

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (1-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20°C, 100kHz)	Ripple Current (mA rms.) (100kHz, 105°C)
D x L				max.	max.	max.	max.
4 x 5.8	6.3FZ220MLC4x5.8EC	6.3	22	0.26	3.0	1.35	90
4 x 5.8	6.3FZ270MLC4x5.8EC	6.3	27	0.26	3.0	1.35	90
4 x 5.8	6.3FZ330MLC4x5.8EC	6.3	33	0.26	3.0	1.35	90
5 x 5.8	6.3FZ330MLC5x5.8EC	6.3	33	0.26	3.0	0.70	160
4 x 5.8	6.3FZ470MLC4x5.8EC	6.3	47	0.26	3.0	1.35	90
5 x 5.8	6.3FZ470MLC5x5.8EC	6.3	47	0.26	3.0	0.70	160
5 x 5.8	6.3FZ560MLC5x5.8EC	6.3	56	0.26	3.5	0.70	160
5 x 5.8	6.3FZ680MLC5x5.8EC	6.3	68	0.26	4.3	0.70	160
6.3 x 5.8	6.3FZ680MLC6.3x5.8EC	6.3	68	0.26	4.3	0.36	240
5 x 5.8	6.3FZ101MLC5x5.8EC	6.3	100	0.26	6.3	0.70	160
6.3 x 5.8	6.3FZ101MLC6.3x5.8EC	6.3	100	0.26	6.3	0.36	240
6.3 x 5.8	6.3FZ151MLC6.3x5.8EC	6.3	150	0.26	9.5	0.36	240
6.3 x 5.8	6.3FZ221MLC6.3x5.8EC	6.3	220	0.26	13.9	0.36	240
6.3 x 7.7	6.3FZ221MLC6.3x7.7EC	6.3	220	0.26	13.9	0.26	300
8 x 6.2	6.3FZ221MLC8x6.2EC	6.3	220	0.26	13.9	0.26	300
6.3 x 7.7	6.3FZ331MLC6.3x7.7EC	6.3	330	0.26	20.8	0.26	300
8 x 6.2	6.3FZ331MLC8x6.2EC	6.3	330	0.26	20.8	0.26	300
8 x 10.5	6.3FZ471MLC8x10.5EC	6.3	470	0.26	29.6	0.16	600
8 x 10.5	6.3FZ681MLC8x10.5EC	6.3	680	0.26	42.8	0.16	600
10 x 10.5	6.3FZ681MLC10x10.5EC	6.3	680	0.26	42.8	0.08	850
8 x 10.5	6.3FZ102MLC8x10.5EC	6.3	1000	0.26	63.0	0.16	600
10 x 10.5	6.3FZ102MLC10x10.5EC	6.3	1000	0.26	63.0	0.08	850
10 x 10.5	6.3FZ152MLC10x10.5EC	6.3	1500	0.26	94.5	0.08	850
10 x 13.5	6.3FZ152MLC10x13.5EC	6.3	1500	0.26	94.5	0.07	950
12.5 x 13.5	6.3FZ222MLC12.5x13.5EC	6.3	2200	0.26	138.6	0.06	1100
12.5 x 16	6.3FZ332MLC12.5x16EC	6.3	3300	0.26	207.9	0.055	1200
16 x 16.5	6.3FZ472MLC16x16.5EC	6.3	4700	0.26	296.1	0.05	1450
4 x 5.8	10FZ220MLC4x5.8EC	10	22	0.19	3.0	1.35	90
4 x 5.8	10FZ270MLC5x5.8EC	10	27	0.19	3.0	1.35	90
5 x 5.8	10FZ270MLC5x5.8EC	10	27	0.19	3.0	0.70	160
4 x 5.8	10FZ330MLC4x5.8EC	10	33	0.19	3.3	1.35	90
5 x 5.8	10FZ330MLC5x5.8EC	10	33	0.19	3.3	0.70	160
5 x 5.8	10FZ470MLC5x5.8EC	10	47	0.19	4.7	0.70	160
6.3 x 5.8	10FZ470MLC6.3x5.8EC	10	47	0.19	4.7	0.36	240
6.3 x 5.8	10FZ560MLC6.3x5.8EC	10	56	0.19	5.6	0.36	240

