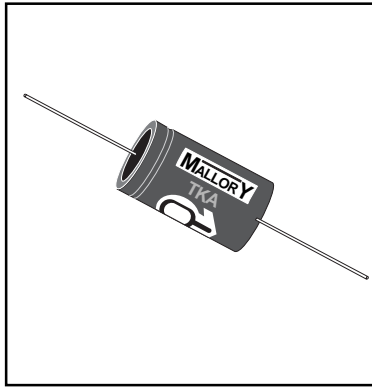


Type TKA Axial Leaded Capacitors



- 105°C - Long Life
- Small Size
- Low Leakage Current
- Available in 3,000 Hours Load Life

GENERAL SPECIFICATIONS

Operating Temperature:
-40°C to +105°C

Voltage Range:
6.3 WVDC to 450 WVDC

Capacitance Range:
0.47 μF to 15,000 μF

Capacitance Tolerance:
 $\pm 20\%$

DC Leakage Current:
 $I = 0.01CV$ or $3\mu\text{A}$ whichever is greater after 2 minutes.
C = Capacitance in μF
V = Rated Voltage
I = Leakage Current in μA

QA Stability Test:
Apply WVDC for 1,000 hrs at 105°C

- Capacitance change $\pm 20\%$ of initial limits
- DC leakage current meets initial limits
- ESR $\leq 200\%$ of initial measured value

Dissipation Factor:

Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160-350	400-450
tan δ	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.10	0.20	0.25

For Capacitance of more than 1,000 μF , add 0.002 for every increase of 1,000 μF at 120Hz/20°C

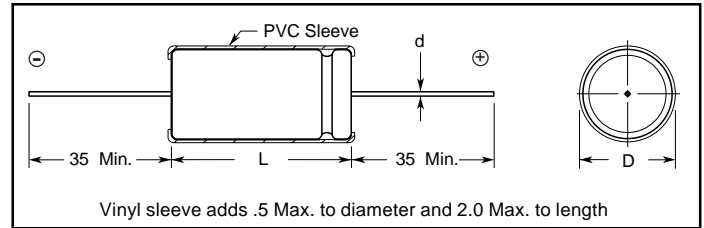
TKA parts are available taped and reeled. See page 136 for details.

The maximum ripple current at 105°C and 120 Hz for TKA capacitors is shown in the Standard Rating Table. Maximum ripple current may be adjusted by the multipliers in the following tables.

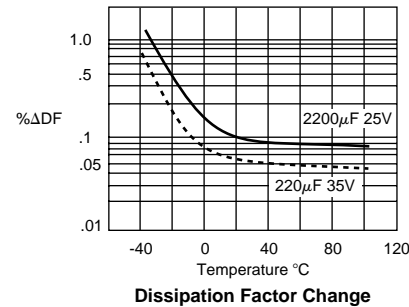
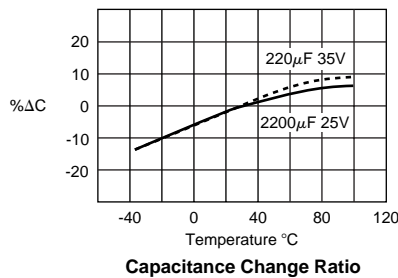
Rated WVDC	Ripple Multipliers			
	60Hz	120Hz	1kHz	10kHz
6 to 25	.80	1.0	1.10	1.20
35 to 100	.75	1.0	1.30	1.40
160 to 250	.70	1.0	1.40	1.60
350 to 400	.60	1.0	1.50	1.80

Ambient Temperature	Ripple Multiplier
+105°C	1.00
+85°C	1.50
+70°C	1.80

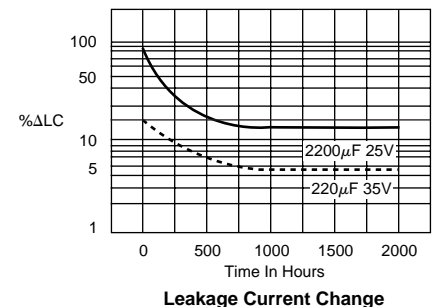
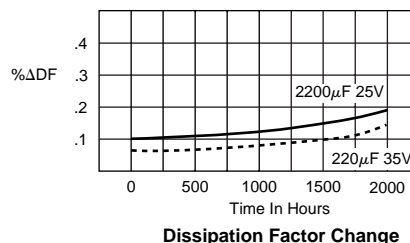
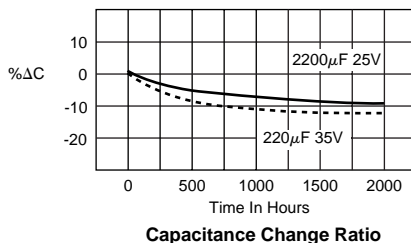
Outline Dimensions (Millimeters)



