

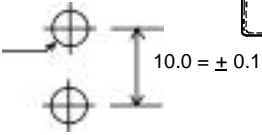
LBA Series

+85°C Snap-Mount Aluminum Electrolytic Capacitors

P.C. Mounting Specifications (Dim.=mm)



2.0 = ± 0.1



Features

- Voltage Range: 10 to 450 WVDC
- Capacitance Range: 47µF to 47,000µF
- High Ripple Currents Ratings
- Large case size selection
- Rugged Design
- Proven High Reliability
- Solvent tolerant end seal standard
- Rated at Full Voltage and Ripple Current for Long Life

LBA Specifications

- Capacitance Tolerance: ± 20% (M) standard
- Operating Temperature: -40°C to + 85°C (WVDC 10-250)
-25°C to + 85°C (WVDC 350-450)

Special Order Options

- Special Tolerances: ±10% (K), -10% + 30% (Q)
- Epoxy End Seal

LBA Series (Continued)

Mfr.'s Type	MFD	WV DC	Dimensions Dia. /L(mm)	Each
687LBA100M2BC	680	100	22/25	2.45
687LBA200M2CF	680	200	25/40	4.47
687LBA250M2DF	680	250	30/40	5.43
827LBA200M2DF	820	200	30/40	4.98
827LBA250M2DG	820	250	30/45	5.35
108LBA080M2BC	1,000	80	22/25	2.30
108LBA100M2CC	1,000	100	25/25	2.86
108LBA160M2DE	1,000	160	30/30	4.26
108LBA200M2DG	1,000	200	30/45	5.55
108LBA200M2EE	1,000	200	35/35	5.23
108LBA250M2DH	1,000	250	30/50	7.10
108LBA250M2EF	1,000	250	35/40	2.41
128LBA200M2DH	1,200	200	30/50	5.95
128LBA200M2EF	1,200	200	35/40	6.33
158LBA063M2BC	1,500	63	22/25	2.43
158LBA100M2CE	1,500	100	25/35	3.42
158LBA160M2EE	1,500	160	35/35	6.91
158LBA200M2EG	1,500	200	35/45	7.46
188LBA200M2EH	1,800	200	35/50	8.97
228LBA050M2BC	2,200	50	22/25	2.21
228LBA063M2CC	2,200	63	25/25	2.70
228LBA080M2BF	2,200	80	22/40	3.50
228LBA080M2CE	2,200	80	25/35	3.50
228LBA100M2CG	2,200	100	25/45	3.94
228LBA100M2DE	2,200	100	30/35	3.85
228LBA160M4FF	2,200	160	40/40	9.33
338LBA035M2BC	3,300	35	22/25	20.8
338LBA050M2CC	3,300	50	25/25	2.37
338LBA063M2CE	3,300	63	25/35	3.00
338LBA100M2EE	3,300	100	35/35	6.68
478LBA025M2BC	4,700	25	22/25	1.99
478LBA035M2BD	4,700	35	22/30	2.35
478LBA035M2CC	4,700	35	25/25	2.57
478LBA050M2BF	4,700	50	22/40	2.89
478LBA050M2CE	4,700	50	25/35	3.08
478LBA050M2DC	4,700	50	30/25	3.13
478LBA063M2CG	4,700	63	25/45	3.68
478LBA100M2EG	4,700	100	35/45	7.92
688LBA025M2CC	6,800	25	25/25	2.65
688LBA035M2BF	6,800	35	22/40	2.39
688LBA035M2CD	6,800	35	25/30	2.98
688LBA050M2CG	6,800	50	25/45	3.95
688LBA063M2EE	6,800	63	35/35	5.64
688LBA080M2EG	6,800	80	35/45	6.80
828LBA016M2BC	8,200	16	22/25	2.37
828LBA025M2BE	8,200	25	22/35	2.73
109LBA016M2BD	10,000	16	22/30	2.41
109LBA016M2CC	10,000	16	25/25	2.63
109LBA025M2BG	10,000	25	22/45	2.09
109LBA025M2DC	10,000	25	30/25	3.04
109LBA035M2CF	10,000	35	25/40	3.57
109LBA035M2DD	10,000	35	30/30	3.81
109LBA050M2EE	10,000	50	35/35	4.66
109LBA063M2EG	10,000	63	35/45	7.44
159LBA016M2BF	15,000	16	22/40	2.87
159LBA016M2DC	15,000	16	30/25	3.27
159LBA025M2CG	15,000	25	25/45	3.33
159LBA035M2EE	15,000	35	35/35	5.14
159LBA050M2EG	15,000	50	35/45	6.27
229LBA016M2DD	22,000	16	30/30	3.86
229LBA025M2EE	22,000	25	35/35	5.23
229LBA035M2EG	22,000	35	35/45	6.68
339LBA016M2DF	33,000	16	30/40	4.73
339LBA025M2EH	33,000	25	35/50	6.88
479LBA016M2EF	47,000	16	35/40	5.27

