2	3	±3.75	20 ±18.0		0.5	1.5	35	±300 ~ ±1000	1.8K/5.0	-20 ~ +70	HC-49/U.35*1
10L072A		4	3	±3.75	40 ±14.0		1.0	2.5	65	±300 ~ ±1000	1.8K/4.5	-20 ~ +70	HC-49/U.35*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	10.695	2	3	±6.0	20 ±25.0		0.5	1.5	35	±300 ~ ±1000	2.5K/2.5	-20 ~ +70	HC-49/U.35*1
10L122A		4	3	±6.0	40 ±20.0		1.0	2.5	65	±300 ~ ±1000	2.5K/1.5	-20 ~ +70	HC-49/U.35*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		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	10.700	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.35*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.35*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		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	10.700	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.35*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.35*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		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

21M081A	21.400	2	3	±3.75	20 ±18.0		0.5	1.5	35	±300 ~ ±1000	850/6.0	-20 ~ +70	UM-1.35*1
21M082A		4	3	±3.75	40 ±14.0		1.0	2.5	65	±300 ~ ±1000	850/5.0	-20 ~ +70	UM-1.35*2
21M083A		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
21M084A	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
21M085A		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
21M121A	21.400	2	3	±6.0	20 ±25.0		0.5	1.5	35	±300 ~ ±1000	1.2K/3.0	-20 ~ +70	UM-1.35*1
21M122A		4	3	±6.0	40 ±20.0		1.0	2.5	65	±300 ~ ±1000	1.2K/2.5	-20 ~ +70	UM-1.35*2
21M123A		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
21M124A		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
21M125A	21.800	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
21M151A		2	3	±7.5	18 ±25.0		0.5	1.5	35	±300 ~ ±1000	1.5K/2.5	-20 ~ +70	UM-1.35*1
21M152A	21.400	4	3	±7.5	40 ±25.0		1.0	2.5	65	±300 ~ ±1000	1.5K/2.0	-20 ~ +70	UM-1.35*2
21M153A		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
21M154A		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
21M155A	21.800	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
21M301A		2	3	±15.0	15 ±45.0		0.5	1.5	35	±300 ~ ±1000	1.5K/1.0	-20 ~ +70	UM-1.35*1
21M302A	21.400	4	3	±15.0	40 ±50.0		1.0	2.5	65	±300 ~ ±1000	2.2K/0.5	-20 ~ +70	UM-1.35*2
21M303A		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
21M304A		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

21M151A	21.400	2	3	±7.5	18 ±25.0		1.0	1.5	35	±300 ~ ±1000	1.5K/2.5	-20 ~ +70	UM-1.35*1
21T151A		4	3	±7.5	18 ±25.0		1.0	1.5	35	±300 ~ ±1000	1.5K/2.5	-20 ~ +70	UM-5.35*1
21T201A	21.800	6	3	±10.0	15 ±30.0		1.0	1.5	35	±300 ~ ±1000	1.8K/2.5	-20 ~ +70	UM-5.35*1

For SSB

10L023A	10.695	6	6	±1.1	20 ±1.7	60 ±3.0	2.0	3.0	70	±4 ~ ±1000	600/15.0	-20 ~ +70	L-1, L-5
10L024A		8	6	±1.1	20 ±1.5	60 ±2.5	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	60 ±4.0	2.0	4.0	80	±6 ~ ±1000	1.0K/8.0	-20 ~ +70	L-2, L-6

HC-49U, UM

MONOLITHIC CRYSTAL FILTER

DIP



For Cordless Telephone

Type	Nominal Frequency (MHz)	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	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
21M071A	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
21M122A	~	4	3	±6.0	40	±20.0	1.5	3.0	80	±(910±10)	1.2K/2.5	-20 ~ +70	UM-1.3S*2
21M152A	21.800	4	3	±7.5	40	±25.0	1.5	3.0	80	±(910±10)	1.5K/2.0	-20 ~ +70	UM-1.3S*2
58M072AT	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
58M122AT	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
58M152AT	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
83M302AT	83.160	4	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

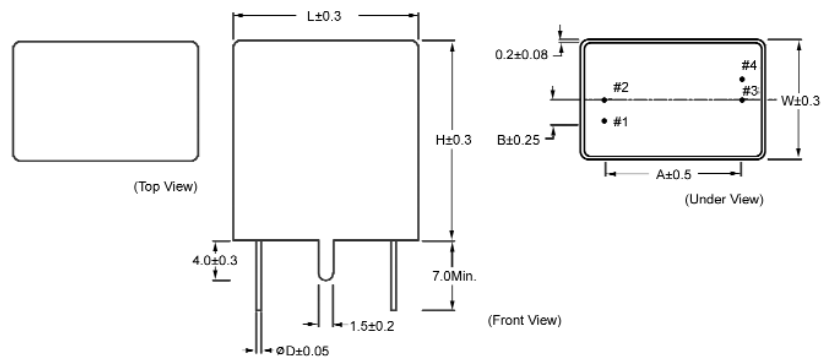
45M301AF	45.000	2	3	±15.0	15	±50.0	1.0	2.0	50	-(910±1.0)	600/1.5	-20 ~ +70	UM-1.3S*1
45T301AF		2	3	±15.0	15	±50.0	1.0	2.0	50	-(910±1.0)	600/1.5	-20 ~ +70	UM-5.3S*1
45N401AF		2	2	±20.0	15	±60.0	1.0	2.0	50	-(910±1.0)	860/-1.7	-20 ~ +70	UM-4.3S*1
45T151AF	45.050	2	3	±7.5	15	±22.0	1.0	2.0	66	-(910±1.0)	470/6.0	-20 ~ +70	UM-5.3S*1
45M152AF	45.100	4	3	±7.5	40	±30.0	1.0	3.0	80	±300 ~ ±1000	560/3.0	-20 ~ +70	UM-1.3S*2
45T152AF		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
90T092AT	90.000	4	3	±4.5	13	±12.5	2.0	6.0	70	±(910 ± 1.0)	2.5K/-1.0	-20 ~ +70	UM-5.3S*2

For VHF Radio

45L152AT	45.000	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
45M152AT		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
55M171AT		2	3	±8.5	18	±34.0	2.0	3.0	35	±300 ~ ±1000	3.0K/-1.0	-20 ~ +70	UM-1.3S*1
55M172AT	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
58M172AT	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
70M152AT	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
90M202AT	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

Dimension (Unit:mm)

Case	L	W	H	A	B	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/UI.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