Temperature Characteristics



Load Life Characteristics



Type TKA Axial Leaded Capacitors



MALLORY

Aluminum Capacitors

Cap μF	Max ESR Ohms 120Hz 25°C	Max Ripple mA 120Hz 105°C	Max LC μA 2 Minutes	Size (Millimeters)			Catalog Number
				D Diameter	L Length	d	
6.3 WVDC; 8 VDC Surge							
0.47	282.18	7	3.0	5	12.5	0.6	TKAR47M6R3ST
33	6.83	55	3.0	5	12.5	0.6	TKA330M6R3ST
47	10.60	51	3.0	5	12.5	0.6	TKA470M6R3ST
68	3.90	63	4.3	5	12.5	0.6	TKA680M6R3ST
100	5.00	82	7.0	6	12.5	0.6	TKA101M6R3ST
150	1.76	110	9.5	6	16	0.6	TKA151M6R3ST
220	1.33	150	13.9	6.3	16	0.6	TKA221M6R3ST
330	1.10	200	20.8	8	16	0.6	TKA331M6R3ST
470	0.62	239	29.3	8	16	0.6	TKA471M6R3ST
680	0.47	300	42.8	8	20	0.6	TKA681M6R3ST
1,000	0.30	393	63.0	10	20	0.6	TKA102M6R3ST
1,500	0.22	535	94.5	10	25	0.6	TKA152M6R3ST
2,200	0.14	733	138.6	13	25	0.6	TKA222M6R3ST
3,300	0.10	953	207.9	13	30	0.6	TKA332M6R3ST
4,700	0.09	1215	296.1	16	30	0.8	TKA472M6R3ST

10 WVDC; 13 VDC Surge							
33	8.04	46	3.3	5	12.5	0.6	TKA330M010ST
47	6.94	56	5.0	5	12.5	0.6	TKA470M010ST
68	3.90	70	6.8	6	12.5	0.6	TKA680M010ST
100	3.26	93	10.0	6	16	0.6	TKA101M010ST
150	1.77	128	15.0	6	16	0.6	TKA151M010ST
220	1.48	177	22.0	8	16	0.6	TKA221M010ST
330	0.99	223	33.0	8	16	0.6	TKA331M010ST
470	0.67	267	47.0	8	20	0.6	TKA471M010ST
680	0.39	355	68.0	8	20	0.6	TKA681M010ST
1,000	0.33	488	100.0	10	20	0.6	TKA102M010ST
1,500	0.26	610	150.0	10	25	0.6	TKA152M010ST
2,200	0.15	783	220.0	13	25	0.6	TKA222M010ST
3,300	0.10	1077	330.0	13	30	0.6	TKA332M010ST
4,700	0.08	1483	470.0	16	30	0.8	TKA472M010ST

16 WVDC; 20 VDC Surge							
0.47	282.00	7	4.0	5	12.5	0.6	TKAR47M016ST
22	10.30	41	4.0	5	12.5	0.6	TKA220M016ST
33	6.84	51	5.3	6	12.5	0.6	TKA330M016ST
47	4.80	61	7.5	6	12.5	0.6	TKA470M016ST
68	3.32	77	10.9	6	16	0.6	TKA680M016ST
100	2.76	101	16.0	6	16	0.6	TKA101M016ST
150	1.50	234	24.0	8	16	0.6	TKA151M016ST
220	1.27	177	35.2	8	16	0.6	TKA221M016ST
330	0.85	242	52.8	8	20	0.6	TKA331M016ST
470	0.53	329	75.2	10	16	0.6	TKA471M016ST
680	0.33	425	108.8	10	20	0.6	TKA681M016ST
1,000	0.21	572	180.0	10	25	0.6	TKA102M016ST
1,500	0.16	714	240.0	13	25	0.6	TKA152M016ST
2,200	0.11	912	352.0	13	30	0.6	TKA222M016ST
3,300	0.10	1215	528.0	16	30	0.8	TKA332M016ST
4,700	0.07	1585	752.0	16	40	0.8	TKA472M016ST

