

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## HT Parts List (1-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	ESR ( $\Omega$ ) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
				max.	max.		
D x L							
4 x 5.4	4HT330MLC4x5.4EC	4	33	0.35	3.0	22.9	18
5 x 5.4	4HT330MLC5x5.4EC	4	33	0.35	3.0	22.9	30
4 x 5.4	4HT470MLC4x5.4EC	4	47	0.35	3.0	16.1	24
5 x 5.4	4HT470MLC5x5.4EC	4	47	0.35	3.0	16.1	36
5 x 5.4	4HT101MLC5x5.4EC	4	100	0.35	4.0	7.5	43
6.3 x 5.4	4HT101MLC6.3x5.4EC	4	100	0.35	4.0	7.5	60
6.3 x 5.4	4HT151MLC6.3x5.4EC	4	150	0.35	6.0	5.0	52
6.3 x 5.4	4HT221MLC6.3x5.4EC	4	220	0.35	8.8	3.4	57
6.3 x 7.7	4HT331MLC6.3x7.7EC	4	330	0.35	13.2	2.3	100
6.3 x 7.7	4HT471MLC6.3x7.7EC	4	470	0.35	18.8	1.6	105
8 x 10.5	4HT681MLC8x10.5EC	4	680	0.35	27.2	1.1	210
8 x 10.5	4HT102MLC8x10.5EC	4	1000	0.35	40.0	0.8	230
10 x 10.5	4HT152MLC10x10.5EC	4	1500	0.35	60.0	0.5	315
10 x 10.5	4HT222MLC10x10.5EC	4	2200	0.35	88.0	0.3	340
10 x 13.5	4HT222MLC10x13.5EC	4	2200	0.35	88.0	0.34	440
10 x 13.5	4HT332MLC10x13.5EC	4	3300	0.35	132.0	0.23	490
12.5 x 13.5	4HT472MLC12.5x13.5EC	4	4700	0.42	188.0	0.19	600
12.5 x 16	4HT682MLC12.5x16EC	4	6800	0.42	272.0	0.13	650
16 x 16.5	4HT682MLC16x16.5EC	4	6800	0.42	272.0	0.13	950
4 x 5.4	6.3HT220MLC4x5.4EC	6.3	22	0.26	3.0	25.5	22
4 x 5.4	6.3HT330MLC4x5.4EC	6.3	33	0.26	3.0	17.0	22
5 x 5.4	6.3HT330MLC5x5.4EC	6.3	33	0.26	3.0	17.0	27
4 x 5.4	6.3HT470MLC4x5.4EC	6.3	47	0.26	3.0	11.9	25
5 x 5.4	6.3HT470MLC5x5.4EC	6.3	47	0.26	3.0	11.9	33
5 x 5.4	6.3HT101MLC5x5.4EC	6.3	100	0.26	6.3	5.6	39
6.3 x 5.4	6.3HT101MLC6.3x5.4EC	6.3	100	0.26	6.3	5.6	50
6.3 x 5.4	6.3HT151MLC6.3x5.4EC	6.3	150	0.26	9.5	3.7	55
6.3 x 5.4	6.3HT221MLC6.3x5.4EC	6.3	220	0.26	13.9	2.5	67
6.3 x 7.7	6.3HT221MLC6.3x7.7EC	6.3	220	0.26	13.9	2.5	105
6.3 x 7.7	6.3HT331MLC6.3x7.7EC	6.3	330	0.26	20.8	1.7	105
6.3 x 7.7	6.3HT471MLC6.3x7.7EC	6.3	470	0.26	29.6	1.2	120
8 x 10.5	6.3HT471MLC8x10.5EC	6.3	470	0.26	29.6	1.2	210
8 x 10.5	6.3HT681MLC8x10.5EC	6.3	680	0.26	42.8	0.8	210
8 x 10.5	6.3HT102MLC8x10.5EC	6.3	1000	0.26	63.0	0.6	230

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## HT Parts List (2-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	ESR ( $\Omega$ ) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
D x L				max.	max.	max.	max.
