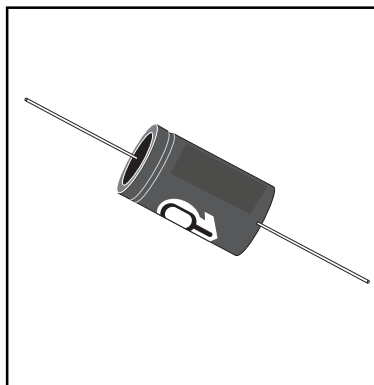


# Type DTKA Axial Leaded Capacitors



- 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  $\mu\text{F}$  to 15,000  $\mu\text{F}$

Capacitance Tolerance:  
 $\pm 20\%$

DC Leakage Current:

$I = 0.01CV$  or  $3\mu\text{A}$  whichever is greater after 2 minutes.

$C$  = Capacitance in  $\mu\text{F}$

$V$  = Rated Voltage

$I$  = Leakage Current in  $\mu\text{A}$

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
$\tan\delta$	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.10	0.20	0.25

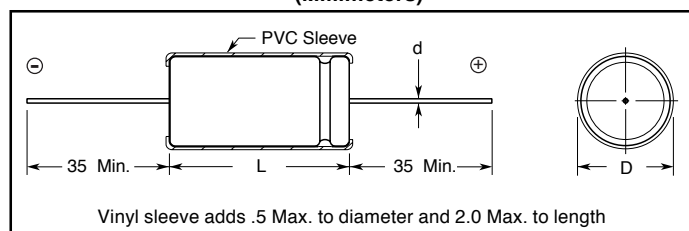
For Capacitance of more than 1,000 $\mu\text{F}$ , add 0.002 for every increase of 1,000 $\mu\text{F}$  at 120Hz/20°C

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

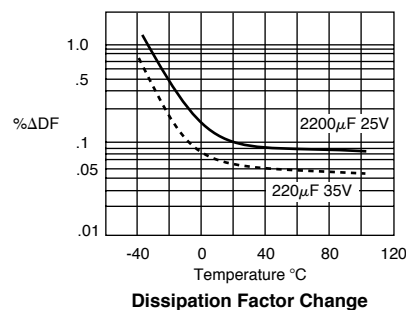
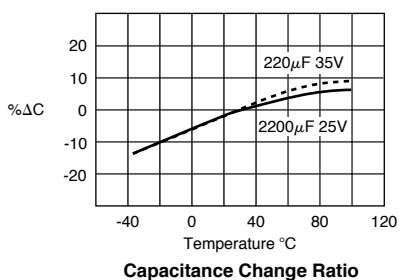
Rated WVDC	Ripple Multipliers			
	60Hz	120Hz	1kHz	10kHz
6 to 25	.80	1.0	1.10	1.20
35 to 100	.75	1.0	1.30	1.40
160 to 250	.70	1.0	1.40	1.60
350 to 400	.60	1.0	1.50	1.80

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

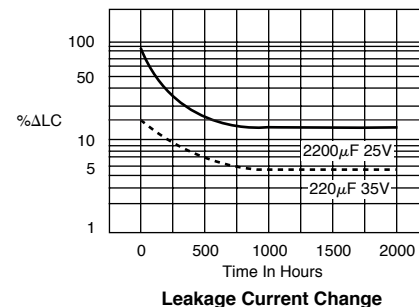
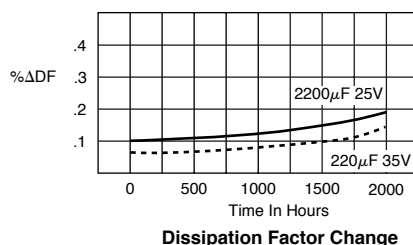
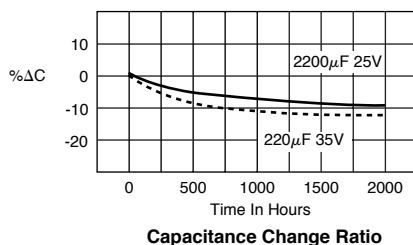
## Outline Dimensions (Millimeters)