25 WVDC; 32 VDC Surge							
0.47	282.18	7	4.0	5	12.5	0.6	TKAR47M025ST
15	13.27	33	4.0	5	12.5	0.6	TKA150M025ST
22	10.50	44	5.5	6	12.5	0.6	TKA220M025ST
33	6.70	54	8.2	6	12.5	0.6	TKA330M025ST
47	4.70	73	11.7	6	12.5	0.6	TKA470M025ST
68	2.83	94	17.0	6	16	0.6	TKA680M025ST
100	2.21	127	25.0	8	16	0.6	TKA101M025ST
150	1.33	162	37.5	8	16	0.6	TKA151M025ST
220	1.01	210	55.0	8	20	0.6	TKA221M025ST
330	0.67	291	82.5	10	16	0.6	TKA331M025ST
470	0.47	384	117.5	10	20	0.6	TKA471M025ST
680	0.37	241	170.0	10	25	0.6	TKA681M025ST
1,000	0.22	672	250.0	13	25	0.6	TKA102M025ST
1,500	0.14	850	375.0	13	30	0.6	TKA152M025ST
2,200	0.11	1099	550.0	16	30	0.8	TKA222M025ST
3,300	0.09	1483	825.0	16	40	0.8	TKA332M025ST
4,700	0.07	1498	1175.0	18	40	0.8	TKA472M025ST

Cap μF	Max ESR Ohms 120Hz 25°C	Max Ripple mA 120Hz 105°C	Max LC μA 2 Minutes	Size (Millimeters)			Catalog Number
				D Diameter	L Length	d	
35 WVDC; 44 VDC Surge							
0.47	282.18	7	3.0	5	12.5	0.6	TKAR47M035ST
6.8	23.42	25	3.0	5	12.5	0.6	TKA68R8M035ST
10	17.68	30	3.5	5	12.5	0.6	TKA100M035ST
15	10.62	38	5.3	6	12.5	0.6	TKA150M035ST
22	8.04	49	7.7	6	12.5	0.6	TKA220M035ST
33	5.54	69	11.6	6	16	0.6	TKA330M035ST
47	3.76	82	16.5	6	16	0.6	TKA470M035ST
68	2.34	112	23.8	8	16	0.6	TKA680M035ST
100	1.77	158	35.0	8	16	0.6	TKA101M035ST
150	1.06	203	52.5	8	20	0.6	TKA151M035ST
220	0.80	266	77.0	10	16	0.6	TKA221M035ST
330	0.54	359	115.5	10	20	0.6	TKA331M035ST
470	0.38	467	164.5	10	25	0.6	TKA471M035ST
680	0.23	605	238.0	13	25	0.6	TKA681M035ST
1,000	0.18	816	350.0	13	30	0.6	TKA102M035ST
1,500	0.12	951	525.0	16	30	0.8	TKA152M035ST
2,200	0.09	1140	770.0	16	40	0.8	TKA222M035ST
3,300	0.07	1350	1155.0	18	40	0.8	TKA332M035ST
4,700	0.06	1550	1645.0	22	40	0.8	TKA472M035ST

50 WVDC; 63 VDC Surge							
4.7	28.23	23	3.0	5	12.5	0.6	TKA4R7M050ST
10	14.74	33	5.0	6	12.5	0.6	TKA100M050ST
15	8.85	45	7.5	6	12.5	0.6	TKA150M050ST
22	6.70	61	11.0	6	16	0.6	TKA220M050ST
33	4.47	75	16.5	6	16	0.6	TKA330M050ST
47	3.14	106	23.5	8	16	0.6	TKA470M050ST
68	1.95	133	34.0	8	16	0.6	TKA680M050ST
100	1.47	174	50.0	8	20	0.6	TKA101M050ST
150	0.88	235	75.0	10	16	0.6	TKA151M050ST
220	0.67	321	110.0	10	20	0.6	TKA221M050ST
330	0.45	424	165.0	10	25	0.6	TKA331M050ST
470	0.31	554	235.0	13	25	0.6	TKA471M050ST
680	0.20	735	340.0	13	30	0.6	TKA681M050ST
1,000	0.15	1011	500.0	16	30	0.8	TKA102M050ST
1,500	0.10	1119	750.0	16	40	0.8	TKA152M050ST
2,200	0.08	1270	1100.0	18	40	0.8	TKA222M050ST
3,300	0.06	1430	1650.0	22	40	0.8	TKA332M050ST
4,700	0.06	3230	2350.0	22	40	0.8	TKA472M050ST