TTA Series

+85°C Miniature Axial Lead Aluminum Electrolytic Capacitors



Features

- Wide Capacitance Range: 0.47µF to 22,000µF
- 2,000 Hour Endurance Rating
- Small Sizes
- High Ripple Current Ratings
- Wide Voltage Range: 10 to 450 WVDC

TTA Specifications

- Capacitance Tolerance: All values ± 20% (M) Standard
- Leakage Current:
 - ≤ 0.006 CV 2uA min. (≤ 100 WVDC)
 - ≤ 0.006 CV + 100uAmin. (≥ 100 WVDC)

Operating

- Temperature: -45°C to +85°C (WVDC 10-350)
-25°C to +85°C (WVDC 450)

Special Order Options

- Special Tolerances: ± 10% (K), -10% + 30% (Q)
- Tape and Reel
- Epoxy End Seal
- Polyester Sleeve

Mfr.'s Type	MFD	WV DC	Dimensions Dia. /L (mm)	Each
474TTA100M	.47	100	5/12.5	.15
105TTA050M	1.0	50	5/12.5	.15
105TTA100M	1.0	100	5/12.5	.15
105TTA160M	1.0	160	6.3/12.5	.25
105TTA350M	1.0	350	6.3/16	.32
105TTA450M	1.0	450	8/16	.38
225TTA050M	2.2	50	5/12.5	.15
225TTA100M	2.2	100	5/12.5	.15
225TTA160M	2.2	160	6.3/16	.23
225TTA250M	2.2	250	8/16	.37
225TTA350M	2.2	350	8/16	.38
225TTA450M	2.2	450	10/20	.69
335TTA050M	3.3	50	5/12.5	.15
335TTA100M	3.3	100	5/12.5	.17
335TTA160M	3.3	160	8/16	.29
335TTA250M	3.3	250	8/16	.42
335TTA350M	3.3	350	8/20	.62
335TTA450M	3.3	450	8/20	.90
475TTA050M	4.7	50	5/12.5	.15
475TTA100M	4.7	100	5/12.5	.15
475TTA160M	4.7	160	8/16	.32
475TTA250M	4.7	250	8/20	.63
475TTA350M	4.7	350	8/20	.75
475TTA450M	4.7	450	10/25	.82
106TTA035M	10	35	5/12.5	.15
106TTA050M	10	50	5/12.5	.15
106TTA063M	10	63	5/12.5	.18
106TTA100M	10	100	6.3/12.5	.19
106TTA160M	10	160	8/20	.57
106TTA250M	10	250	10/20	.66
106TTA350M	10	350	12.5/25	.97
106TTA450M	10	450	12.5/25	1.20
156TTA050M	15	50	5/12.5	.18

TTA Series (Continued)



TTA Series (Continued)

Mfr.'s Type	MFD	WV DC	Dimensions Dia. /L(mm)	Each
477TTA035M	470	35	10/25	.51
477TTA050M	470	50	12.5/25	.66
477TTA063M	470	63	12.5/30	.87
477TTA100M	470	100	16/30	1.75
108TTA010M	1,000	10	10/20	.36
108TTA016M	1,000	16	10/25	.44
108TTA025M	1,000	25	12.5/25	.60
108TTA035M	1,000	35	12.5/25	.76
108TTA050M	1,000	50	16/30	1.22
108TTA063M	1,000	63	16/30	1.65
108TTA080M	1,000	80	16/40	2.63
108TTA100M	1,000	100	18/40	3.24
158TTA025M	1,500	25	12.5/25	1.10
158TTA035M	1,500	35	16/30	1.50
158TTA050M	1,500	50	16/40	2.01
228TTA010M	2,200	10	12.5/25	.65
228TTA016M	2,200	16	12.5/30	.76
228TTA025M	2,200	25	16/30	.29
228TTA035M	2,200	35	16/30	.30
228TTA050M	2,200	50	16/40	.36
338TTA010M	3,300	10	12.5/30	.99
338TTA016M	3,300	16	16/30	1.21
338TTA025M	3,300	25	16/40	1.63
338TTA035M	3,300	35	16/40	2.09
338TTA050M	3,300	50	22/40	3.04
478TTA010M	4,700	10	16/30	1.30
478TTA016M	4,700	16	16/31.5	1.63
478TTA025M	4,700	25	16/40	2.06
478TTA035M	4,700	35	16/40	2.93
478TTA050M	4,700	50	22/50	4.15
688TTA016M	6,800	16	16/40	2.06
688TTA025M	6,800	25	18/40	2.80
688TTA035M	6,800	35	22/50	3.78
109TTA010M	10,000	10	18/40	2.12
109TTA016M	10,000	16	18/40	2.76
109TTA025M	10,000	25	22/50	3.76
109TTA035M	10,000	35	25/50	5.13
159TTA016M	15,000	16	22/50	3.52
159TTA025M	15,000	25	25/50	4.67
229TTA016M	22,000	16	22/50	5.06