8 x 10.5	6.3HT102MLC8x10.5EC	6.3	1000	0.26	63.0	0.6	230
10 x 10.5	6.3HT102MLC10x10.5EC	6.3	1000	0.26	63.0	0.6	300
10 x 10.5	6.3HT152MLC10x10.5EC	6.3	1500	0.26	94.5	0.4	315
10 x 13.5	6.3HT152MLC10x13.5EC	6.3	1500	0.26	94.5	0.37	450
10 x 13.5	6.3HT222MLC10x13.5EC	6.3	2200	0.26	138.6	0.25	500
12.5 x 13.5	6.3HT222MLC12.5x13.5EC	6.3	2200	0.38	138.6	0.37	620
12.5 x 13.5	6.3HT332MLC12.5x13.5EC	6.3	3300	0.38	207.9	0.25	660
12.5 x 16	6.3HT332MLC12.5x16EC	6.3	3300	0.38	207.9	0.25	700
16 x 16.5	6.3HT472MLC16x16.5EC	6.3	4700	0.38	296.1	0.17	1000
4 x 5.4	10HT220MLC4x5.4EC	10	22	0.20	3.0	19.6	20
5 x 5.4	10HT220MLC5x5.4EC	10	22	0.20	3.0	19.6	25
4 x 5.4	10HT330MLC4x5.4EC	10	33	0.20	3.3	13.1	22
5 x 5.4	10HT330MLC5x5.4EC	10	33	0.20	3.3	13.1	30
5 x 5.4	10HT470MLC5x5.4EC	10	47	0.20	4.7	9.2	30
6.3 x 5.4	10HT470MLC6.3x5.4EC	10	47	0.20	4.7	9.2	41
6.3 x 5.4	10HT101MLC6.3x5.4EC	10	100	0.20	10.0	4.3	53
8 x 6.2	10HT101MLC8x6.2EC	10	100	0.20	10.0	4.3	110
6.3 x 5.4	10HT151MLC6.3x5.4EC	10	150	0.20	15.0	2.9	62
6.3 x 7.7	10HT221MLC6.3x7.7EC	10	220	0.20	22.0	2.0	105
8 x 6.2	10HT221MLC8x6.2EC	10	220	0.20	22.0	2.0	105
8 x 10.5	10HT331MLC8x10.5EC	10	330	0.20	33.0	1.3	196
8 x 10.5	10HT471MLC8x10.5EC	10	470	0.20	47.0	0.9	210
10 x 10.5	10HT471MLC10x10.5EC	10	470	0.20	47.0	0.9	260
10 x 10.5	10HT681MLC10x10.5EC	10	680	0.20	68.0	0.6	270
10 x 10.5	10HT102MLC10x10.5EC	10	1000	0.20	100.0	0.4	315
10 x 13.5	10HT152MLC10x13.5EC	10	1500	0.20	150.0	0.29	460
12.5 x 13.5	10HT222MLC12.5x13.5EC	10	2200	0.34	220.0	0.33	680
16 x 16.5	10HT332MLC16x16.5EC	10	3300	0.34	330.0	0.22	1000
4 x 5.4	16HT100MLC4x5.4EC	16	10	0.16	3.0	34.5	18
4 x 5.4	16HT220MLC4x5.4EC	16	22	0.16	3.5	15.7	20
5 x 5.4	16HT220MLC5x5.4EC	16	22	0.16	3.5	15.7	27
5 x 5.4	16HT330MLC5x5.4EC	16	33	0.16	5.3	10.5	28
6.3 x 5.4	16HT330MLC6.3x5.4EC	16	33	0.16	5.3	10.5	40
5 x 5.4	16HT470MLC5x5.4EC	16	47	0.16	7.5	7.3	31

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## HT Parts List (3-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	ESR ( $\Omega$ ) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
				max.	max.		
