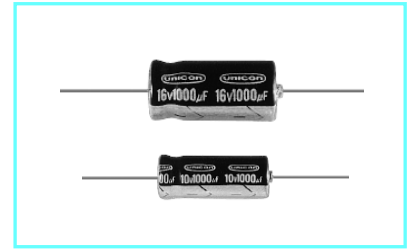


**FUT** シリーズ 02 形標準品  
Series, 85°C, Axial Lead, Standard

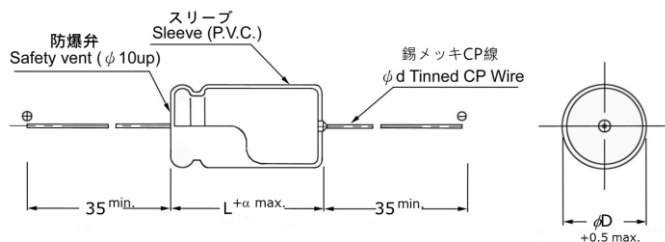
- 民生機器用小形化/標準品  
Standard for general purpose use
- 85°C 2,000時間保証  
Load life: 2,000 hours
- 定格電圧範囲 Rated voltage range : 6.3~450V
- 静電容量範囲 Capacitance range : 0.47~22,000 $\mu$ F
- RoHS指令対応済/RoHS Compliant



■ 仕様 SPECIFICATIONS

項目 Items	特性 Characteristics										
カテゴリ温度範囲 Operating Temperature Range	-40 ~ +85°C (6.3~400V) / -25 ~ +85°C (450V)										
定格電圧範囲 Rated Voltage Range	6.3V ~ 450V										
静電容量範囲 Nominal Capacitance Range	0.47 ~ 22,000 $\mu$ F										
静電容量許容差 Capacitance Tolerance	$\pm$ 20% (120Hz, 20°C)										
漏れ電流 Leakage Current	6.3 ~ 100 W.V.						160 ~ 450 W.V.				
	I $\leq$ 0.03CV 又は 4 $\mu$ A のいずれかが大きい値以下 (1分値) I $\leq$ 0.03CV or 4 $\mu$ A whichever is greater, after 1 minute application of rated voltage. I $\leq$ 0.01CV 又は 3 $\mu$ A のいずれかが大きい値以下 (2分値) I $\leq$ 0.01CV or 3 $\mu$ A whichever is greater, after 2 minutes application of rated voltage.						CV $\leq$ 1,000 : I = 0.1CV + 40 $\mu$ A 以下 (1分値) : I = 0.1CV + 40 $\mu$ A or less after 1 minute application of rated voltage. CV > 1,000 : I = 0.04CV + 100 $\mu$ A 以下 (1分値) : I = 0.04CV + 100 $\mu$ A or less after 1 minute application of rated voltage.				
損失角の正接 Dissipation Factor	定格電圧(V) Rated voltage	6.3	10	16	25	35	50	63	100	160~250	350~450
	tan $\delta$ (max.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25
1,000 $\mu$ F を越えるものについては、1,000 $\mu$ F を増す毎に 0.02 を加えた値とする。 For capacitance of more than 1,000 $\mu$ F, add 0.02 for every increase of 1,000 $\mu$ F (120Hz, 20°C)											
温度特性 Temperature Characteristics	インピーダンス比 Impedance Ratio /120 Hz										
	定格電圧(V) Rated voltage	6.3	10	16	25	35	50	63~100	160~250	350~400	450
	Z(-25°C) / Z(+20°C)	5	4	3	2	2	2	2	4	4	6
	Z(-40°C) / Z(+20°C)	12	10	8	5	4	3	3	15	10	-
高温負荷特性 Load Life	85°C 2,000 時間定格電圧連続印加後、20°C に戻し測定を行ったとき、下記項目を満足する After 2,000 hours application of rated voltage at 85°C, capacitor meet the characteristic requirements as below.										
	静電容量変化率 Capacitance change	初期値の $\pm$ 20%以内 Within $\pm$ 20% of initial value									
	損失角の正接 Dissipation Factor	初期規格値の 200%以下 200% or less of initial specified value									
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less									
高温無負荷特性 Shelf Life	85°C 1,000 時間無負荷放置後、下記規格を満足する。(但し、JIS C-5102 4.4 項の電圧処理後) After storing the capacitors under no load at 85°C for 1,000 hours, capacitors meet the characteristic requirements as below. Be sure to apply voltage to the capacitors before test according to JIS-C-5101-4.4.1										
	静電容量変化率 Capacitance change	初期値の $\pm$ 20%以内 Within $\pm$ 20% of initial value									
	損失角の正接 Dissipation Factor	初期規格値の 200%以下 200% or less of initial specified value									
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less									
表示 Marking	黒色チューブに白色印刷 White print on black sleeve.										
関連規格 Applicable standard	JIS C-5141 特性W Characteristics W of JIS C-5141										