## Temperature Characteristics



## Load Life Characteristics



# Types DTCG, DTCX, DSKA, DTKA Part Number Information



DuraCap Catalogue Number DTCG 231 U 035 D1A

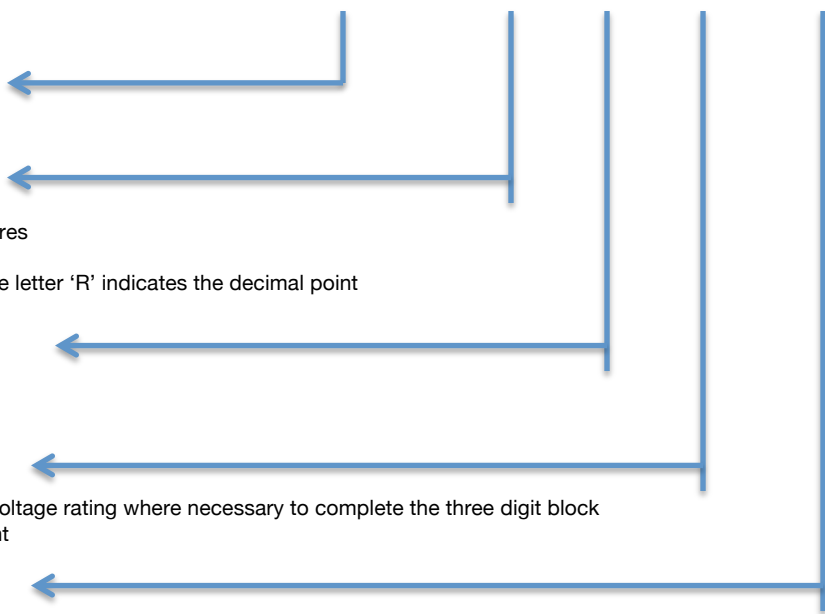
**TYPE:**  
Identifies the basic type  
DTCG, DTCX, DSKA, DTKA

**CAPACITANCE:**  
Expressed in microfarads  
The first two digits are significant figures  
The third digit is the number of zeros  
If the microfarads are less than 10, the letter 'R' indicates the decimal point

**CAPACITANCE TOLERANCE:**  
K = ± 10%  
M = ± 20%  
T = -10% +50%  
U = -10% +75%

**DC VOLTAGE RATING:**  
Zeros are used to prefix the voltage rating where necessary to complete the three digit block  
The letter 'R' indicates a decimal point

**CASE CODES**



# Type DTKA Axial Leaded 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	
<b>6.3 WVDC; 8 VDC Surge</b>							
0.47	282.18	7	3.0	5	12.5	0.6	DTKAR47M6R3ST
33	6.83	55	3.0	5	12.5	0.6	DTKA330M6R3ST
47	10.60	51	3.0	5	12.5	0.6	DTKA470M6R3ST
68	3.90	63	4.3	5	12.5	0.6	DTKA680M6R3ST
100	5.00	82	7.0	6	12.5	0.6	DTKA101M6R3ST
150	1.76	110	9.5	6	16	0.6	DTKA151M6R3ST
220	1.33	150	13.9	6.3	16	0.6	DTKA221M6R3ST
330	1.10	200	20.8	8	16	0.6	DTKA331M6R3ST
470	0.62	239	29.3	8	16	0.6	DTKA471M6R3ST
680	0.47	300	42.8	8	20	0.6	DTKA681M6R3ST
1,000	0.30	393	63.0	10	20	0.6	DTKA102M6R3ST
1,500	0.22	535	94.5	10	25	0.6	DTKA152M6R3ST
2,200	0.14	733	138.6	13	25	0.6	DTKA222M6R3ST
3,300	0.10	953	207.9	13	30	0.6	DTKA332M6R3ST
4,700	0.09	1215	296.1	16	30	0.8	DTKA472M6R3ST

