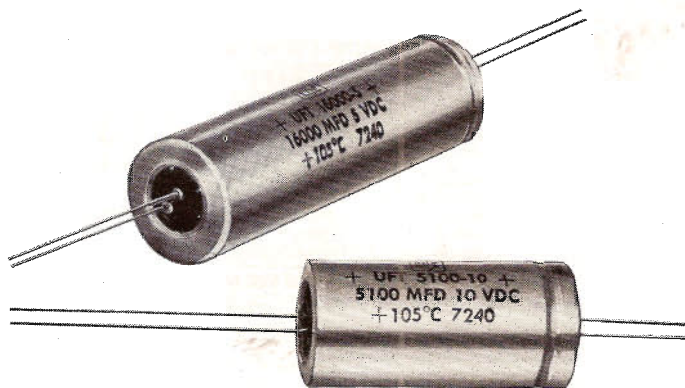
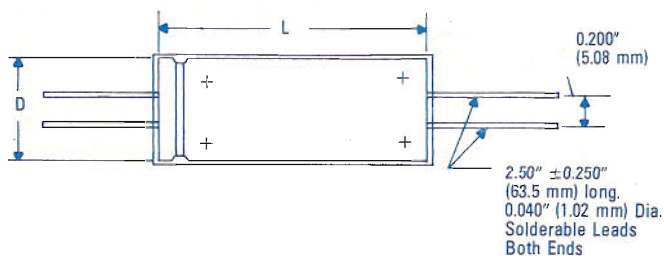


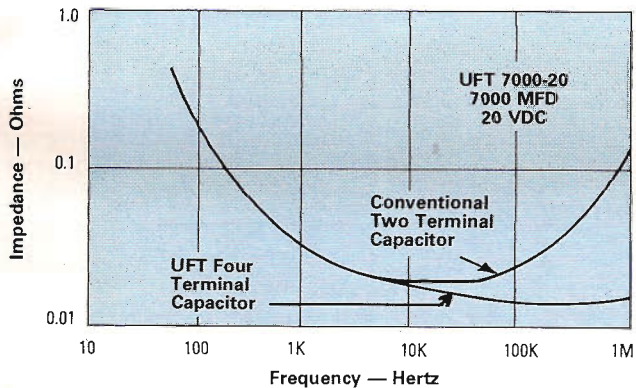
EXTENDED TEMPERATURE RANGE, LOW IMPEDANCE, HIGH FREQUENCY (-55°C to +105°C)



Outline Drawing



Typical Impedance vs. Frequency Curve



CAPACITANCE CHANGE WITH TEMPERATURE:

The maximum capacitance changes from measured +25°C values are:

VOLTAGE RANGE	TEMPERATURE						
	-55°C	-40°C	-30°C	-20°C	0°C	+85°C	+105°C
5 to 50 VDC	-25%	-20%	-15%	-10%	-6%	+15%	+25%
over 50 VDC	-20%	-15%	-10%	-8%	-5%	+15%	+25%

Table 1

FEATURES

- Ultra low impedance above 10KHz
- Broad temperature range
- Low ESR (Equivalent Series Resistance)
- Shock and high frequency vibration resistant
- UFT* has No. 18 AWG and UFTA* No. 16 AWG leads

APPLICATIONS

- Designed for switching regulator power supplies
- High gain amplifiers
- Critical circuits where operation at high frequency is necessary yet still have a high degree of reliability and low failure rate under adverse environmental conditions.

The unique four terminal construction and internal assembly techniques dramatically reduce the inductance to approximately one nanohenry. As a result, the impedance does not increase at frequencies above 10KHz, but actually decreases to a value approximately equal to the ESR and then remains essentially flat as shown in the impedance-frequency curve. These capacitors also provide effective isolation of the load from the power source.

In a typical switching regulator power supply, UFT and UFTA capacitors perform the following functions:

1. Adequately filter the fundamental frequency ripple current.
2. Localize and filter the high frequency megahertz ripple.
3. Prevent high frequency noise from feeding back into the power line.

The UFT and UFTA are designed for continuous duty operation over the temperature range of -55°C to +105°C (-67°F to +221°F). They are shock and vibration resistant and unaffected by chlorinated cleaning solvents.

Capacitance ratings available are 50 to 16,000 Mfd. Voltage ratings available are 5 to 200 VDC at 105°C. The maximum capacitance change from the 25°C value over the temperature range of -55°C to +105°C is ±25%.

Unlike conventional axial lead capacitors, the DC current flows through the aluminum rods located in the center of the capacitors. Under certain conditions, up to 45 amperes DC load current can be handled. This current is limited by the temperature rise due to the DC load current and ripple current, the ambient temperature, and external loads.

The capacitors are capable of withstanding a minimum of 2000 hours life test at rated DC voltage and ripple current at 105°C.

MIL Style CUR19 to MIL-C-39018/7 are available.

