

# TTA

## +85°C General Purpose Axial Lead Aluminum Electrolytic Capacitors



### Applications

- Filtering
- Bypass
- Coupling

### Features

- Standard case sizes
- Lead free
- RoHS compliant

<b>Capacitance Tolerance</b>		<b>+20% at 120 Hz, 20°C</b>														
<b>Operating Temperature Range</b>		<b>-40°C to +85°C</b>							<b>-25°C to +85°C</b>							
<b>Surge voltage</b>	<b>WVDC</b>	10	16	25	35	50	63	100	160	200	250	350	400	450		
	<b>SVDC</b>	13	20	32	44	63	79	125	200	250	300	400	450	500		
<b>Dissipation Factor</b>	<b>WVDC</b>	10	16	25	35	50	63	100	160	200	250	350	400	450		
	<b>Tan δ</b>	.24	.2	.16	.14	.12	.1	.1	.2	.2	.2	.2	.25	.25		
Add .02 for every 1000uF above 1000uF																
<b>Leakage current</b>		<b>6.3 to 100 WVDC</b>							<b>160 to 450 WVDC</b>							
		<b>2 Minutes</b>							<b>2 Minutes</b>							
		.02CV or 4uA, Whichever is greater							.03CV+10A							
<b>Low temperature stability Impedance ratio (120 Hz)</b>	<b>Rated WVDC</b>	10	16	25	35	50	63	100	160	200	250	350	400	450		
	<b>-25°C to +20°C</b>	4	3	2	2	2	2	2	4	4	4	4	4	6		
	<b>-40°C to +20°C</b>	10	8	5	4	3	3	3	15	15	15	10	10	-		
<b>Load Life</b>		<b>2000 hours at 85°C with rated WVDC applied</b>														
		<b>Capacitance change</b>	<20% of initial measured value													
		<b>Dissipation factor</b>	<200% of maximum specified value													
		<b>Leakage current</b>	>100% of maximum specified value													
<b>Shelf Life</b>		<b>1000 hours at 85°C with no voltage applied</b>														
		<b>Capacitance change</b>	<20% initial measured value													
		<b>Dissipation factor</b>	<200% of maximum specified value													
		<b>Insulation resistance</b>	>100% of maximum specified value													
<b>Ripple Current Multipliers</b>		<b>Frequency (Hz)</b>							<b>Temperature (°C)</b>							
		<b>Capacitance</b>	50	120	300	1k	10k		+85	+70	+60					
		C≤10	0.75	1.0	1.35	1.57	2		1.0	1.3	1.5					
		10<C≤100	0.8	1.0	1.23	1.34	1.5		1.0	1.3	1.5					
		100<C≤1000	0.85	1.0	1.1	1.13	1.15		1.0	1.3	1.5					
		C>1000	0.8	1.0	1.25	1.40	1.6		1.0	1.3	1.5					