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (2-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20°C, 100kHz)	Ripple Current (mA rms.) (100kHz, 105°C)
D x L				max.	max.	max.	max.
6.3 x 5.8	10FZ680MLC6.3x5.8EC	10	68	0.19	6.8	0.36	240
6.3 x 5.8	10FZ101MLC6.3x5.8EC	10	100	0.19	10.0	0.36	240
6.3 x 7.7	10FZ101MLC6.3x7.7EC	10	100	0.19	10.0	0.26	300
6.3 x 7.7	10FZ151MLC6.3x7.7EC	10	150	0.19	15.0	0.26	300
6.3 x 7.7	10FZ221MLC6.3x7.7EC	10	220	0.19	22.0	0.26	300
8 x 6.2	10FZ221MLC8x6.2EC	10	220	0.26	22.0	0.26	300
8 x 10.5	10FZ331MLC8x10.5EC	10	330	0.19	33.0	0.16	600
10 x 10.5	10FZ331MLC10x10.5EC	10	330	0.19	33.0	0.08	850
8 x 10.5	10FZ471MLC8x10.5EC	10	470	0.19	47.0	0.16	600
10 x 10.5	10FZ471MLC10x10.5EC	10	470	0.19	47.0	0.08	850
10 x 10.5	10FZ681MLC10x10.5EC	10	680	0.19	68.0	0.08	850
10 x 10.5	10FZ102MLC10x10.5EC	10	1000	0.19	100.0	0.08	850
10 x 13.5	10FZ102MLC10x13.5EC	10	1000	0.19	100.0	0.07	950
12.5 x 13.5	10FZ152MLC12.5x13.5EC	10	1500	0.22	150.0	0.06	1100
12.5 x 16	10FZ222MLC12.5x16EC	10	2200	0.22	220.0	0.055	1200
16 x 16.5	10FZ332MLC16x16.5EC	10	3300	0.22	330.0	0.05	1450
4 x 5.8	16FZ100MLC4x5.8EC	16	10	0.16	3.0	1.35	90
4 x 5.8	16FZ150MLC4x5.8EC	16	15	0.16	3.0	1.35	90
4 x 5.8	16FZ220MLC4x5.8EC	16	22	0.16	3.5	1.35	90
5 x 5.8	16FZ220MLC5x5.8EC	16	22	0.16	3.5	0.70	160
5 x 5.8	16FZ270MLC5x5.8EC	16	27	0.16	4.3	0.70	160
5 x 5.8	16FZ330MLC5x5.8EC	16	33	0.16	5.3	0.70	160
6.3 x 5.8	16FZ330MLC6.3x5.8EC	16	33	0.16	5.3	0.36	240
5 x 5.8	16FZ470MLC5x5.8EC	16	47	0.16	7.5	0.70	160
6.3 x 5.8	16FZ470MLC6.3x5.8EC	16	47	0.16	7.5	0.36	240
6.3 x 5.8	16FZ560MLC6.3x5.8EC	16	56	0.16	9.0	0.36	240
6.3 x 5.8	16FZ680MLC6.3x5.8EC	16	68	0.16	10.9	0.36	240
6.3 x 7.7	16FZ680MLC6.3x7.7EC	16	68	0.16	10.9	0.26	300
6.3 x 5.8	16FZ101MLC6.3x5.8EC	16	100	0.16	16.0	0.36	240
6.3 x 7.7	16FZ101MLC6.3x7.7EC	16	100	0.16	16.0	0.26	300
6.3 x 7.7	16FZ151MLC6.3x7.7EC	16	150	0.16	24.0	0.26	300
6.3 x 7.7	16FZ221MLC6.3x7.7EC	16	220	0.16	35.2	0.26	300
8 x 10.5	16FZ221MLC8x10.5EC	16	220	0.16	35.2	0.16	600
8 x 10.5	16FZ331MLC8x10.5EC	16	330	0.16	52.8	0.16	600
10 x 10.5	16FZ331MLC10x10.5EC	16	330	0.16	52.8	0.08	850