Special Order Options

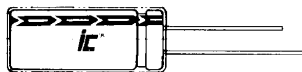
- Special Tolerances: ±10% (K), -10% + 30% (Q)
 - Tape and Reel/Ammo Pack
 - Cut, Formed, Cut & Formed, & Snap-in Leads
 - Epoxy and Seal
 - Polyester Sleeve
- Dimensions: A= Diameter, B= Case Length, C= Lead Spacing

Mfr.'s Type	MFD	WV DC	Dimensions Dia. /L (mm)	Each
226TTA016M	22	16	5/12.5	.15
226TTA035M	22	35	5/12.5	.18
226TTA050M	22	50	6.3/12.5	.19
226TTA100M	22	100	8/16	.25
226TTA160M	22	160	10/25	.77
226TTA250M	22	250	12.5/25	1.01
226TTA350M	22	350	12.5/30	1.35
226TTA450M	22	450	16/30	1.83
336TTA025M	33	25	5/12.5	.18
336TTA050M	33	50	6.3/16	.20
336TTA100M	33	100	8/16	.32
336TTA160M	33	160	12.5/25	.91
336TTA250M	33	250	12.5/30	1.19
336TTA350M	33	350	16/31.5	1.93
336TTA450M	33	450	16/40	2.42
476TTA016M	47	16	5/12.5	.19
476TTA025M	47	25	6.3/12.5	.19
476TTA035M	47	35	6.3/16	.20
476TTA050M	47	50	6.3/16	.23
476TTA063M	47	63	8/16	.25
476TTA063M	47	100	8/20	.39
476TTA100M	47	160	12.5/30	1.03
476TTA160M	47	250	16/30	1.21
476TTA250M	47	350	16/40	2.07
476TTA350M	47	450	22/40	3.59
686TTA016M	68	16	6.3/16	.19
686TTA035M	68	35	8/16	.25
686TTA063M	68	63	8/20	.30
107TTA010M	100	10	6.3/12.5	.17
107TTA025M	100	25	6.3/16	.22
107TTA050M	100	50	8/16	.30
107TTA063M	100	63	8/20	.30
107TTA100M	100	100	10/25	.50
107TTA160M	100	160	16/30	1.42
107TTA250M	100	250	16/40	1.96
107TTA350M	100	350	18/40	3.28
107TTA450M	100	450	22/50	3.08
157TTA025M	150	25	8/16	.24
157TTA035M	150	35	8/20	.29
157TTA050M	150	50	10/16	.34
157TTA063M	150	63	10/20	.39
157TTA100M	150	100	12.5/25	.65
227TTA016M	220	16	8/16	.24
227TTA025M	220	25	8/16	.29
227TTA035M	220	35	8/20	.30
227TTA050M	220	50	10/20	.36
227TTA063M	220	63	10/25	.51
227TTA100M	220	100	12.5/25	1.05
227TTA160M	220	160	22/40	2.72
227TTA250M	220	250	22/40	4.08
337TTA016M	330	16	8/16	.29
337TTA025M	330	25	8/20	.29
337TTA050M	330	50	10/25	.51
337TTA063M	330	63	12.5/25	.66
337TTA100M	330	100	12.5/30	1.35
477TTA010M	470	10	8/16	.26
477TTA016M	470	16	8/20	.30
477TTA025M	470	25	10/20	.42