TTA

85°C Axial lead General  
Purpose Aluminum  
Electrolytic Capacitor

Cap (uF)	VDC	PART #	Maximum ESR $\Omega$ 120Hz 20C	Maximum RMS ripple current (mA) 120Hz,85C	Dims DxL (mm)
0.47	100	474TTA100M	352.74	10	5x13
1	50	105TTA050M	165.79	10	5x13
1	100	105TTA100M	165.79	18	5x13
1	160	105TTA160M	331.57	14	6.3x13
1	350	105TTA350M	331.57	20	6.3x16
1	450	105TTA450M	414.47	19	8x16
2.2	50	225TTA050M	75.36	23	5x13
2.2	100	225TTA100M	75.36	27	5x13
2.2	160	225TTA160M	150.71	23	6.3x16
2.2	250	225TTA250M	150.71	30	8x16
2.2	350	225TTA350M	150.71	33	8x16
2.2	450	225TTA450M	188.39	31	10x21
3.3	50	335TTA050M	50.24	30	5x13
3.3	100	335TTA100M	50.24	34	5x13
3.3	160	335TTA160M	100.48	33	8x16
3.3	250	335TTA250M	100.48	40	8x16
3.3	350	335TTA350M	100.48	37	8x20
3.3	450	335TTA450M	125.60	38	8x20
4.7	50	475TTA050M	35.27	36	5x13
4.7	100	475TTA100M	35.27	40	5x13
4.7	160	475TTA160M	70.55	50	8x16
4.7	250	475TTA250M	70.55	45	8x20
4.7	350	475TTA350M	70.55	55	8x20
4.7	450	475TTA450M	88.18	50	10x26
10	35	106TTA035M	23.21	41	5x13
10	50	106TTA050M	16.58	50	5x13
10	63	106TTA063M	16.58	55	5x13
10	100	106TTA100M	16.58	65	6.3x13
10	160	106TTA160M	33.16	80	8x20
10	250	106TTA250M	33.16	90	10x21
10	350	106TTA350M	33.16	100	13x26
10	450	106TTA450M	41.45	90	13x26
15	50	156TTA050M	11.05	70	5x13
22	16	226TTA016M	15.07	50	5x13
22	35	226TTA035M	10.55	70	5x13
22	50	226TTA050M	7.54	85	6.3x13
22	100	226TTA100M	7.54	120	8x16
22	160	226TTA160M	15.07	130	10x25
22	250	226TTA250M	15.07	160	13x26
22	350	226TTA350M	15.07	150	13x31
22	450	226TTA450M	18.84	160	16x31
33	25	336TTA025M	7.54	80	5x13
33	50	336TTA050M	5.02	115	6.3x16

Cap (uF)	VDC	PART #	Maximum ESR $\Omega$ 120Hz 20C	Maximum RMS ripple current (mA) 120Hz,85C	Dims DxL (mm)
33	100	336TTA100M	5.02	145	8x16
33	160	336TTA160M	10.05	170	13x26
33	250	336TTA250M	10.05	190	13x31
33	350	336TTA350M	10.05	210	16x31.5
33	450	336TTA450M	12.56	230	16x41
47	16	476TTA016M	7.05	90	5x13
47	25	476TTA025M	5.64	105	6.3x13
47	35	476TTA035M	4.94	125	6.3x16
47	50	476TTA050M	3.53	140	6.3x16
47	63	476TTA063M	3.53	165	8x16
47	100	476TTA100M	3.53	190	8x20
47	160	476TTA160M	7.05	225	13x31
47	250	476TTA250M	7.05	255	16x31
47	350	476TTA350M	7.05	290	16x41
47	450	476TTA450M	8.82	300	22x41
47	500	476TTA500ARZ	8.82	290	18x41
47	500	476TTA500A	8.82	290	22x51
68	16	686TTA016M	4.88	150	6.3x16
68	35	686TTA035M	3.41	200	8x16
68	63	686TTA063M	2.44	250	8x20
100	10	107TTA010M	3.98	130	6.3x13
100	25	107TTA025M	2.65	170	6.3x13
100	35	107TTA035M	2.32	200	8x16
100	50	107TTA050M	1.66	220	8x16
100	63	107TTA063M	1.66	260	8x20
100	100	107TTA100M	1.66	310	10x21
100	160	107TTA160M	3.32	400	16x31
100	250	107TTA250M	3.32	450	16x41
100	350	107TTA350M	3.32	460	18x41
100	450	107TTA450M	4.14	370	22x51
150	25	157TTA025M	1.77	260	8x16
150	35	157TTA035M	1.55	270	8x20
150	50	157TTA050M	1.11	285	10x16
150	63	157TTA063M	1.11	310	10x20
150	100	157TTA100M	1.11	515	13x26
220	16	227TTA016M	1.51	260	8x16
220	25	227TTA025M	1.21	280	8x16
220	35	227TTA035M	1.06	340	8x20
220	50	227TTA050M	0.75	440	10x21
220	63	227TTA063M	0.75	490	10x26
220	100	227TTA100M	0.75	560	13x26
220	160	227TTA160M	1.51	660	22x41
220	250	227TTA250M	1.51	764	22x41