63 WVDC; 79 VDC Surge							
4.7	31.40	25	3.0	6	12.5	0.6	TKA4R7M063ST
10	14.70	36	6.3	6	12.5	0.6	TKA100M063ST
15	8.85	120	9.5	6	16	0.6	TKA150M063ST
22	6.70	61	13.9	6	16	0.6	TKA220M063ST
33	4.47	89	20.8	8	16	0.6	TKA330M063ST
47	3.14	117	29.6	8	16	0.6	TKA470M063ST
68	1.85	263	42.8	8	20	0.6	TKA680M063ST
100	1.47	196	63.0	10	16	0.6	TKA101M063ST
150	0.88	460	94.5	10	20	0.6	TKA151M063ST
220	0.67	346	138.6	10	25	0.6	TKA221M063ST
330	0.45	463	207.9	13	25	0.6	TKA331M063ST
470	0.31	597	296.1	13	30	0.6	TKA471M063ST
680	0.20	1020	428.4	16	30	0.8	TKA681M063ST
1,000	0.15	1163	630.0	16	40	0.8	TKA102M063ST
1,500	0.12	1325	945.0	18	40	0.8	TKA152M063ST
2,200	0.08	1320	1386.0	22	40	0.8	TKA222M063ST

Type TKA Axial Leaded Capacitors



MALLORY

Cap μF	Max ESR Ohms 120Hz 25°C	Max Ripple mA 120Hz 105°C	Max LC μA 2 Minutes	Size (Millimeters)			Catalog Number
				D Diameter	L Length	d	
100 WVDC; 125 VDC Surge							
0.47	250.80	7	3.0	5	12.5	0.6	TKAR47M100ST
1	117.90	10	3.0	5	12.5	0.6	TKA010M100ST
2.2	53.59	17	3.0	5	12.5	0.6	TKA2R2M100ST
3.3	35.73	21	3.3	6	12.5	0.6	TKA3R3M100ST
4.7	25.08	25	4.7	6	12.5	0.6	TKA4R7M100ST
6.8	19.82	59	6.8	6	16	0.6	TKA6R8M100ST
10	11.79	45	10.0	6	16	0.6	TKA100M100ST
15	9.12	105	15.0	8	16	0.6	TKA150M100ST
22	5.36	81	22.0	8	16	0.6	TKA220M100ST
33	3.57	99	33.0	8	20	0.6	TKA330M100ST
47	2.51	47	47.0	10	20	0.6	TKA470M100ST
68	1.98	319	68.0	10	20	0.6	TKA680M100ST
100	1.18	255	100.0	10	25	0.6	TKA101M100ST
150	0.91	590	150.0	13	25	0.6	TKA151M100ST
220	0.54	439	220.0	13	30	0.6	TKA221M100ST
330	0.36	620	330.0	16	30	0.8	TKA331M100ST
470	0.25	792	470.0	16	40	0.8	TKA471M100ST
680	0.20	1013	680.0	18	40	0.8	TKA681M100ST
1,000	0.12	1350	1000.0	22	40	0.8	TKA102M100ST
160 WVDC; 200 VDC Surge							
1	266.00	19	101.6	6	16	0.6	TKA010M160ST
2.2	121.00	16	103.5	6	16	0.6	TKA2R2M160ST
3.3	80.40	23	105.3	8	16	0.6	TKA3R3M160ST
4.7	56.50	28	107.5	8	16	0.6	TKA4R7M160ST
6.8	39.03	55	110.8	8	20	0.6	TKA6R8M160ST
10	26.60	47	116.0	8	20	0.6	TKA100M160ST
15	20.60	91	124.0	8	20	0.6	TKA150M160ST
22	12.10	85	135.2	10	20	0.6	TKA220M160ST
33	8.04	123	152.8	10	25	0.6	TKA330M160ST
47	5.65	159	175.2	13	21	0.6	TKA470M160ST
68	4.47	242	208.8	13	25	0.6	TKA680M160ST
100	2.66	267	260.0	13	30	0.6	TKA101M160ST
150	1.21	378	340.0	16	30	0.8	TKA151M160ST
200 WVDC; 250 VDC Surge							
1	332.00	17	102.5	6	16	0.6	TKA010M200ST
2.2	151.00	30	105.5	6	16	0.6	TKA2R2M200ST
3.3	101.00	40	108.3	8	16	0.6	TKA3R3M200ST
4.7	70.60	50	111.7	8	16	0.6	TKA4R7M200ST
6.8	55.80	60	117.0	8	20	0.6	TKA6R8M200ST
10	33.20	80	125.0	8	20	0.6	TKA100M200ST
15	25.60	105	137.5	10	16	0.6	TKA150M200ST
22	15.10	140	155.0	10	20	0.6	TKA220M200ST
33	10.10	175	182.5	10	25	0.6	TKA330M200ST
47	7.06	215	217.5	13	25	0.6	TKA470M200ST
68	5.58	265	270.0	13	30	0.6	TKA680M200ST
100	3.32	340	350.0	16	30	0.8	TKA101M200ST