Mfr.'s Type	MFD	WV DC	Dimensions A/B/C (mm)	Each
104CKR050M	0.1	50	5/11/2	.06
154CKR050M	0.15	50	5/11/2	.06
224CKR050M	0.22	50	5/11/2	.06
334CKR050M	0.33	50	5/11/2	.06
474CKR050M	0.47	50	5/11/2	.06
474CKR100M	0.47	100	5/11/2	.06
684CKR050M	0.68	50	5/11/2	.06
105CKR050M	1.0	50	5/11/2	.12
105CKR100M	1.0	100	5/11/2	.06
105CKR250M	1.0	250	6.3/11/2.5	.10
155CKR050M	1.5	50	5/11/2	.06
225CKR050M	2.2	50	5/11/2	.06
225CKR100M	2.2	100	5/11/2	.06
225CKR160M	2.2	160	6.3/11/2.5	.09
225CKR250M	2.2	250	8/11/3.5	.15
335CKR050M	3.3	50	5/11/2	.06
335CKR100M	3.3	100	5/11/2	.07
335CKR160M	3.3	160	8/11.5/3.5	.14
335CKR250M	3.3	250	10/11.5/3.5	.15
475CKR050M	4.7	50	5/11/2	.06
475CKR100M	4.7	100	5/11/2	.07
475CKR160M	4.7	160	8/11.5/3.5	.14
475CKR250M	4.7	250	10/12.5/5	.19
685CKR063M	6.8	63	5/11/2	.11
106CKR050M	10	50	5/11/2	.06
106CKR063M	10	63	5/11/2	.06
106CKR100M	10	100	6.3/11/2.5	.10
106CKR160M	10	160	10/16/5	.22
106CKR250M	10	250	10/20/5	.27
156CKR050M	15	50	5/11/2	.06
156CKR063M	15	63	6.3/11/2.5	.10
156CKR100M	15	100	8/11.5/3.5	.14
226CKR050M	22	50	5/11/2	.06
226CKR063M	22	63	6.3/11/2.5	.10
226CKR100M	22	100	8/11.5/3.5	.14
226CKR160M	22	160	10/20/5	.28
226CKR250M	22	250	12.5/20/5	.48
336CKR035M	33	35	5/11/2	.07
336CKR050M	33	50	6.3/11/2.5	.10
336CKR063M	33	63	6.3/11/2.5	.11
336CKR100M	33	100	10/12.5/5	.21
336CKR160M	33	160	10/20/5	.51
336CKR250M	33	250	12.5/25/5	.57
476CKR025M	47	25	5/11/2	.06
476CKR050M	47	50	6.3/11/2.5	.10
476CKR063M	47	63	8/11.5/3.5	.13
476CKR100M	47	100	10/16/5	.23
476CKR160M	47	160	12.5/25/5	.54
476CKR250M	47	250	16/25/7.5	.74
686CKR025M	68	25	6.3/11/2.5	.14
686CKR050M	68	50	8/11.5/3.5	.21
686CKR063M	68	63	10/12.5/5	.14
686CKR100M	68	100	10/16/5	.24

CKR Series

+85°C Standard Radial Lead Aluminum Electrolytic Capacitors



Features

- Standard Size
- Wide Capacitance Range: 0.1µ to 15,000µF
- Wide Voltage Range: 6.3 to 450 WVDC
- Solvent Tolerant End Seals Standard
- 2,000 Hour Endurance Rating
- High Ripple Current
- Low Leakage Current

CKR Specifications

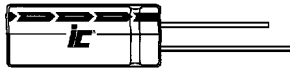
Capacitance Tolerance: All Values ± 20% (M) Standard Operating

Temperature: -40°C to +85°C (WVDC 6.3-100)
-25°C to +85°C (WVDC 160-450)

CKR Series Continued
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Aluminum Electrolytic Capacitors

CKR Series (Continued)

