

# Panasonic M Series Radial Lead Aluminum Electrolytic Capacitors (Cont.)



WV (VDC)	Cap. (µF)	Leakage Current (µA)	Ripple tan δ max.	Current (mA) rms	Dimensions (mm)				Digi-Key Part No.	Pricing					Panasonic Part No.	
					øD	L	P	ød		1	10	100	500	1,000		5,000
35	10	3.5	0.14	60	5	11	2.0	0.5	P5161-ND	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1VM100
	22	7.7	0.14	95	5	11	2.0	0.5	P5162-ND	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1VM220
	33	11.5	0.14	110	5	11	2.0	0.5	P5163-ND	.18	.87	5.86	19.85	30.00	26.00/M	ECA-1VM330
	47	16.4	0.14	130	5	11	2.0	0.5	P5164-ND	.18	.87	5.86	19.85	30.00	26.00/M	ECA-1VM470
	100	35.0	0.14	210	6.3	11.2	2.5	0.5	P5165-ND	.20	1.02	7.21	24.89	39.00	34.00/M	ECA-1VM101
	220	77.0	0.14	350	8	11.5	3.5	0.6	P5166-ND	.26	1.48	10.58	38.07	59.00	55.00/M	ECA-1VM221
	330	115.5	0.14	440	10	12.5	5.0	0.6	P5167-ND	.36	2.30	16.40	59.04	92.00	85.00/M	ECA-1VM331
	470	164.5	0.14	550	10	16	5.0	0.6	P5168-ND	.43	2.65	18.95	68.22	106.00	99.00/M	ECA-1VM471
	1000	350.0	0.14	900	12.5	20	5.0	0.6	P5169-ND	.74	5.13	37.67	136.26	216.00	208.00/M	ECA-1VM102
	2200	770.0	0.16	1250	16	25	7.5	0.8	P5170-ND	1.26	8.31	62.30	221.52	368.00	354.00/M	ECA-1VM222
50	3300	1155.0	0.18	1400	16	31.5	7.5	0.8	P5171-ND	1.48	10.04	75.78	284.18	493.00	477.00/M	ECA-1VM332
	4700	1645.0	0.20	1600	18	35.5	7.5	0.8	P5172-ND	2.42	14.67	110.74	415.28	720.00	698.00/M	ECA-1VM472
	0.33	3.0	0.12	4.4	5	11	2.0	0.5	P5349-ND†	.21	1.33	8.99	30.45	46.00	39.00/M	ECA-1HMR33
	0.47	3.0	0.12	5	5	11	2.0	0.5	P5173-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HMR47
	1.0	3.0	0.12	10	5	11	2.0	0.5	P5174-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HM010
	2.2	3.0	0.12	20	5	11	2.0	0.5	P5175-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HM2R2
	3.3	3.0	0.12	35	5	11	2.0	0.5	P5176-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HM3R3
	4.7	3.0	0.12	45	5	11	2.0	0.5	P5177-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HM4R7
	10	5.0	0.12	65	5	11	2.0	0.5	P5178-ND†	.15	.77	5.21	17.64	27.00	23.00/M	ECA-1HM100
	22	11.0	0.12	100	5	11	2.0	0.5	P5179-ND†	.18	.87	5.86	19.85	30.00	26.00/M	ECA-1HM220
63	33	16.5	0.12	110	5	11	2.0	0.5	P5180-ND†	.18	.87	5.86	19.85	30.00	26.00/M	ECA-1HM330