Cap μF	Max ESR Ohms 120Hz 25°C	Max Ripple mA 120Hz 105°C	Max LC μA 2 Minutes	Size (Millimeters)			Catalog Number
				D Diameter	L Length	d	
250 WVDC; 300 VDC Surge							
1	332.00	11	102.5	6	16	0.6	TKA010M250ST
2.2	151.00	19	105.5	8	16	0.6	TKA2R2M250ST
3.3	101.00	23	108.3	8	16	0.6	TKA3R3M250ST
4.7	70.60	32	111.7	8	20	0.6	TKA4R7M250ST
6.8	55.80	70	117.0	10	16	0.6	TKA6R8M250ST
10	33.20	57	125.0	10	16	0.6	TKA100M250ST
15	25.60	110	137.5	10	20	0.6	TKA150M250ST
22	15.10	101	155.0	10	25	0.6	TKA220M250ST
33	10.10	133	182.5	13	21	0.6	TKA330M250ST
47	7.06	184	217.5	13	25	0.6	TKA470M250ST
100	3.32	324	350.0	16	33	0.8	TKA101M250ST
150	1.34	475	475.0	16	40	0.8	TKA151M250ST
350 WVDC; 400 VDC Surge							
1	332.00	13	103.0	8	16	0.6	TKA010M350ST
2.2	151.00	19	107.0	8	16	0.6	TKA2R2M350ST
3.3	101.00	26	111.0	8	20	0.6	TKA3R3M350ST
4.7	70.60	36	116.0	10	20	0.6	TKA4R7M350ST
10	33.20	62	135.0	10	20	0.6	TKA100M350ST
15	25.60	153	152.5	10	25	0.6	TKA150M350ST
22	15.10	109	177.0	13	21	0.6	TKA220M350ST
33	10.10	154	215.0	13	25	0.6	TKA330M350ST
47	7.06	197	264.0	13	30	0.6	TKA470M350ST
100	3.32	351	450.0	16	40	0.8	TKA101M350ST
150	1.34	474	625.0	18	40	0.8	TKA151M350ST
400 WVDC; 450 VDC Surge							
1	331.74	17	104.0	8	16	0.6	TKA010M400ST
2.2	150.79	30	108.8	8	20	0.6	TKA2R2M400ST
3.3	100.53	39	113.2	10	20	0.6	TKA3R3M400ST
4.7	70.58	51	118.8	10	25	0.6	TKA4R7M400ST
6.8	48.79	66	127.2	10	25	0.6	TKA6R8M400ST
10	33.17	89	140.0	10	25	0.6	TKA100M400ST
15	22.12	124	160.0	10	21	0.6	TKA150M400ST
22	15.05	175	188.0	13	25	0.6	TKA220M400ST
33	10.05	241	232.0	13	30	0.6	TKA330M400ST
47	7.06	318	288.0	16	30	0.8	TKA470M400ST
68	5.58	412	372.0	16	40	0.8	TKA680M400ST
100	3.32	555	500.0	18	40	0.8	TKA101M400ST
450 WVDC; 500 VDC Surge							
1	331.70	11	104.5	8	16	0.6	TKA010M450ST
2.2	150.80	19	109.9	8	20	0.6	TKA2R2M450ST
3.3	100.50	27	114.9	10	20	0.6	TKA3R3M450ST
4.7	70.58	35	121.2	10	25	0.6	TKA4R7M450ST
10	33.17	60	145.0	13	21	0.6	TKA100M450ST
22	15.08	104	199.0	13	30	0.6	TKA220M450ST
33	10.05	148	248.5	16	30	0.8	TKA330M450ST
47	7.06	311	311.5	13	33	0.8	TKA470M450ST
100	3.32	550	550.0	22	40	0.8	TKA101M450ST

Aluminum Capacitors