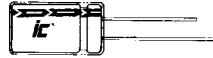


Dimensions: A= Diameter, B= Case Length,
C= Lead Spacing

Mfr.'s Type	MFD	WV DC	Dimensions A/B/C (mm)	Each
107CKR010M	100	10	5/11/2	.06
107CKR025M	100	25	6.3/11/2.5	.09
107CKR050M	100	50	8/11.5/3.5	.15
107CKR063M	100	63	10/12.5/5	.21
107CKR100M	100	100	12.5/20/5	.39
107CKR160M	100	160	16/25/7.5	.77
107CKR250M	100	250	16/35.5/7.5	1.44
157CKR010M	150	10	6.3/11/2.5	.13
157CKR025M	150	25	8/11.5/3.5	.14
157CKR035M	150	35	10/12.5/5	.19
157CKR050M	150	50	10/16/5	.68
157CKR100M	150	100	12.5/20/5	.39
227CKR010M	220	10	6.3/11/2.5	.10
227CKR016M	220	16	8/11.5/3.5	.13
227CKR025M	220	25	8/11.5/3.5	.15
227CKR035M	220	35	10/12.5/5	.19
227CKR050M	220	50	10/16/5	.25
227CKR063M	220	63	10/20/5	.25
227CKR100M	220	100	16/25/7.5	.57
337CKR016M	330	16	6.3/11/2.5	.11
337CKR016M	330	16	8/11.5/3.5	.14
337CKR025M	330	25	10/12.5/5	.19
337CKR035M	330	35	10/16/5	.25
337CKR050M	330	50	10/20/5	.28
337CKR063M	330	63	12.5/20/5	.43
337CKR100M	330	100	16/25/7.5	.76
477CKR010M	470	10	8/11.5/3.5	.14
477CKR016M	470	16	10/12.5/5	.19
477CKR025M	470	25	10/16/5	.23
477CKR035M	470	35	10/20/5	.27
477CKR050M	470	50	12.5/20/5	.42
477CKR063M	470	63	12.5/25/5	.49
477CKR100M	470	100	16/31.5/7.5	.81
687CKR016M	680	16	10/16/5	.10
687CKR035M	680	35	12.5/20/5	.25
687CKR050M	680	50	12.5/25/5	.49
108CKR010M	1,000	10	10/12.5/5	.19
108CKR010M	1,000	10	10/16/5	.22
108CKR016M	1,000	16	10/20/5	.27
108CKR025M	1,000	25	12.5/20/5	.40
108CKR035M	1,000	35	12.5/25/5	.53
108CKR050M	1,000	50	16/25/7.5	.70
108CKR063M	1,000	63	16/31.5/7.5	.97
158CKR016M	1,500	16	12.5/20/5	.41
158CKR025M	1,500	25	12.5/25/5	.50
158CKR035M	1,500	35	16/25/7.5	.72
158CKR050M	1,500	50	18/31.5/7.5	1.40
228CKR010M	2,200	10	12.5/20/5	.41
228CKR016M	2,200	16	12.5/25/5	.48
228CKR025M	2,200	25	16/25/7.5	.67
228CKR035M	2,200	35	16/31.5/7.5	.94
228CKR050M	2,200	50	18/35.5/7.5	1.40
338CKR016M	3,300	16	12.5/20/5	.10
338CKR010M	3,300	10	12.5/25/5	.52
338CKR016M	3,300	16	16/25/7.5	.70
338CKR025M	3,300	25	16/31.5/7.5	.88
338CKR035M	3,300	35	18/35.5/7.5	1.34
478CKR010M	4,700	10	16/25/7.5	.71
478CKR016M	4,700	16	16/31.5/7.5	.86
478CKR025M	4,700	25	18/31.5/7.5	1.38
688CKR016M	6,800	16	16/25/7.5	.65
688CKR016M	6,800	16	18/35.5/7.5	1.34
109CKR010M	10,000	10	16/31.5/7.5	.19
109CKR010M	10,000	10	18/35.5/7.5	1.25

RSS Series

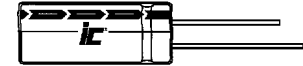
+85°C Low Profile Radial Lead Aluminum Electrolytic Capacitors