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (3-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20°C,100kHz)	Ripple Current (mA rms.) (100kHz,105°C)
D x L				max.	max.	max.	max.
8 x 10.5	16FZ471MLC8x10.5EC	16	470	0.16	75.2	0.16	600
10 x 10.5	16FZ471MLC10x10.5EC	16	470	0.16	75.2	0.08	850
10 x 10.5	16FZ681MLC10x10.5EC	16	680	0.16	108.8	0.08	850
10 x 13.5	16FZ681MLC10x13.5EC	16	680	0.16	108.8	0.07	950
12.5 x 13.5	16FZ102MLC12.5x13.5EC	16	1000	0.18	160.0	0.06	1100
12.5 x 16	16FZ102MLC12.5x16EC	16	1000	0.18	160.0	0.055	1200
16 x 16.5	16FZ102MLC16x16.5EC	16	1000	0.18	160.0	0.05	1450
16 x 16.5	16FZ152MLC16x16.5EC	16	1500	0.18	240.0	0.05	1450
4 x 5.8	25FZ100MLC4x5.8EC	25	10	0.14	3.0	1.35	90
5 x 5.8	25FZ150MLC5x5.8EC	25	15	0.14	3.8	0.70	160
5 x 5.8	25FZ220MLC5x5.8EC	25	22	0.14	5.5	0.70	160
6.3 x 5.8	25FZ220MLC6.3x5.8EC	25	22	0.14	5.5	0.36	240
5 x 5.8	25FZ270MLC5x5.8EC	25	27	0.14	6.8	0.70	160
6.3 x 5.8	25FZ270MLC6.3x5.8EC	25	27	0.14	6.8	0.36	240
5 x 5.8	25FZ330MLC5x5.8EC	25	33	0.14	8.3	0.70	160
6.3 x 5.8	25FZ330MLC6.3x5.8EC	25	33	0.14	8.3	0.36	240
6.3 x 5.8	25FZ470MLC6.3x5.8EC	25	47	0.14	11.8	0.36	240
6.3 x 7.7	25FZ470MLC6.3x7.7EC	25	47	0.14	11.8	0.26	300
8 x 6.2	25FZ470MLC8x6.2EC	25	47	0.26	11.8	0.26	300
6.3 x 5.8	25FZ560MLC6.3x5.8EC	25	56	0.14	14.0	0.36	240
6.3 x 7.7	25FZ560MLC6.3x7.7EC	25	56	0.14	14.0	0.26	300
6.3 x 7.7	25FZ680MLC6.3x7.7EC	25	68	0.14	17.0	0.26	300
6.3 x 7.7	25FZ101MLC6.3x7.7EC	25	100	0.14	25.0	0.26	300
8 x 6.2	25FZ101MLC8x6.2EC	25	100	0.26	25.0	0.26	300
6.3 x 7.7	25FZ151MLC6.3x7.7EC	25	150	0.14	37.5	0.26	300
8 x 10.5	25FZ151MLC8x10.5EC	25	150	0.14	37.5	0.16	600
8 x 10.5	25FZ221MLC8x10.5EC	25	220	0.14	55.0	0.16	600
8 x 10.5	25FZ331MLC8x10.5EC	25	330	0.14	82.5	0.16	600
10 x 10.5	25FZ331MLC10x10.5EC	25	330	0.14	82.5	0.08	850
10 x 10.5	25FZ471MLC10x10.5EC	25	470	0.14	117.5	0.08	850
10 x 13.5	25FZ471MLC10x13.5EC	25	470	0.14	117.5	0.07	950
12.5 x 13.5	25FZ681MLC12.5x13.5EC	25	680	0.16	170.0	0.06	1100
12.5 x 16	25FZ102MLC12.5x16EC	25	1000	0.16	250.0	0.055	1200
16 x 16.5	25FZ102MLC16x16.5EC	25	1000	0.16	250.0	0.05	1450
16 x 16.5	25FZ152MLC16x16.5EC	25	1500	0.16	375.0	0.05	1450