6.3 x 5.4	16HT470MLC6.3x5.4EC	16	47	0.16	7.5	7.3	48
6.3 x 5.4	16HT101MLC6.3x5.4EC	16	100	0.16	16.0	3.5	60
8 x 6.2	16HT101MLC8x6.2EC	16	100	0.16	16.0	3.5	120
6.3 x 7.7	16HT151MLC6.3x7.7EC	16	150	0.16	24.0	2.3	95
6.3 x 7.7	16HT221MLC6.3x7.7EC	16	220	0.16	35.2	1.6	105
8 x 6.2	16HT221MLC8x6.2EC	16	220	0.16	35.2	1.6	85
8 x 10.5	16HT221MLC8x10.5EC	16	220	0.16	35.2	1.6	150
8 x 10.5	16HT331MLC8x10.5EC	16	330	0.16	52.8	1.0	195
8 x 10.5	16HT471MLC8x10.5EC	16	470	0.16	75.2	0.7	230
10 x 10.5	16HT471MLC10x10.5EC	16	470	0.16	75.2	0.7	295
10 x 10.5	16HT681MLC10x10.5EC	16	680	0.16	108.8	0.5	315
10 x 10.5	16HT102MLC10x10.5EC	16	1000	0.16	160.0	0.3	340
10 x 13.5	16HT102MLC10x13.5EC	16	1000	0.16	160.0	0.35	390
12.5 x 13.5	16HT102MLC12.5x13.5EC	16	1000	0.30	160.0	0.65	500
12.5 x 13.5	16HT152MLC12.5x13.5EC	16	1500	0.30	240.0	0.43	550
12.5 x 16	16HT222MLC12.5x16EC	16	2200	0.30	352.0	0.29	750
16 x 16.5	16HT222MLC16x16.5EC	16	2200	0.30	352.0	0.29	950
16 x 16.5	16HT332MLC16x16.5EC	16	3300	0.30	528.0	0.20	1000
4 x 5.4	25HT4R7MLC4x5.4EC	25	4.7	0.14	3.0	64.2	13
4 x 5.4	25HT100MLC4x5.4EC	25	10	0.14	3.0	30.2	14
5 x 5.4	25HT100MLC5x5.4EC	25	10	0.14	3.0	30.2	20
5 x 5.4	25HT220MLC5x5.4EC	25	22	0.14	5.5	13.7	25
6.3 x 5.4	25HT220MLC6.3x5.4EC	25	22	0.14	5.5	13.7	36
5 x 5.4	25HT330MLC5x5.4EC	25	33	0.14	8.3	9.1	29
6.3 x 5.4	25HT330MLC6.3x5.4EC	25	33	0.14	8.3	9.1	44
6.3 x 5.4	25HT470MLC6.3x5.4EC	25	47	0.14	11.8	6.4	48
8 x 6.2	25HT470MLC8x6.2EC	25	47	0.14	11.8	6.4	91
6.3 x 7.7	25HT101MLC6.3x7.7EC	25	100	0.14	25.0	3.0	91
6.3 x 7.7	25HT151MLC6.3x7.7EC	25	150	0.14	37.5	2.0	100
8 x 10.5	25HT151MLC8x10.5EC	25	150	0.14	37.5	2.0	140
8 x 10.5	25HT221MLC8x10.5EC	25	220	0.14	55.0	1.4	175
8 x 10.5	25HT331MLC8x10.5EC	25	330	0.14	82.5	0.9	220
10 x 10.5	25HT331MLC10x10.5EC	25	330	0.14	82.5	0.9	240
10 x 10.5	25HT471MLC10x10.5EC	25	470	0.14	117.5	0.6	280
10 x 13.5	25HT681MLC10x13.5EC	25	680	0.14	170.0	0.44	400

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## HT Parts List (4-6)

Size D × L	Part No.	R.V. (V.DC)	Cap. (μ F)	Tangent of Loss Angle (tan δ )	Leakage Current (μ A)	ESR (Ω) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
				max.	max.	max.	max.
12.5 × 13.5	25HT102MLC12.5×13.5EC	25	1000	0.26	250.0	0.56	580
12.5 × 16	25HT152MLC12.5×16EC	25	1500	0.26	375.0	0.37	850
16 × 16.5	25HT222MLC16×16.5EC	25	2200	0.26	550.0	0.25	1050
4 × 5.4	35HT3R3MLC4×5.4EC	35	3.3	0.12	3.0	78.4	13
4 × 5.4	35HT4R7MLC4×5.4EC	35	4.7	0.12	3.0	55.1	14
4 × 5.4	35HT100MLC4×5.4EC	35	10	0.12	3.5	25.9	14
5 × 5.4	35HT100MLC5×5.4EC	35	10	0.12	3.5	25.9	21
6.3 × 5.4	35HT220MLC6.3×5.4EC	35	22	0.12	7.7	11.8	38
6.3 × 5.4	35HT330MLC6.3×5.4EC	35	33	0.12	11.6	7.8	42
8 × 6.2	35HT330MLC8×6.2EC	35	33	0.12	11.6	7.8	84