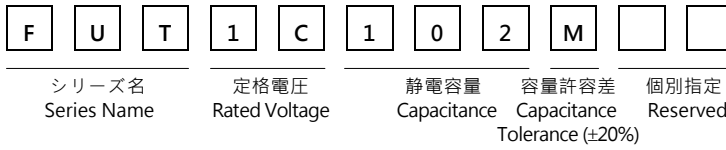
■ 寸法図 Dimensions



unit: mm

$\phi$ D	5	6.3	8	10	12.5	16	18
$\phi$ d	0.6	0.6	0.6	0.6	0.6	0.8	0.8
$\alpha$	6.3~100V: 1.0mm / 160~450V: 2.0mm						

■ 品名コード体系 Part Numbering (例 example: 16V 1000 μF)



■ 寸法表 Standard Products Table

Cap. (μF)	W.V. Code	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)		100 (2A)	
		0.47	R47											5x12.5	5		
1	1R0											5x12.5	10			5x12.5	18
2.2	2R2											5x12.5	23			5x12.5	27
3.3	3R3											5x12.5	30			5x12.5	34
4.7	4R7											5x12.5	36			5x12.5	40
10	100											5x12.5	50	5x12.5	55	6.3x12.5	65
22	220								5x12.5	70	6.3x12.5	85	6.3x12.5	90	8x16	120	
33	330							5x12.5	80	6.3x12.5	95	6.3x12.5	105	6.3x16	125	8x16	145
47	470					5x12.5	90	6.3x12.5	105	6.3x12.5	115	6.3x16	140	8x16	165	8x20	190
100	101	5x12.5	110	6.3x12.5	130	6.3x12.5	145	6.3x16	170	8x16	200	8x16	220	8x20	260	10x21	310
220	221	6.3x12.5	180	6.3x16	220	8x16	260	8x16	280	8x20	340	8x20	370	10x21	440	12.5x26	560
330	331	6.3x16	250	8x16	300	8x16	320	8x16	350	8x20	410	10x21	510	12.5x26	650	12.5x31	730
470	471	8x16	330	8x16	350	8x16	390	8x20	460	10x21	550	12.5x26	740	12.5x26	780	16x31	960
1000	102	8x20	530	8x20	570	10x21	700	10x26	830	12.5x26	980	12.5x31	1130	16x31	1330	18x41	1640
2200	222	10x21	850	12.5x26	1100	12.5x26	1190	12.5x31	1330	16x31	1580	16x41	1930	18x41	2080		
3300	332	12.5x26	1210	12.5x26	1290	12.5x31	1460	16x31	1700	16x31	1810	18x41	2260				
4700	472	12.5x26	1400	12.5x31	1550	16x31	1840	16x41	2190	18x41	2380						
6800	682	12.5x31	1650	16x31	1930	16x41	2310	18x41	2480								
10000	103	16x31	1990	16x41	2350	18x41	2520										
15000	153	16x41	2480	18x41	2630												
22000	223	18x41	2730														Size (mm) R.C.

Cap. (μF)	W.V. Code	160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)	
		1	1R0					6.3x12.5	16	6.3x16	20	6.3x16	20
2.2	2R2			6.3x12.5	24	6.3x16	30	8x16	33	8x16	33	8x16	28
3.3	3R3	6.3x16	37	6.3x16	37	8x16	40	8x16	40	8x20	45	8x20	38
4.7	4R7	8x16	50	8x16	50	8x16	50	8x20	55	10x21	60	10x21	50
10	100	8x20	80	8x20	80	10x21	90	10x26	100	12.5x26	110	12.5x26	90
22	220	10x21	130	10x26	145	12.5x26	160	12.5x26	160	12.5x31	170	16x31	160
33	330	10x26	180	12.5x26	195	12.5x26	195	12.5x31	200	16x31	230	16x31	190
47	470	12.5x26	230	12.5x26	230	12.5x31	240	16x31	270	16x41	310	16x41	270
100	101	16x31	400	16x31	400	16x41	450	18x41	460				
220	221	16x41	670	18x41	690								Size (mm) R.C.

Allowable Ripple Current/定格リップル電流 ( mArms ) at 85°C 120Hz

● 許容リップル電流の周波数補正係数 Frequency coefficient of allowable ripple current

W.V.(V.DC)	Frequency					
	Cap (μF)	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz~
6.3 ~ 100	0.47 ~ 47	0.75	1.00	1.35	1.57	2.00
	100 ~ 470	0.80	1.00	1.23	1.34	1.50
	1000 ~ 22000	0.85	1.00	1.10	1.13	1.15
160 ~ 450	1 ~ 220	0.80	1.00	1.25	1.40	1.60