Features				
Small Case Sizes				
Capacitance Range: 1µ to 2200µF				
Voltage Range: 6.3 to 50 WVDC				
Suitable for Dipped Tantalum Replacement				
Solvent Tolerant End Seal Standard				
Specifications				
Capacitance Tolerance: ± 20% (M) standard				
Operating Temperature: -40°C To + 85°C				
Special Order Options				
• Special Tolerances: ± 10%(K), -10% + 30% (Q)				
• Tape and Reel/Ammo Pack				
• Cut, Cut and Formed Leads and Snap-in Leads				
• Epoxy End Seal				
• Polyester Sleeve				
Dimensions: A= Diameter, B= Case Length, C= Lead Spacing				
Mfr.'s Type	MFD	WV DC	Dimensions A/B/C (mm)	Each
104RSS050M	0.1	50	4/7/1.5	.10
334RSS050M	0.33	50	4/7/1.5	.10
474RSS050M	0.47	50	4/7/1.5	.10
105RSS050M	1.0	50	4/7/1.5	.10
225RSS050M	2.2	50	4/7/1.5	.10
335RSS050M	3.3	50	4/7/1.5	.10
475RSS035M	4.7	35	4/7/1.5	.08
475RSS050M	4.7	50	5/7/2	.09
685RSS025M	6.8	25	4/7/1.5	.08
106RSS016M	10	16	4/7/1.5	.08
106RSS035M	10	35	5/7/2	.09
106RSS050M	10	50	6.3/7/2.5	.11
226RSS016M	22	16	5/7/2	.09
226RSS035M	22	35	6.3/7/2.5	.10
336RSS010M	33	10	5/7/2	.09
336RSS025M	33	25	6.3/7/2.5	.11
476RSS6R3M	47	6.3	5/7/2	.09
476RSS016M	47	16	6.3/7/2.5	.11
107RSS6R3M	100	6.3	6.3/7/2.5	.11
107RSS025M	100	25	8/9/3.5	.21
107RSS035M	100	35	10/9/5	.29
227RSS010M	220	10	8/9/3.5	.21
227RSS016M	220	16	10/9/5	.29
337RSS010M	330	10	10/9/5	.29
337RSS050M	330	50	16/15/7.5	.67
477RSS6R3M	470	6.3	10/9/5	.29
477RSS035M	470	35	12.5/15/5	.65
477RSS050M	470	50	16/15/7.5	.81
108RSS016M	1,000	16	12.5/15/5	.56
108RSS035M	1,000	35	16/15/7.5	.91
228RSS016M	2,200	16	16/15/7.5	.87

CKH Series

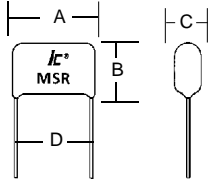
+105°C Extended Life Standard Radial Lead Aluminum Electrolytic Capacitors



Features				
Standard Size				
Wide Capacitance Range: 0.1µF to 15,000µF				
Solvent Tolerant End Seals Standard				
Specifications				
Capacitance Tolerance: ± 20% (M) Standard				
Operating Temperature: -55°C to +105°C (WVDC 6.3-100) -40°C to +105°C (WVDC 160-250) -25°C to +105°C (WVDC 350-450)				
Special Order Options				
• Special Tolerances: ± 10%(K), -10% + 30% (Q)				
• Tape and Reel/Ammo Pack				
• Cut, Formed, Cut and Formed and Snap-in Leads				
• Epoxy End Seal				
• Polyester Sleeve				
Dimensions: A= Diameter, B= Case Length,, C= Lead Spacing				
Mfr.'s Type	MFD	WV DC	Dimensions A/B/C (mm)	Each
104CKH050M	0.1	50	5.0/11/2.0	.08
154CKH050M	0.15	50	5.0/11/2.0	.08
224CKH050M	0.22	50	5.0/11/2.0	.07
334CKH050M	0.33	50	5.0/11/2.0	.07
474CKH050M	0.47	50	5.0/11/2.0	.07
474CKH100M	0.47	100	5.0/11/2.0	.07
474CKH250M	0.47	250	6.3/11/2.5	.11
684CKH050M	0.68	50	5.0/11/2.0	.07
105CKH050M	1	50	5.0/11/2.0	.07
105CKH100M	1	100	5.0/11/2.0	.07
105CKH250M	1	250	6.3/11/2.5	.10
155CKH050M	1.5	50	5.0/11/2.0	.08
225CKH050M	2.2	50	5.0/11/2.0	.07
225CKH100M	2.2	100	5.0/11/2.0	.07
225CKH250M	2.2	250	6.3/11/2.5	.12
335CKH050M	3.3	50	5.0/11/2.0	.07
335CKH100M	3.3	100	5.0/11/2.0	.07
335CKH160M	3.3	160	6.3/11/2.5	.13
335CKH200M	3.3	200	8.0/11.5/3.5	.13
335CKH250M	3.3	250	8.0/11.5/3.5	.20
475CKH050M	4.7	50	5.0/11/2.0	.06
475CKH100M	4.7	100	5.0/11/2.0	.09
475CKH160M	4.7	160	6.3/11/2.5	.14
475CKH200M	4.7	200	8.0/11.5/3.5	.19
475CKH250M	4.7	250	8.0/12.5/3.5	.19
685CKH050M	6.8	50	5.0/11/2.0	.07
685CKH063M	6.8	63	5.0/11/2.0	.07
685CKH100M	6.8	100	6.3/11/2.5	.14
685CKH200M	6.8	200	10/16/5.0	.24
685CKH250M	6.8	250	10/16/5.0	.26