	47	23.5	0.12	130	6.3	11.2	2.5	0.5	P5181-ND†	.25	1.21	8.12	27.51	42.00	35.00/M	ECA-1HM470
	100	50.0	0.12	250	8	11.5	3.5	0.6	P5182-ND†	.29	1.65	11.63	40.19	63.00	55.00/M	ECA-1HM101
	220	110.0	0.12	400	10	12.5	5.0	0.6	P5183-ND†	.37	2.45	17.48	62.91	98.00	91.00/M	ECA-1HM221
	330	165.0	0.12	500	10	16	5.0	0.6	P5184-ND†	.43	2.56	18.82	68.09	108.00	104.00/M	ECA-1HM331
	470	235.0	0.12	650	10	20	5.0	0.6	P5185-ND†	.52	3.50	25.69	92.91	148.00	142.00/M	ECA-1HM471
	1000	500.0	0.12	1050	12.5	25	5.0	0.6	P5186-ND†	1.03	6.12	45.90	163.20	271.00	261.00/M	ECA-1HM102
	2200	1100.0	0.14	1300	16	31.5	7.5	0.8	P5187-ND†	1.85	10.81	81.60	306.00	530.00	514.00/M	ECA-1HM222
	3300	1650.0	0.16	1500	18	35.5	7.5	0.8	P5188-ND†	2.51	14.67	110.74	415.28	720.00	698.00/M	ECA-1HM332
	100	10	6.3	0.11	70	5	11	2.0	0.5	P5189-ND	.17	.87	5.86	19.85	30.00	26.00/M
22		13.8	0.11	105	5	11	2.0	0.5	P5190-ND	.18	.87	5.86	19.85	30.00	26.00/M	ECA-1JM220
33		20.7	0.11	130	6.3	11.2	2.5	0.5	P5191-ND	.19	1.02	7.21	24.89	39.00	34.00/M	ECA-1JM330
47		29.6	0.11	160	6.3	11.2	2.5	0.5	P5192-ND	.21	1.11	7.81	26.98	43.00	37.00/M	ECA-1JM470
100		63.0	0.11	270	8	11.5	3.5	0.6	P5193-ND	.31	1.79	12.75	45.90	71.00	66.00/M	ECA-1JM101
220		138.6	0.11	450	10	16	5.0	0.6	P5194-ND	.45	2.56	18.82	68.09	108.00	104.00/M	ECA-1JM221
330		207.9	0.11	550	10	20	5.0	0.6	P5195-ND	.63	3.64	26.72	96.65	153.00	148.00/M	ECA-1JM331
470		296.1	0.11	750	12.5	20	5.0	0.6	P5196-ND	.92	5.25	39.35	139.92	233.00	224.00/M	ECA-1JM471
1000		630.0	0.11	1100	16	25	7.5	0.8	P5197-ND	1.40	8.31	62.30	221.52	368.00	354.00/M	ECA-1JM102
2200		1386.0	0.13	1400	18	35.5	7.5	0.8	P5198-ND	2.64	15.45	116.58	437.18	758.00	734.00/M	ECA-1JM222
160	0.47	3.0	0.10	10	5	11	2.0	0.5	P5199-ND	.18	.91	6.11	20.69	32.00	27.00/M	ECA-2AMR47
	1.0	3.0	0.10	20	5	11	2.0	0.5	P5305-ND	.18	.91	6.11	20.69	32.00	27.00/M	ECA-2AM010
	2.2	3.0	0.10	30	5	11	2.0	0.5	P5306-ND	.19	.91	6.11	20.69	32.00	27.00/M	ECA-2AM2R2
	3.3	3.3	0.10	40	5	11	2.0	0.5	P5307-ND	.19	.91	6.11	20.69	32.00	27.00/M	ECA-2AM3R3
	4.7	4.7	0.10	50	5	11	2.0	0.5	P5308-ND	.19	.91	6.11	20.69	32.00	27.00/M	ECA-2AM4R7
	10	10.0	0.10	70	5	11	2.0	0.5	P5309-ND	.19	.94	6.32	21.42	33.00	28.00/M	ECA-2AM100
	22	22.0	0.10	115	6.3	11.2	2.5	0.5	P5310-ND	.21	1.11	7.81	26.98	43.00	37.00/M	ECA-2AM220