*Patented

Aluminum Electrolytic Capacitors



Types
UFT/UFTA
201.68

EXTENDED TEMPERATURE RANGE, LOW IMPEDANCE, (cont'd)

Standard Ratings - (not normally stocked but readily available)

CAP (MFD)	TYPE† UFT or UFTA	Insulated Case Size D X L* (Inches)	Max. Impedance 25°C (OHMS)	RMS Ripple Current for 10°C Rise
			10KHz-1MHz	10KHz-1MHz (Amperes)
5 VDC RATED — 7 VDC SURGE				
2400	2400-5	0.785 x 1.843	0.110	1.50
3300	3300-5	0.785 x 2.343	0.080	1.80
3700	3700-5	0.910 x 1.843	0.071	1.90
4400	4400-5	0.785 x 2.843	0.060	2.50
5000	5000-5	0.910 x 2.343	0.053	2.50
5700	5700-5	0.785 x 3.343	0.047	3.10
6700	6700-5	0.910 x 2.843	0.039	3.20
7200	7200-5	1.035 x 2.343	0.037	3.50
8800	8800-5	0.910 x 3.343	0.030	4.00
10000	10000-5	1.035 x 2.843	0.026	4.60
13000	13000-5	1.035 x 3.343	0.020	5.60
16000	16000-5	1.035 x 3.843	0.017	7.00
7.5 VDC RATED — 10 VDC SURGE				
2000	2000-7.5	0.785 x 1.843	0.130	1.40
3000	3000-7.5	0.910 x 1.843	0.087	1.80
3800	3800-7.5	0.785 x 2.843	0.070	2.40
4400	4400-7.5	0.910 x 2.343	0.059	2.40
4800	4800-7.5	1.035 x 1.843	0.055	2.40
5000	5000-7.5	0.785 x 3.343	0.053	3.00
5800	5800-7.5	0.910 x 2.843	0.046	3.10
6200	6200-7.5	1.035 x 2.343	0.043	3.30
7500	7500-7.5	0.910 x 3.343	0.035	3.80
9000	9000-7.5	1.035 x 2.843	0.029	4.40
11000	11000-7.5	1.035 x 3.343	0.024	5.30
14000	14000-7.5	1.035 x 3.843	0.019	6.60
10 VDC RATED — 15 VDC SURGE				
1700	1700-10	0.785 x 1.843	0.144	1.30
2300	2300-10	0.785 x 2.343	0.107	1.70
2600	2600-10	0.910 x 1.843	0.094	1.70
3000	3000-10	0.785 x 2.843	0.082	2.20
3600	3600-10	0.910 x 2.343	0.068	2.20
4100	4100-10	0.785 x 3.343	0.060	2.80
4800	4800-10	0.910 x 2.843	0.051	2.90
5100	5100-10	1.035 x 2.343	0.048	3.20
6300	6300-10	0.910 x 3.343	0.039	3.60
7500	7500-10	1.035 x 2.843	0.033	4.10
9700	9700-10	1.035 x 3.343	0.025	5.00
12000	12000-10	1.035 x 3.843	0.021	6.20
16 VDC RATED — 20 VDC SURGE				
1400	1400-16	0.785 x 1.843	0.149	1.20
1900	1900-16	0.785 x 2.343	0.110	1.60
2100	2100-16	0.910 x 1.843	0.100	1.60
2700	2700-16	0.910 x 2.343	0.077	2.00
3400	3400-16	0.785 x 3.343	0.061	2.60
4200	4200-16	1.035 x 2.343	0.050	2.90
5200	5200-16	0.910 x 3.343	0.041	3.30
6100	6100-16	1.035 x 2.843	0.035	3.90
6400	6400-16	0.910 x 3.843	0.033	4.10
8000	8000-16	1.035 x 3.343	0.026	4.70
10000	10000-16	1.035 x 3.843	0.021	5.90
20 VDC RATED — 25 VDC SURGE				
1200	1200-20	0.785 x 1.843	0.170	1.20
1800	1800-20	0.910 x 1.843	0.011	1.50
2200	2200-20	0.785 x 2.843	0.092	2.00
2400	2400-20	0.910 x 2.343	0.084	1.90
2900	2900-20	0.785 x 3.343	0.070	2.50
3400	3400-20	0.910 x 2.843	0.060	2.60
3700	3700-20	1.035 x 2.343	0.055	2.70
4500	4500-20	0.910 x 3.343	0.045	3.30
5300	5300-20	1.035 x 2.843	0.039	3.50
7000	7000-20	1.035 x 3.343	0.030	4.50
8600	8600-20	1.035 x 3.843	0.024	5.50
25 VDC RATED — 30 VDC SURGE				
900	900-25	0.785 x 1.843	0.224	1.05
1200	1200-25	0.785 x 2.343	0.168	1.40
1600	1600-25	0.785 x 2.843	0.126	1.75
2000	2000-25	0.910 x 2.343	0.102	1.90
2500	2500-25	1.035 x 2.343	0.081	2.40
2800	2800-25	0.910 x 2.843	0.072	3.00
3600	3600-25	1.035 x 2.843	0.056	3.25
4700	4700-25	1.035 x 3.343	0.043	4.00
5700	5700-25	1.035 x 3.843	0.036	4.65