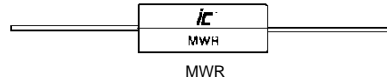
CKH Series Continued On Next Page

MSR Series Continued



MWR Series

+125°C Metallized Polyester Film Wrapped & Filled Axial Lead Capacitors



Features

Self Healing
Wide Operating Temperature Range
Low ESR and ESL
High dv/dt Ratings

Specifications

Capacitance Tolerance: $\pm 10\%$ (K) standard
Operating Temperature: -55°C to +125°C

Mfr.'s Type	MFD	WV DC	Case Dia./Length (mm)	Each
334MWR063K	.33	63	5.5/14.0	.53
334MWR100K	.33	100	7.5/14.0	.40
334MWR250K	.33	250	8.0/19.0	.43
334MWR400K	.33	400	10.0/27.0	.64
334MWR630K	.33	630	13.5/32.0	1.02
334MWR102K	.33	1,000	17.0/34.0	1.87

474MWR100K	.47	100	7.0/15.5	.47
474MWR250K	.47	250	9.5/19.0	.47
474MWR400K	.47	400	12.5/27.0	.78
474MWR630K	.47	630	15.5/32.0	1.33
474MWR102K	.47	1,000	19.5/34.0	2.44

684MWR063K	.68	63	6.5/19.0	.64
684MWR100K	.68	100	8.0/19.0	.55
684MWR250K	.68	250	9.5/27.0	.53
684MWR400K	.68	400	12.5/32.0	.99
684MWR630K	.68	630	18.0/32.0	1.61

Mfr.'s Type	MFD	WV DC	Case Dia./Length (mm)	Each
102MWR630K	.001	630	5.5/11.5	.36
152MWR630K	.0015	630	5.5/11.5	.36
222MWR630K	.0022	630	5.5/11.5	.36
332MWR630K	.0033	630	5.5/11.5	.36
392MWR630K	.0039	630	5.5/11.5	.37
472MWR630K	.0047	630	5.5/11.5	.36
682MWR630K	.0068	630	5.5/11.5	.36
822MWR630K	.0082	630	5.5/11.5	.37

103MWR400K	.01	400	5.0/11.5	.23
103MWR630K	.01	630	6.0/14.0	.28
103MWR102K	.01	1,000	7.0/15.0	.50

153MWR400K	.015	400	5.5/14.0	.36
153MWR630K	.015	630	6.5/14.0	.37
153MWR102K	.015	1,000	8.0/15.5	.41

223MWR250K	.022	250	5.0/10.5	.24
223MWR400K	.022	400	5.5/14.0	.26
223MWR630K	.022	630	8.0/14.0	.32
223MWR102K	.022	1,000	9.5/20.5	.54

333MWR250K	.033	250	5.0/10.5	.30
333MWR400K	.033	400	6.0/14.0	.27
333MWR630K	.033	630	7.0/19.0	.33
333MWR102K	.033	1,000	10.5/20.5	1.87

393MWR250K	.039	250	6.0/11.5	.36
393MWR400K	.039	400	7.0/15.5	.39
393MWR630K	.039	630	8.0/20.5	.48

473MWR250K	.047	250	5.5/14.0	.26
473MWR400K	.047	400	7.0/14.0	.29
473MWR630K	.047	630	7.5/19.0	.36
473MWR102K	.047	1,000	10.5/29.0	.68

683MWR100K	.068	100	5.5/10.5	.37
683MWR250K	.068	250	5.5/14.0	.37
683MWR400K	.068	400	6.5/19.0	.34
683MWR630K	.068	630	9.0/19.0	.55
683MWR102K	.068	1,000	11.5/29.0	.85

823MWR100K	.082	100	6.0/11.5	.37
823MWR250K	.082	250	6.5/15.5	.37
823MWR400K	.082	400	8.0/20.5	.48
823MWR630K	.082	630	8.5/29.0	.60

104MWR100K	.10	100	6.0/10.5	.27
104MWR250K	.10	250	6.0/14.0	.27
104MWR400K	.10	400	7.5/19.0	.34
104MWR630K	.10	630	9.0/27.0	.48
104MWR102K	.10	1,000	12.0/29.0	.88