<b>10 WVDC; 13 VDC Surge</b>							
33	8.04	46	3.3	5	12.5	0.6	DTKA330M010ST
47	6.94	56	5.0	5	12.5	0.6	DTKA470M010ST
68	3.90	70	6.8	6	12.5	0.6	DTKA680M010ST
100	3.26	93	10.0	6	16	0.6	DTKA101M010ST
150	1.77	128	15.0	6	16	0.6	DTKA151M010ST
220	1.48	177	22.0	8	16	0.6	DTKA221M010ST
330	0.99	223	33.0	8	16	0.6	DTKA331M010ST
470	0.67	267	47.0	8	20	0.6	DTKA471M010ST
680	0.39	355	68.0	8	20	0.6	DTKA681M010ST
1,000	0.33	488	100.0	10	20	0.6	DTKA102M010ST
1,500	0.26	610	150.0	10	25	0.6	DTKA152M010ST
2,200	0.15	783	220.0	13	25	0.6	DTKA222M010ST
3,300	0.10	1077	330.0	13	30	0.6	DTKA332M010ST
4,700	0.08	1483	470.0	16	30	0.8	DTKA472M010ST

<b>16 WVDC; 20 VDC Surge</b>							
0.47	282.00	7	4.0	5	12.5	0.6	DTKAR47M016ST
22	10.30	41	4.0	5	12.5	0.6	DTKA220M016ST
33	6.84	51	5.3	6	12.5	0.6	DTKA330M016ST
47	4.80	61	7.5	6	12.5	0.6	DTKA470M016ST
68	3.32	77	10.9	6	16	0.6	DTKA680M016ST
100	2.76	101	16.0	6	16	0.6	DTKA101M016ST
150	1.50	234	24.0	8	16	0.6	DTKA151M016ST
220	1.27	177	35.2	8	16	0.6	DTKA221M016ST
330	0.85	242	52.8	8	20	0.6	DTKA331M016ST
470	0.53	329	75.2	10	16	0.6	DTKA471M016ST
680	0.33	425	108.8	10	20	0.6	DTKA681M016ST
1,000	0.21	572	180.0	10	25	0.6	DTKA102M016ST
1,500	0.16	714	240.0	13	25	0.6	DTKA152M016ST
2,200	0.11	912	352.0	13	30	0.6	DTKA222M016ST
3,300	0.10	1215	528.0	16	30	0.8	DTKA332M016ST
4,700	0.07	1585	752.0	16	40	0.8	DTKA472M016ST

<b>25 WVDC; 32 VDC Surge</b>							
0.47	282.18	7	4.0	5	12.5	0.6	DTKAR47M025ST
15	13.27	33	4.0	5	12.5	0.6	DTKA150M025ST
22	10.50	44	5.5	6	12.5	0.6	DTKA220M025ST
33	6.70	54	8.2	6	12.5	0.6	DTKA330M025ST
47	4.70	73	11.7	6	12.5	0.6	DTKA470M025ST
68	2.83	94	17.0	6	16	0.6	DTKA680M025ST
100	2.21	127	25.0	8	16	0.6	DTKA101M025ST
150	1.33	162	37.5	8	16	0.6	DTKA151M025ST
220	1.01	210	55.0	8	20	0.6	DTKA221M025ST
330	0.67	291	82.5	10	16	0.6	DTKA331M025ST
470	0.47	384	117.5	10	20	0.6	DTKA471M025ST
680	0.37	241	170.0	10	25	0.6	DTKA681M025ST
1,000	0.22	672	250.0	13	25	0.6	DTKA102M025ST
1,500	0.14	850	375.0	13	30	0.6	DTKA152M025ST
2,200	0.11	1099	550.0	16	30	0.8	DTKA222M025ST
3,300	0.09	1483	825.0	16	40	0.8	DTKA332M025ST
4,700	0.07	1498	1175.0	18	40	0.8	DTKA472M025ST