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (4-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20 $^{\circ}$ C, 100kHz)	Ripple Current (mA rms.) (100kHz, 105 $^{\circ}$ C)
D x L				max.	max.	max.	max.
4 x 5.8	35FZ4R7MLC4x5.8EC	35	4.7	0.12	3.0	1.35	90
4 x 5.8	35FZ100MLC4x5.8EC	35	10	0.12	3.5	1.35	90
5 x 5.8	35FZ100MLC5x5.8EC	35	10	0.12	3.5	0.70	160
5 x 5.8	35FZ150MLC5x5.8EC	35	15	0.12	5.3	0.70	160
5 x 5.8	35FZ220MLC5x5.8EC	35	22	0.12	7.7	0.70	160
6.3 x 5.8	35FZ220MLC6.3x5.8EC	35	22	0.12	7.7	0.36	240
6.3 x 5.8	35FZ270MLC6.3x5.8EC	35	27	0.12	9.5	0.36	240
6.3 x 5.8	35FZ330MLC6.3x5.8EC	35	33	0.12	11.6	0.36	240
8 x 6.2	35FZ330MLC8x6.2EC	35	33	0.26	11.6	0.26	300
6.3 x 5.8	35FZ470MLC6.3x5.8EC	35	47	0.12	16.5	0.36	240
6.3 x 7.7	35FZ470MLC6.3x7.7EC	35	47	0.12	16.5	0.26	300
8 x 6.2	35FZ470MLC8x6.2EC	35	47	0.26	16.5	0.26	300
6.3 x 7.7	35FZ560MLC6.3x7.7EC	35	56	0.12	19.6	0.26	300
6.3 x 7.7	35FZ680MLC6.3x7.7EC	35	68	0.12	23.8	0.26	300
8 x 10.5	35FZ101MLC8x10.5EC	35	100	0.12	35.0	0.16	600
8 x 10.5	35FZ151MLC8x10.5EC	35	150	0.12	52.5	0.16	600
10 x 10.5	35FZ151MLC10x10.5EC	35	150	0.12	52.5	0.08	850
8 x 10.5	35FZ221MLC8x10.5EC	35	220	0.12	77.0	0.16	600
10 x 10.5	35FZ221MLC10x10.5EC	35	220	0.12	77.0	0.08	850
10 x 10.5	35FZ331MLC10x10.5EC	35	330	0.12	115.5	0.08	850
10 x 13.5	35FZ471MLC10x13.5EC	35	470	0.14	164.5	0.07	950
12.5 x 13.5	35FZ471MLC12.5x13.5EC	35	470	0.14	164.5	0.06	1100
12.5 x 16	35FZ681MLC12.5x16EC	35	680	0.14	238.0	0.055	1200
16 x 16.5	35FZ102MLC16x16.5EC	35	1000	0.14	350.0	0.05	1450
4 x 5.8	50FZ4R7MLC4x5.8EC	50	4.7	0.10	3.0	2.9	60
5 x 5.8	50FZ4R7MLC5x5.8EC	50	4.7	0.10	3.0	1.52	85
5 x 5.8	50FZ100MLC5x5.8EC	50	10	0.10	5.0	1.52	85
6.3 x 5.8	50FZ100MLC6.3x5.8EC	50	10	0.10	5.0	0.88	165
6.3 x 5.8	50FZ150MLC6.3x5.8EC	50	15	0.10	7.5	0.88	165
6.3 x 5.8	50FZ220MLC6.3x5.8EC	50	22	0.10	11.0	0.88	165
6.3 x 7.7	50FZ220MLC6.3x7.7EC	50	22	0.10	11.0	0.68	195
8 x 6.2	50FZ220MLC8x6.2EC	50	22	0.10	11.0	0.68	195
6.3 x 7.7	50FZ270MLC6.3x7.7EC	50	27	0.10	13.5	0.68	195
6.3 x 7.7	50FZ330MLC6.3x7.7EC	50	33	0.10	16.5	0.68	195
8 x 6.2	50FZ330MLC8x6.2EC	50	33	0.10	16.5	0.68	195

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (5-6)