154MWR063K	.15	63	5.5/14.0	.44
154MWR100K	.15	100	6.0/14.0	.35
154MWR250K	.15	250	7.0/14.0	.35
154MWR400K	.15	400	8.5/19.0	.45
154MWR630K	.15	630	10.5/27.0	.70
154MWR102K	.15	1,000	13.0/34.0	1.15

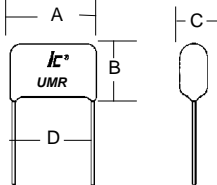
224MWR100K	.22	100	6.5/14.0	.33
224MWR250K	.22	250	7.0/19.0	.35
224MWR400K	.22	400	8.5/27.0	.56
224MWR630K	.22	630	12.5/27.0	.76
224MWR102K	.22	1,000	14.5/34.0	1.46

Note: WVDC= Max Working Voltage @ +85°C.

Mfr.'s Type	MFD	WV DC	Dimensions A/B/C/D (mm)	Each
474MSR100K	.47	100	17.5/11.0/6.5/15.0	.40
474MSR250K	.47	250	22.5/12.5/7.5/20.0	.31
474MSR400K	.47	400	22.5/19.5/10.0/20.0	.38
474MSR630K	.47	630	30.0/22.0/12.5/27.5	.58
474MSR102K	.47	1,000	32.5/26.5/18.5/27.5	.88
684MSR100K	.68	100	17.5/12.5/7.5/15.0	.48
684MSR250K	.68	250	22.5/14.5/8.5/20.0	.37
684MSR400K	.68	400	30.0/18.0/10.0/27.5	.53
684MSR630K	.68	630	33.0/24.5/14.0/30.0	.64
105MSR100K	1.0	100	18.0/14.0/8.0/15.0	.48
105MSR250K	1.0	250	22.5/17.0/9.5/20.0	.45
105MSR400K	1.0	400	30.0/20.5/12.0/27.5	.70
155MSR100K	1.5	100	22.5/14.5/8.5/20.0	.73
155MSR250K	1.5	250	30.0/18.0/9.5/27.5	.68
225MSR100K	2.2	100	22.5/16.5/10.5/20.0	.95
225MSR250K	2.2	250	30.0/21.5/11.5/27.5	.96
335MSR100K	3.3	100	22.5/21.0/11.5/20.0	1.21
475MSR100K	4.7	100	30.0/20.5/11.0/27.5	1.62
685MSR100K	6.8	100	30.0/22.5/12.5/27.5	2.17
106MSR100K	10	100	32.0/28.0/17.0/27.5	2.94

UMR Series

+85°C Epoxy Dipped Radial Lead Inductive Film/Foil Capacitors



Features

Cost Efficient
Ceramic Disc Alternative
High Insulation Resistance

Specifications

Capacitance Tolerance: $\pm 10\%$ (K) standard
Operating Temperature: -55°C To +85°C

Mfr.'s Type	MFD	WV DC	Dimensions A/B/C/D (mm)	Each
102UMR100K	.001	100	5.5/11.0/3.0/3.0	.04
152UMR100K	.0015	100	5.5/11.0/3.0/3.0	.04
222UMR100K	.0022	100	5.5/11.0/3.0/3.0	.04
332UMR100K	.0033	100	5.5/11.0/3.0/3.0	.04
392UMR100K	.0039	100	6.0/11.0/3.5/3.5	.15
472UMR100K	.0047	100	6.0/11.0/3.5/3.5	.04
562UMR100K	.0056	100	6.0/11.0/3.0/4.0	.04
682UMR100K	.0068	100	6.0/11.0/3.5/3.5	.04
103UMR100K	.01	100	6.5/12.0/4.0/4.0	.05
153UMR100K	.015	100	7.0/12.0/4.0/4.0	.05
223UMR100K	.022	100	7.0/12.0/4.0/4.0	.05
333UMR100K	.033	100	8.5/12.0/4.5/6.0	.06
473UMR100K	.047	100	9.5/13.0/4.5/7.0	.06
563UMR100K	.056	100	9.5/13.0/4.5/7.0	.07
683UMR100K	.068	100	10.0/13.0/5.0/7.0	.07
104UMR100K	.1	100	11.0/13.0/6.5/7.0	.09
154UMR100K	.15	100	12.5/16.0/6.5/7.5	.12
224UMR100K	.22	100	13.0/16.0/7.0/7.5	.12
334UMR100K	.33	100	14.0/16.0/7.5/8.0	.15
474UMR100K	.47	100	15.0/16.0/8.5/8.5	.21