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	
<b>35 WVDC; 44 VDC Surge</b>							
0.47	282.18	7	3.0	5	12.5	0.6	DTKAR47M035ST
6.8	23.42	25	3.0	5	12.5	0.6	DTKA68R8M035ST
10	17.68	30	3.5	5	12.5	0.6	DTKA100M035ST
15	10.62	38	5.3	6	12.5	0.6	DTKA150M035ST
22	8.04	49	7.7	6	12.5	0.6	DTKA220M035ST
33	5.54	69	11.6	6	16	0.6	DTKA330M035ST
47	3.76	82	16.5	6	16	0.6	DTKA470M035ST
68	2.34	112	23.8	8	16	0.6	DTKA680M035ST
100	1.77	158	35.0	8	16	0.6	DTKA101M035ST
150	1.06	203	52.5	8	20	0.6	DTKA151M035ST
220	0.80	266	77.0	10	16	0.6	DTKA221M035ST
330	0.54	359	115.5	10	20	0.6	DTKA331M035ST
470	0.38	467	164.5	10	25	0.6	DTKA471M035ST
680	0.23	605	238.0	13	25	0.6	DTKA681M035ST
1,000	0.18	816	350.0	13	30	0.6	DTKA102M035ST
1,500	0.12	951	525.0	16	30	0.8	DTKA152M035ST
2,200	0.09	1140	770.0	16	40	0.8	DTKA222M035ST
3,300	0.07	1350	1155.0	18	40	0.8	DTKA332M035ST
4,700	0.06	1550	1645.0	22	40	0.8	DTKA472M035ST

<b>50 WVDC; 63 VDC Surge</b>							
4.7	28.23	23	3.0	5	12.5	0.6	DTKA47R7M050ST
10	14.74	33	5.0	6	12.5	0.6	DTKA100M050ST
15	8.85	45	7.5	6	12.5	0.6	DTKA150M050ST
22	6.70	61	11.0	6	16	0.6	DTKA220M050ST
33	4.47	75	16.5	6	16	0.6	DTKA330M050ST
47	3.14	106	23.5	8	16	0.6	DTKA470M050ST
68	1.95	133	34.0	8	16	0.6	DTKA680M050ST
100	1.47	174	50.0	8	20	0.6	DTKA101M050ST
150	0.88	235	75.0	10	16	0.6	DTKA151M050ST
220	0.67	321	110.0	10	20	0.6	DTKA221M050ST
330	0.45	424	165.0	10	25	0.6	DTKA331M050ST
470	0.31	554	235.0	13	25	0.6	DTKA471M050ST
680	0.20	735	340.0	13	30	0.6	DTKA681M050ST
1,000	0.15	1011	500.0	16	30	0.8	DTKA102M050ST
1,500	0.10	1119	750.0	16	40	0.8	DTKA152M050ST
2,200	0.08	1270	1100.0	18	40	0.8	DTKA222M050ST
3,300	0.06	1430	1650.0	22	40	0.8	DTKA332M050ST
4,700	0.06	3230	2350.0	22	40	0.8	DTKA472M050ST

<b>63 WVDC; 79 VDC Surge</b>							
4.7	31.40	25	3.0	6	12.5	0.6	DTKA47R7M063ST
10	14.70	36	6.3	6	12.5	0.6	DTKA100M063ST
15	8.85	120	9.5	6	16	0.6	DTKA150M063ST
22	6.70	61	13.9	6	16	0.6	DTKA220M063ST
33	4.47	89	20.8	8	16	0.6	DTKA330M063ST
47	3.14	117	29.6	8	16	0.6	DTKA470M063ST
68	1.85	263	42.8	8	20	0.6	DTKA680M063ST
100	1.47	196	63.0	10	16	0.6	DTKA101M063ST
150	0.88	460	94.5	10	20	0.6	DTKA151M063ST
220	0.67	346	138.6	10	25	0.6	DTKA221M063ST
330	0.45	463	207.9	13	25	0.6	DTKA331M063ST
470	0.31	597	296.1	13	30	0.6	DTKA471M063ST
680	0.20	1020	428.4	16	30	0.8	DTKA681M063ST
1,000	0.15	1163	630.0	16	40	0.8	DTKA102M063ST
1,500	0.12	1325	945.0	18	40	0.8	DTKA152M063ST
2,200	0.08	1320	1386.0	22	40	0.8	DTKA222M063ST