	33	33.0	0.10	145	8	11.5	3.5	0.6	P5311-ND	.38	1.99	14.03	48.45	77.00	66.00/M	ECA-2AM330
	47	47.0	0.10	180	8	11.5	3.5	0.6	P5312-ND	.32	1.89	13.48	48.51	75.00	70.00/M	ECA-2AM470
	100	100.0	0.10	350	10	16	5.0	0.6	P5313-ND	.48	2.89	21.22	76.76	122.00	117.00/M	ECA-2AM101
250	220	220.0	0.10	550	12.5	20	5.0	0.6	P5314-ND	.94	5.46	40.97	145.68	242.00	233.00/M	ECA-2AM221
	330	330.0	0.10	700	12.5	25	5.0	0.6	P5315-ND	1.21	6.99	52.45	186.48	310.00	298.00/M	ECA-2AM331
	470	470.0	0.10	900	16	25	7.5	0.8	P5316-ND	1.59	9.27	69.94	262.28	455.00	441.00/M	ECA-2AM471
	1000	1000.0	0.10	1300	18	35.5	7.5	0.8	P5317-ND	2.91	17.76	134.06	502.73	871.00	845.00/M	ECA-2AM102
	1.0	19.6	0.16	36	6.3	11.2	2.5	0.5	P5318-ND	.32	1.37	9.63	33.25	53.00	46.00/M	ECA-2CM010
	2.2	31.1	0.16	53	6.3	11.2	2.5	0.5	P5319-ND	.33	1.37	9.63	33.25	53.00	46.00/M	ECA-2CM2R2
	3.3	41.6	0.16	66	6.3	11.2	2.5	0.5	P5320-ND	.29	1.23	8.75	31.50	49.00	46.00/M	ECA-2CM3R3
	4.7	55.1	0.16	78	6.3	11.2	2.5	0.5	P5321-ND	.31	1.23	8.75	31.50	49.00	46.00/M	ECA-2CM4R7
	10	103.0	0.16	105	10	12.5	5.0	0.6	P5322-ND	.42	2.30	16.40	59.04	92.00	85.00/M	ECA-2CM100
	22	221.0	0.16	175	10	16	5.0	0.6	P5323-ND	.51	2.56	18.82	68.09	108.00	104.00/M	ECA-2CM220
450	33	326.0	0.16	235	10	20	5.0	0.6	P5324-ND	.68	3.03	22.25	80.50	128.00	123.00/M	ECA-2CM330
	47	461.0	0.16	320	12.5	20	5.0	0.6	P5325-ND	.99	4.81	36.07	128.24	213.00	205.00/M	ECA-2CM470
	100	970.0	0.16	515	12.5	25	5.0	0.6	P5326-ND	1.24	6.12	45.90	163.20	271.00	261.00/M	ECA-2CM101
	220	2122.0	0.16	830	16	31.5	7.5	0.8	P5327-ND	1.79	9.65	72.86	273.23	474.00	459.00/M	ECA-2CM221
	330	3178.0	0.16	1090	18	31.5	7.5	0.8	P5328-ND	3.07	18.53	139.88	524.55	909.00	881.00/M	ECA-2CM331
	470	4522.0	0.16	1440	18	40	7.5	0.8	P5329-ND	4.16	24.33	183.60	688.50	1193.00	1157.00/M	ECA-2CM471
	1.0	25.0	0.18	34	6.3	11.2	2.5	0.5	P5330-ND	.29	1.23	8.75	31.50	49.00	46.00/M	ECA-2EM010
	2.2	43.0	0.18	50	6.3	11.2	2.5	0.5	P5331-ND	.29	1.23	8.75	31.50	49.00	46.00/M	ECA-2EM2R2
	3.3	59.5	0.18	72	8	11.5	3.5	0.6	P5332-ND	.36	1.79	12.75	45.90	71.00	66.00/M	ECA-2EM3R3
	4.7	80.5	0.18	86	8	11.5	3.5	0.6	P5333-ND	.41	1.79	12.75	45.90	71.00	66.00/M	ECA-2EM4R7
10	160.0	0.18	110	10	16	5.0	0.6	P5334-ND	.51	2.56	18.82	68.09	108.00	104.00/M	ECA-2EM100	
900	22	340.0	0.18	180	10	20	5.0	0.6	P5335-ND	.81	3.36	24.65				