6.3 × 5.4	35HT470MLC6.3×5.4EC	35	47	0.12	16.5	5.5	50
6.3 × 7.7	35HT470MLC6.3×7.7EC	35	47	0.12	16.5	5.5	70
6.3 × 7.7	35HT101MLC6.3×7.7EC	35	100	0.12	35.0	2.6	84
8 × 10.5	35HT101MLC8×10.5EC	35	100	0.12	35.0	2.6	120
8 × 10.5	35HT151MLC8×10.5EC	35	150	0.12	52.5	1.7	155
8 × 10.5	35HT221MLC8×10.5EC	35	220	0.12	77.0	1.2	190
10 × 10.5	35HT221MLC10×10.5EC	35	220	0.12	77.0	1.2	220
10 × 10.5	35HT331MLC10×10.5EC	35	330	0.12	115.5	0.8	245
10 × 10.5	35HT471MLC10×10.5EC	35	470	0.12	164.5	0.6	280
10 × 13.5	35HT471MLC10×13.5EC	35	470	0.12	164.5	0.55	375
12.5 × 13.5	35HT471MLC12.5×13.5EC	35	470	0.22	164.5	1.01	520
10 × 13.5	35HT681MLC10×13.5EC	35	680	0.12	238.0	0.38	395
12.5 × 13.5	35HT681MLC12.5×13.5EC	35	680	0.22	238.0	0.70	530
12.5 × 16	35HT102MLC12.5×16EC	35	1000	0.22	350.0	0.47	600
16 × 16.5	35HT102MLC16×16.5EC	35	1000	0.22	350.0	0.47	750
4 × 5.4	50HT0R1MLC4×5.4EC	50	0.1	0.12	3.0	2587.6	0.7
4 × 5.4	50HTR22MLC4×5.4EC	50	0.22	0.12	3.0	1176.2	1.6
4 × 5.4	50HTR33MLC4×5.4EC	50	0.33	0.12	3.0	784.1	2.5
4 × 5.4	50HTR47MLC4×5.4EC	50	0.47	0.12	3.0	550.5	3.5
4 × 5.4	50HT010MLC4×5.4EC	50	1	0.12	3.0	258.8	7
4 × 5.4	50HT2R2MLC4×5.4EC	50	2.2	0.12	3.0	117.6	11
4 × 5.4	50HT3R3MLC4×5.4EC	50	3.3	0.12	3.0	78.4	13
4 × 5.4	50HT4R7MLC4×5.4EC	50	4.7	0.12	3.0	55.1	13
5 × 5.4	50HT4R7MLC5×5.4EC	50	4.7	0.12	3.0	55.1	16

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## HT Parts List (5-6)

Size D × L	Part No.	R.V. (V.DC)	Cap. (μ F)	Tangent of Loss Angle (tan δ )	Leakage Current (μ A)	ESR (Ω) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
				max.	max.	max.	max.
6.3 × 5.4	50HT100MLC6.3×5.4EC	50	10	0.12	5.0	25.9	24
6.3 × 5.4	50HT220MLC6.3×5.4EC	50	22	0.12	11.0	11.8	42
6.3 × 7.7	50HT220MLC6.3×7.7EC	50	22	0.12	11.0	11.8	51
8 × 6.2	50HT220MLC8×6.2EC	50	22	0.12	11.0	11.8	70
6.3 × 7.7	50HT330MLC6.3×7.7EC	50	33	0.12	16.5	7.8	60
6.3 × 7.7	50HT470MLC6.3×7.7EC	50	47	0.12	23.5	5.5	63
8 × 10.5	50HT470MLC8×10.5EC	50	47	0.12	23.5	5.5	120
8 × 10.5	50HT101MLC8×10.5EC	50	100	0.12	50.0	2.6	140
10 × 10.5	50HT101MLC10×10.5EC	50	100	0.12	50.0	2.6	170
10 × 10.5	50HT151MLC10×10.5EC	50	150	0.12	75.0	1.7	170
10 × 10.5	50HT221MLC10×10.5EC	50	220	0.12	110.0	1.2	220
10 × 13.5	50HT221MLC10×13.5EC	50	220	0.12	110.0	1.2	280
10 × 13.5	50HT331MLC10×13.5EC	50	330	0.12	165.0	0.78	295
12.5 × 13.5	50HT331MLC12.5×13.5EC	50	330	0.18	165.0	1.18	420
16 × 16.5	50HT331MLC16×16.5EC	50	330	0.18	165.0	1.18	600
12.5 × 16	50HT471MLC12.5×16EC	50	470	0.18	235.0	0.83	520
16 × 16.5	50HT471MLC16×16.5EC	50	470	0.18	235.0	0.83	700
16 × 16.5	50HT681MLC16×16.5EC	50	680	0.18	340.0	0.57	750
4 × 5.4	63HT0R1MLC4×5.4EC	63	0.1	0.12	3.0	2587.6	0.7
4 × 5.4	63HTR22MLC4×5.4EC	63	0.22	0.12	3.0	1176.2	1.6