# Type DTKA Axial Leaded 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	
<b>100 WVDC; 125 VDC Surge</b>							
0.47	250.80	7	3.0	5	12.5	0.6	DTKAR47M100ST
1	117.90	10	3.0	5	12.5	0.6	DTKA010M100ST
2.2	53.59	17	3.0	5	12.5	0.6	DTKA2R2M100ST
3.3	35.73	21	3.3	6	12.5	0.6	DTKA3R3M100ST
4.7	25.08	25	4.7	6	12.5	0.6	DTKA4R7M100ST
6.8	19.82	59	6.8	6	16	0.6	DTKA6R8M100ST
10	11.79	45	10.0	6	16	0.6	DTKA100M100ST
15	9.12	105	15.0	8	16	0.6	DTKA150M100ST
22	5.36	81	22.0	8	16	0.6	DTKA220M100ST
33	3.57	99	33.0	8	20	0.6	DTKA330M100ST
47	2.51	47	47.0	10	20	0.6	DTKA470M100ST
68	1.98	319	68.0	10	20	0.6	DTKA680M100ST
100	1.18	255	100.0	10	25	0.6	DTKA101M100ST
150	0.91	590	150.0	13	25	0.6	DTKA151M100ST
220	0.54	439	220.0	13	30	0.6	DTKA221M100ST
330	0.36	620	330.0	16	30	0.8	DTKA331M100ST
470	0.25	792	470.0	16	40	0.8	DTKA471M100ST
680	0.20	1013	680.0	18	40	0.8	DTKA681M100ST
1,000	0.12	1350	1000.0	22	40	0.8	DTKA102M100ST
<b>160 WVDC; 200 VDC Surge</b>							
1	266.00	19	101.6	6	16	0.6	DTKA010M160ST
2.2	121.00	16	103.5	6	16	0.6	DTKA2R2M160ST
3.3	80.40	23	105.3	8	16	0.6	DTKA3R3M160ST
4.7	56.50	28	107.5	8	16	0.6	DTKA4R7M160ST
6.8	39.03	55	110.8	8	20	0.6	DTKA6R8M160ST
10	26.60	47	116.0	8	20	0.6	DTKA100M160ST
15	20.60	91	124.0	8	20	0.6	DTKA150M160ST
22	12.10	85	135.2	10	20	0.6	DTKA220M160ST
33	8.04	123	152.8	10	25	0.6	DTKA330M160ST
47	5.65	159	175.2	13	21	0.6	DTKA470M160ST
68	4.47	242	208.8	13	25	0.6	DTKA680M160ST
100	2.66	267	260.0	13	30	0.6	DTKA101M160ST
150	1.21	378	340.0	16	30	0.8	DTKA151M160ST
<b>200 WVDC; 250 VDC Surge</b>							
1	332.00	17	102.5	6	16	0.6	DTKA010M200ST
2.2	151.00	30	105.5	6	16	0.6	DTKA2R2M200ST
3.3	101.00	40	108.3	8	16	0.6	DTKA3R3M200ST
4.7	70.60	50	111.7	8	16	0.6	DTKA4R7M200ST
6.8	55.80	60	117.0	8	20	0.6	DTKA6R8M200ST
10	33.20	80	125.0	8	20	0.6	DTKA100M200ST
15	25.60	105	137.5	10	16	0.6	DTKA150M200ST
22	15.10	140	155.0	10	20	0.6	DTKA220M200ST
33	10.10	175	182.5	10	25	0.6	DTKA330M200ST
47	7.06	215	217.5	13	25	0.6	DTKA470M200ST
68	5.58	265	270.0	13	30	0.6	DTKA680M200ST
100	3.32	340	350.0	16	30	0.8	DTKA101M200ST