CAP (MFD)	TYPE† UFT or UFTA	Insulated Case Size D X L* (Inches)	Max. Impedance 25°C (OHMS)	RMS Ripple Current for 10°C Rise
			10KHz-1MHz	10KHz-1MHz (Amperes)
30 VDC RATED — 40 VDC SURGE				
700	700-30	0.785 x 1.843	0.262	1.00
900	900-30	0.785 x 2.343	0.204	1.25
1300	1300-30	0.785 x 2.843	0.141	1.70
1600	1600-30	0.910 x 2.343	0.114	1.75
2000	2000-30	1.035 x 2.343	0.092	2.25
2200	2200-30	0.910 x 2.843	0.083	2.35
2800	2800-30	1.035 x 2.843	0.066	3.00
3000	3000-30	0.910 x 3.343	0.061	2.90
3600	3600-30	1.035 x 3.343	0.051	3.60
4500	4500-30	1.035 x 3.843	0.041	4.40
40 VDC RATED — 50 VDC SURGE				
550	550-40	0.785 x 1.843	0.322	0.90
700	700-40	0.785 x 2.343	0.255	1.15
900	900-40	0.910 x 1.843	0.197	1.20
1200	1200-40	0.910 x 2.343	0.147	1.55
1500	1500-40	1.035 x 2.343	0.117	2.05
1700	1700-40	0.910 x 2.843	0.104	2.15
2300	2300-40	0.910 x 3.343	0.077	2.60
2900	2900-40	1.035 x 3.343	0.061	3.40
3600	3600-40	1.035 x 3.843	0.050	4.10
50 VDC RATED — 75 VDC SURGE				
300	300-50	0.785 x 1.843	0.280	0.93
400	400-50	0.785 x 2.343	0.212	1.15
530	530-50	0.910 x 1.843	0.160	1.25
700	700-50	0.910 x 2.343	0.120	1.60
870	870-50	1.035 x 2.343	0.098	2.10
1000	1000-50	0.910 x 2.843	0.085	2.15
1200	1200-50	1.035 x 2.843	0.070	2.80
1600	1600-50	1.035 x 3.343	0.053	3.40
2000	2000-50	1.035 x 3.843	0.042	4.25
75 VDC RATED — 100 VDC SURGE				
200	200-75	0.785 x 1.843	0.384	0.78
260	260-75	0.785 x 2.343	0.295	1.00
350	350-75	0.910 x 1.843	0.218	1.10
450	450-75	0.910 x 2.343	0.171	1.40
570	570-75	1.035 x 2.343	0.136	1.85
650	650-75	0.910 x 2.843	0.118	1.95
850	850-75	0.910 x 3.343	0.090	2.25
1000	1000-75	1.035 x 3.343	0.077	2.95
1300	1300-75	1.035 x 3.843	0.059	3.55
100 VDC RATED — 125 VDC SURGE				
130	130-100	0.785 x 1.843	0.530	0.70
170	170-100	0.785 x 2.343	0.405	0.90
230	230-100	0.910 x 1.843	0.300	0.93
300	300-100	0.910 x 2.343	0.230	1.20
380	380-100	1.035 x 2.343	0.180	1.55
430	430-100	0.910 x 2.843	0.159	1.60
550	550-100	1.035 x 2.843	0.125	2.10
700	700-100	1.035 x 3.343	0.098	2.65
850	850-100	1.035 x 3.843	0.080	3.15
150 VDC RATED — 200 VDC SURGE				
70	70-150	0.785 x 1.843	0.780	0.65
90	90-150	0.785 x 2.343	0.610	0.80
120	120-150	0.910 x 1.843	0.455	0.83
150	150-150	1.035 x 1.843	0.362	1.10
200	200-150	1.035 x 2.343	0.273	1.40
300	300-150	0.910 x 3.343	0.181	1.80
380	380-150	1.035 x 3.343	0.143	2.35
470	470-150	1.035 x 3.843	0.095	2.85
200 VDC RATED — 250 VDC SURGE				
50	50-200	0.785 x 1.843	0.780	0.60
85	85-200	0.910 x 1.843	0.460	0.75
100	100-200	0.910 x 2.343	0.390	0.95
150	150-200	0.910 x 2.843	0.259	1.25
200	200-200	1.035 x 2.843	0.195	1.67
250	250-200	0.910 x 3.843	0.156	1.90
320	320-200	1.035 x 3.843	0.122	2.50

CAPACITANCE TOLERANCE -10% +75%

*Dimensions include insulating sleeve and epoxy coated seals for protection from cleaning solvents.

†Order by complete type number; e.g. UFT2400-5 or UFTA2400-5.