4 × 5.4	63HTR33MLC4×5.4EC	63	0.33	0.12	3.0	784.1	2.5
4 × 5.4	63HTR47MLC4×5.4EC	63	0.47	0.12	3.0	550.5	3.5
4 × 5.4	63HT010MLC4×5.4EC	63	1	0.12	3.0	258.8	7
4 × 5.4	63HT2R2MLC4×5.4EC	63	2.2	0.12	3.0	117.6	11
5 × 5.4	63HT3R3MLC5×5.4EC	63	3.3	0.12	3.0	78.4	13
5 × 5.4	63HT4R7MLC5×5.4EC	63	4.7	0.12	3.0	55.1	16
6.3 × 5.4	63HT100MLC6.3×5.4EC	63	10	0.12	6.3	25.9	24
6.3 × 7.7	63HT100MLC6.3×7.7EC	63	10	0.12	6.3	25.9	39
8 × 6.2	63HT100MLC8×6.2EC	63	10	0.12	6.3	25.9	25
6.3 × 7.7	63HT220MLC6.3×7.7EC	63	22	0.12	13.9	11.8	49
8 × 10.5	63HT220MLC8×10.5EC	63	22	0.12	13.9	11.8	98
8 × 10.5	63HT330MLC8×10.5EC	63	33	0.12	20.8	7.8	112
8 × 10.5	63HT470MLC8×10.5EC	63	47	0.12	29.6	5.5	119
10 × 10.5	63HT470MLC10×10.5EC	63	47	0.12	29.6	5.5	160
10 × 10.5	63HT101MLC10×10.5EC	63	100	0.12	63.0	2.6	196

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## Parts List (6-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	ESR ( $\Omega$ ) (20°C, 120Hz)	Ripple Current (mA rms.) (120Hz, 105°C)
D × L				max.	max.	max.	max.
10 × 13.5	63HT101MLC10×13.5EC	63	100	0.12	63.0	2.6	210
12.5 × 13.5	63HT101MLC12.5×13.5EC	63	100	0.14	63.0	3.0	270
10 × 13.5	63HT151MLC10×13.5EC	63	150	0.12	94.5	1.7	225
10 × 13.5	63HT221MLC10×13.5EC	63	220	0.12	138.6	1.2	235
12.5 × 13.5	63HT221MLC12.5×13.5EC	63	220	0.14	138.6	1.4	470
16 × 16.5	63HT221MLC16×16.5EC	63	220	0.14	138.6	1.4	560
12.5 × 16	63HT331MLC12.5×16EC	63	330	0.14	207.9	0.91	510
16 × 16.5	63HT331MLC16×16.5EC	63	330	0.14	207.9	0.91	700
16 × 16.5	63HT471MLC16×16.5EC	63	470	0.14	296.1	0.64	750
4 × 5.4	100HT010MLC4×5.4EC	100	1	0.12	3.0	258.8	7
6.3 × 5.4	100HT2R2MLC6.3×5.4EC	100	2.2	0.12	3.0	117.6	14
6.3 × 5.4	100HT3R3MLC6.3×5.4EC	100	3.3	0.12	3.3	78.4	20
6.3 × 7.7	100HT3R3MLC6.3×7.7EC	100	3.3	0.12	3.3	78.4	32
8 × 6.2	100HT3R3MLC8×6.2EC	100	3.3	0.12	3.3	78.4	30
6.3 × 5.4	100HT4R7MLC6.3×5.4EC	100	4.7	0.12	4.7	55.1	21
6.3 × 7.7	100HT4R7MLC6.3×7.7EC	100	4.7	0.12	4.7	55.1	35
6.3 × 7.7	100HT100MLC6.3×7.7EC	100	10	0.12	10.0	25.9	35
8 × 10.5	100HT100MLC8×10.5EC	100	10	0.12	10.0	25.9	77
8 × 10.5	100HT220MLC8×10.5EC	100	22	0.12	22.0	11.8	84
10 × 10.5	100HT220MLC10×10.5EC	100	22	0.12	22.0	11.8	126
10 × 10.5	100HT330MLC10×10.5EC	100	33	0.12	33.0	7.8	133
10 × 10.5	100HT470MLC10×10.5EC	100	47	0.12	47.0	5.5	140
10 × 13.5	100HT470MLC10×13.5EC	100	47	0.12	47.0	5.5	160
12.5 × 13.5	100HT470MLC12.5×13.5EC	100	47	0.12	47.0	5.5	250
10 × 13.5	100HT680MLC10×13.5EC	100	68	0.12	68.0	3.8	180
12.5 × 13.5	100HT680MLC12.5×13.5EC	100	68	0.12	68.0	3.8	300
12.5 × 13.5	100HT101MLC12.5×13.5EC	100	100	0.12	100.0	2.6	380
16 × 16.5	100HT101MLC16×16.5EC	100	100	0.12	100.0	2.6	450
16 × 16.5	100HT221MLC16×16.5EC	100	220	0.12	220.0	1.2	550