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	
<b>250 WVDC; 300 VDC Surge</b>							
1	332.00	11	102.5	6	16	0.6	DTKA010M250ST
2.2	151.00	19	105.5	8	16	0.6	DTKA2R2M250ST
3.3	101.00	23	108.3	8	16	0.6	DTKA3R3M250ST
4.7	70.60	32	111.7	8	20	0.6	DTKA4R7M250ST
6.8	55.80	70	117.0	10	16	0.6	DTKA6R8M250ST
10	33.20	57	125.0	10	16	0.6	DTKA100M250ST
15	25.60	110	137.5	10	20	0.6	DTKA150M250ST
22	15.10	101	155.0	10	25	0.6	DTKA220M250ST
33	10.10	133	182.5	13	21	0.6	DTKA330M250ST
47	7.06	184	217.5	13	25	0.6	DTKA470M250ST
100	3.32	324	350.0	16	33	0.8	DTKA101M250ST
150	1.34	475	475.0	16	40	0.8	DTKA151M250ST
<b>350 WVDC; 400 VDC Surge</b>							
1	332.00	13	103.0	8	16	0.6	DTKA010M350ST
2.2	151.00	19	107.0	8	16	0.6	DTKA2R2M350ST
3.3	101.00	26	111.0	8	20	0.6	DTKA3R3M350ST
4.7	70.60	36	116.0	10	20	0.6	DTKA4R7M350ST
10	33.20	62	135.0	10	20	0.6	DTKA100M350ST
15	25.60	153	152.5	10	25	0.6	DTKA150M350ST
22	15.10	109	177.0	13	21	0.6	DTKA220M350ST
33	10.10	154	215.0	13	25	0.6	DTKA330M350ST
47	7.06	197	264.0	13	30	0.6	DTKA470M350ST
100	3.32	351	450.0	16	40	0.8	DTKA101M350ST
150	1.34	474	625.0	18	40	0.8	DTKA151M350ST
<b>400 WVDC; 450 VDC Surge</b>							
1	331.74	17	104.0	8	16	0.6	DTKA010M400ST
2.2	150.79	30	108.8	8	20	0.6	DTKA2R2M400ST
3.3	100.53	39	113.2	10	20	0.6	DTKA3R3M400ST
4.7	70.58	51	118.8	10	25	0.6	DTKA4R7M400ST
6.8	48.79	66	127.2	10	25	0.6	DTKA6R8M400ST
10	33.17	89	140.0	10	25	0.6	DTKA100M400ST
15	22.12	124	160.0	10	21	0.6	DTKA150M400ST
22	15.05	175	188.0	13	25	0.6	DTKA220M400ST
33	10.05	241	232.0	13	30	0.6	DTKA330M400ST
47	7.06	318	288.0	16	30	0.8	DTKA470M400ST
68	5.58	412	372.0	16	40	0.8	DTKA680M400ST
100	3.32	555	500.0	18	40	0.8	DTKA101M400ST
<b>450 WVDC; 500 VDC Surge</b>							
1	331.70	11	104.5	8	16	0.6	DTKA010M450ST
2.2	150.80	19	109.9	8	20	0.6	DTKA2R2M450ST
3.3	100.50	27	114.9	10	20	0.6	DTKA3R3M450ST
4.7	70.58	35	121.2	10	25	0.6	DTKA4R7M450ST
10	33.17	60	145.0	13	21	0.6	DTKA100M450ST
22	15.08	104	199.0	13	30	0.6	DTKA220M450ST
33	10.05	148	248.5	16	30	0.8	DTKA330M450ST
47	7.06	311	311.5	13	33	0.8	DTKA470M450ST
100	3.32	550	550.0	22	40	0.8	DTKA101M450ST