Size D x L	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20°C, 100kHz)	Ripple Current (mA rms.) (100kHz, 105°C)
				max.	max.	max.	max.
6.3 x 7.7	50FZ470MLC6.3x7.7EC	50	47	0.10	23.5	0.68	195
8 x 6.2	50FZ470MLC8x6.2EC	50	47	0.10	23.5	0.68	195
8 x 10.5	50FZ560MLC8x10.5EC	50	56	0.10	28.0	0.34	350
8 x 10.5	50FZ680MLC8x10.5EC	50	68	0.10	34.0	0.34	350
8 x 10.5	50FZ101MLC8x10.5EC	50	100	0.10	50.0	0.34	350
10 x 10.5	50FZ101MLC10x10.5EC	50	100	0.10	50.0	0.18	670
10 x 10.5	50FZ151MLC10x10.5EC	50	150	0.10	75.0	0.18	670
10 x 10.5	50FZ221MLC10x10.5EC	50	220	0.10	110.0	0.18	670
10 x 13.5	50FZ221MLC10x13.5EC	50	220	0.10	110.0	0.14	780
12.5 x 13.5	50FZ331MLC12.5x13.5EC	50	330	0.10	165.0	0.12	900
12.5 x 16	50FZ471MLC12.5x16EC	50	470	0.10	235.0	0.10	1050
16 x 16.5	50FZ471MLC16x16.5EC	50	470	0.10	235.0	0.08	1250
5 x 5.8	63FZ4R7MLC5x5.8EC	63	4.7	0.08	3.0	3.0	50
6.3 x 5.8	63FZ100MLC6.3x5.8EC	63	10	0.08	6.3	1.50	80
6.3 x 7.7	63FZ100MLC6.3x7.7EC	63	10	0.08	6.3	1.20	120
6.3 x 7.7	63FZ220MLC6.3x7.7EC	63	22	0.08	13.9	1.20	120
8 x 6.2	63FZ220MLC8x6.2EC	63	22	0.08	13.9	1.20	120
8 x 10.5	63FZ220MLC8x10.5EC	63	22	0.08	13.9	0.65	250
8 x 10.5	63FZ330MLC8x10.5EC	63	33	0.08	20.8	0.65	250
8 x 10.5	63FZ470MLC8x10.5EC	63	47	0.08	29.6	0.65	250
8 x 10.5	63FZ680MLC8x10.5EC	63	68	0.08	42.8	0.65	250
12.5 x 13.5	63FZ680MLC12.5x13.5EC	63	68	0.08	42.8	0.16	800
10 x 10.5	63FZ101MLC10x10.5EC	63	100	0.08	63.0	0.35	400
12.5 x 13.5	63FZ101MLC12.5x13.5EC	63	100	0.08	63.0	0.16	800
10 x 13.5	63FZ151MLC10x13.5EC	63	150	0.08	94.5	0.25	650
12.5 x 13.5	63FZ151MLC12.5x13.5EC	63	150	0.08	94.5	0.16	800
10 x 13.5	63FZ221MLC10x13.5EC	63	220	0.08	138.6	0.25	650
12.5 x 13.5	63FZ221MLC12.5x13.5EC	63	220	0.08	138.6	0.16	800
16 x 16.5	63FZ331MLC16x16.5EC	63	330	0.08	207.9	0.082	1400
5 x 5.8	80FZ3R3MLC5x5.8EC	80	3.3	0.08	3.0	5.0	25
6.3 x 5.8	80FZ4R7MLC6.3x5.8EC	80	4.7	0.08	3.8	3.0	40
6.3 x 7.7	80FZ100MLC6.3x7.7EC	80	10	0.08	8.0	2.4	60
8 x 6.2	80FZ100MLC8x6.2EC	80	10	0.08	8.0	2.4	60
8 x 10.5	80FZ220MLC8x10.5EC	80	22	0.08	17.6	1.3	130

# V-CHIP ALUMINUM ELECTROLYTIC CAPACITOR



## FZ Parts List (6-6)

Size	Part No.	R.V. (V.DC)	Cap. ( $\mu$ F)	Tangent of Loss Angle ( $\tan \delta$ )	Leakage Current ( $\mu$ A)	Impedance ( $\Omega$ ) (20°C, 100kHz)	Ripple Current (mA rms.) (100kHz, 105°C)
D x L				max.	max.	max.	max.
8 x 10.5	80FZ330MLC8x10.5EC	80	33	0.08	26.4	1.3	130
10 x 10.5	80FZ470MLC10x10.5EC	80	47	0.08	37.6	0.7	200
12.5 x 13.5	80FZ680MLC12.5x13.5EC	80	68	0.08	54.4	0.32	500
12.5 x 13.5	80FZ101MLC12.5x13.5EC	80	100	0.08	80.0	0.32	500
12.5 x 13.5	80FZ151MLC12.5x13.5EC	80	150	0.08	120.0	0.32	500
12.5 x 16	80FZ221MLC12.5x16EC	80	220	0.08	176.0	0.26	550
16 x 16.5	80FZ331MLC16x16.5EC	80	330	0.08	264.0	0.17	795
8 x 10.5	100FZ100MLC8x10.5EC	100	10	0.07	10.0	1.3	130
8 x 10.5	100FZ220MLC8x10.5EC	100	22	0.07	22.0	1.3	130
10 x 10.5	100FZ220MLC10x10.5EC	100	22	0.07	22.0	0.7	200
10 x 10.5	100FZ330MLC10x10.5EC	100	33	0.07	33.0	0.7	200
10 x 13.5	100FZ470MLC10x13.5EC	100	47	0.07	47.0	0.6	250
12.5 x 13.5	100FZ470MLC12.5x13.5EC	100	47	0.07	47.0	0.32	500
12.5 x 13.5	100FZ680MLC12.5x13.5EC	100	68	0.07	68.0	0.32	500
12.5 x 16	100FZ101MLC12.5x16EC	100	100	0.07	100.0	0.26	550
16 x 16.5	100FZ101MLC16x16.5EC	100	100	0.07	100.0	0.17	795