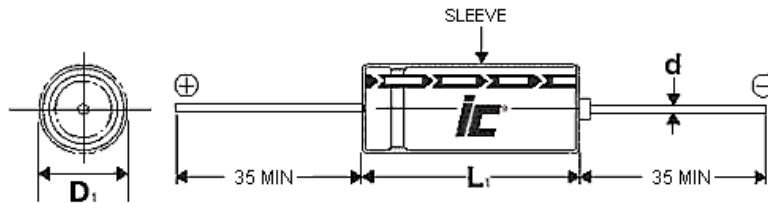
# TTA

85°C Axial lead  
General Purpose  
Aluminum Electrolytic  
Capacitor

Cap (uF)	VDC	PART #	Maximum ESR $\Omega$ 120Hz 20C	Maximum RMS ripple current (mA) 120Hz,85C	Dims DxL (mm)
330	16	337TTA016M	1.00	320	8x16
330	25	337TTA025M	0.80	385	8x20
330	50	337TTA050M	0.50	565	10x25
330	63	337TTA063M	0.50	650	13x26
330	100	337TTA100M	0.50	730	13x31
470	10	477TTA010M	0.85	350	8x16
470	16	477TTA016M	0.71	450	8x20
470	25	477TTA025M	0.56	560	10x21
470	35	477TTA035M	0.49	640	10x26
470	50	477TTA050M	0.35	740	13x26
470	63	477TTA063M	0.35	845	13x31
470	100	477TTA100M	0.35	960	16x31
1000	10	108TTA010M	0.40	570	8x21
1000	16	108TTA016M	0.33	700	10x21
1000	25	108TTA025M	0.27	830	10x26
1000	35	108TTA035M	0.23	980	13x26
1000	50	108TTA050M	0.17	1130	16x31
1000	63	108TTA063M	0.17	1330	16x31
1000	80	108TTA080M	0.17	1500	16x41
1000	100	108TTA100M	0.17	1640	18x41
1500	25	158TTA025M	0.20	1150	13x26
1500	35	158TTA035M	0.18	1280	16x31
1500	50	158TTA050M	0.13	1480	16x41
2200	10	228TTA010M	0.21	1100	13x26
2200	16	228TTA016M	0.18	1190	13x31
2200	25	228TTA025M	0.15	1480	16x31
2200	35	228TTA035M	0.14	1580	16x31

Cap (uF)	VDC	PART #	Maximum ESR $\Omega$ 120Hz 20C	Maximum RMS ripple current (mA) 120Hz,85C	Dims DxL (mm)
2200	50	228TTA050M	0.11	1930	16x41
2200	63	228TTA063M	0.11	2080	18x41
2200	80	228TTA080M	0.11	2260	22x51
2200	100	228TTA100M	0.11	2560	25x51
3300	10	338TTA010M	0.15	1435	13x31
3300	16	338TTA016M	0.13	1610	16x31
3300	25	338TTA025M	0.11	1700	16x31
3300	35	338TTA035M	0.10	1810	16x41
3300	50	338TTA050M	0.08	2350	22x41
3300	63	338TTA063M	0.08	2370	22x51
4700	10	478TTA010M	0.11	1730	16x31
4700	16	478TTA016M	0.10	1840	16x31
4700	25	478TTA025M	0.08	2190	16x41
4700	35	478TTA035M	0.08	2470	22x41
4700	50	478TTA050M	0.06	2510	22x51
4700	63	478TTA063M	0.06	3080	25x60
6800	16	688TTA016M	0.08	2310	16x41
6800	25	688TTA025M	0.07	2480	18x41
6800	35	688TTA035M	0.06	2760	22x51
10000	10	109TTA010M	0.07	2350	18x41
10000	16	109TTA016M	0.06	2520	18x41
10000	25	109TTA025M	0.06	3240	22x51
10000	35	109TTA035M	0.05	3500	25x51
15000	16	159TTA016M	0.05	3310	22x51
15000	25	159TTA025M	0.05	3700	25x51
22000	16	229TTA016M	0.05	3600	22x51

## Physical Dimensions



D	5	6.3	8	10	12.5	16	18	22	25
d	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	0.8
B	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0

$L_1 = L + B$  mm Max

$D_1 = D + 0.5$  mm Max.

mm

