

**UPL** シリーズ 125°C 高温度、低 ESR 品  
Series, Radial Lead, 125°C High C/V

- 導電性高分子電解質を採用し、超低 ESR 化を実現、高リプル電流。  
Low ESR & high ripple current capability
- 125°C 2,000 時間保証品。 Endurance: 2,000 hours at 125°C
- 定格電圧範囲 Rated Voltage : 16V ~ 160V
- 静電容量範囲 Rated capacitance : 4.7 ~ 1,500  $\mu$ F

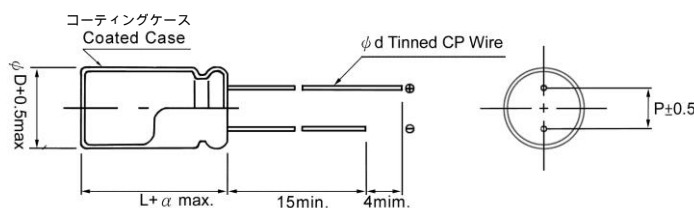


■ 仕様 SPECIFICATIONS

項目 Item	性能 Performance Characteristics	
使用温度範囲 Operating Temperature range	-55 + 125°C	
定格電圧範囲 Rated Voltage Range	16V ~ 160V	
静電容量範囲 Capacitance Tolerance	$\pm 20\%$ (at 120 Hz / 20°C)	
サージ電圧 Surge Voltage	定格電圧 Rated Voltage $\times 1.15$	
漏れ電流 ※ Leakage Current	標準品一覧表の値以下 Within the specified value as in standard rating	
損失角の正接 (tan $\delta$ ) Dissipation Factor (tan $\delta$ )	0.12 以下, Less than or equal to the specified value at 20°C, 120 Hz	
温度特性 (インピーダンス比) Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25°C) / Z (+20°C)	$\leq 1.15$
	Z (-55°C) / Z (+20°C)	$\leq 1.25$
耐久性 Endurance	125°Cにおいて定格電圧を 16 ~ 25V, 2,000 時間 ( $\geq 35V$ & $10 \times 17 \sim 21 = 1,500$ 時間) 印加後、20°Cに復帰させ測定を行なったとき、下記を満足すること The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 16-25V, 2,000 hours or $\geq 35V$ & $10 \times 17 \sim 21$ , 1,500 hours at 125°C.	
	静電容量変化率 Capacitance change	初期値の $\pm 30\%$ 以内 $\leq \pm 30\%$ of the initial value
	損失角の正接 D. F. (Tan $\delta$ )	初期規格値の 300%以下 $\leq 300\%$ of initial specified value
	等価直列抵抗 ESR	初期規格値の 300%以下 $\leq 300\%$ of initial specified value
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less
耐湿負荷特性 Bias Humidity Test	60°C 90 ~ 95%RH 中で 1,000 時間、20°Cに復帰させ、下記を満足すること The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours.	
	静電容量変化率 Capacitance change	初期値の $\pm 20\%$ 以内 $\leq \pm 20\%$ of the initial value
	損失角の正接 D. F. (Tan $\delta$ )	初期規格値の 150%以下 $\leq 150\%$ of initial specified value
	等価直列抵抗 ESR	初期規格値の 150%以下 $\leq 150\%$ of initial specified value
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less
サージ電圧特性 Surge Voltage Test	105°C中でサージ電圧を充電30秒、放電5分30秒で1,000回(Rc=1K $\Omega$ ) 印加した後20°Cに復帰させて測定を行なったとき、下記を満足すること The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified At 105°C for 30 seconds through a protective resistor (R=1K $\Omega$ ) and discharge for 5 minutes 30 seconds.	
	静電容量変化率 Capacitance change	初期値の $\pm 20\%$ 以内 $\leq \pm 20\%$ of the initial value
	損失角の正接 D. F. (Tan $\delta$ )	初期規格値の 150%以下 $\leq 150\%$ of initial specified value
	等価直列抵抗 ESR	初期規格値の 150%以下 $\leq 150\%$ of initial specified value
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less
保証故障率 Failure Rate	0.5%/1,000 時間以下・0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)	

※ 疑義が生じた場合は、下記の電圧処理後測定する。 電圧処理：105°Cにて 120 分間電圧印加する。印加電圧は定格電圧とする。  
In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 105°C.

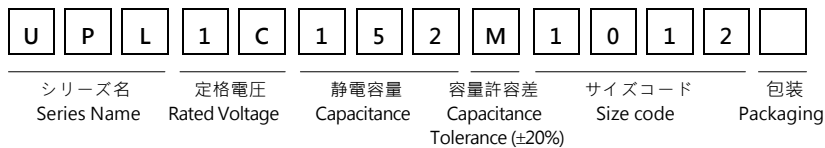
■ 寸法図 Dimension



Unit: mm

$\phi D + 0.5\text{max}$	8	10
$\phi d \pm 0.05$	0.6	0.6
P	3.5	5.0
$\alpha$ (max)	1.5	1.5

■ 品名コード体系 Part Numbering (例 example: 16V 1500 μF 10x12mm)



■ 寸法表 Standard Products Table

定格電圧 Rated voltage (V.DC)	静電容量範囲 Rated Capacitance (μF)	ケースサイズ Case Size D x L (mm)	tan δ	漏れ電流 Leakage Current (μA)	等価直列抵抗 ESR (mΩ max./20°C 100KHz ~ 300KHz)	定格リプル電流 Rated ripple current (mA rms, 100KHz)		品番 Part Number
						Tx ≤ 105°C	105°C < Tx ≤ 125°C	
16 (1C)	330	8 x 8	0.12	1,056	15	4,300	1,720	UPL1C331M0808
	• 470	8 x 8	0.12	1,504	15	4,300	1,720	UPL1C471M0808
	470	8 x 12	0.12	1,504	13	4,650	1,860	UPL1C471M0812
	820	8 x 12	0.12	2,624	13	4,650	1,860	UPL1C821M0812
	820	10 x 12	0.12	2,624	12	5,600	2,240	UPL1C821M1012
	1,000	10 x 12	0.12	3,200	12	5,600	2,240	UPL1C102M1012
	• 1,200	8 x 17	0.12	3,840	13	7,000	2,500	UPL1C122M0817
	1,200	10 x 12	0.12	3,840	12	5,600	2,240	UPL1C122M1012
	• 1,500	8 x 21	0.12	4,800	13	7,500	2,800	UPL1C152M0821
	1,500	10 x 12	0.12	4,800	12	5,600	2,240	UPL1C152M1012
	• 2,200	10 x 17	0.12	7,040	13	8,000	3,200	UPL1C222M1017
• 2,500	10 x 21	0.12	8,000	13	10,000	4,000	UPL1C252M1021	
25 (1E)	100	8 x 8	0.12	500	24	2,900	1,160	UPL1E101M0808
	150	8 x 8	0.12	750	24	2,900	1,160	UPL1E151M0808
	220	8 x 12	0.12	1,100	18	4,250	1,700	UPL1E221M0812
	330	8 x 12	0.12	1,650	18	4,250	1,700	UPL1E331M0812
	470	8 x 12	0.12	2,350	18	4,250	1,700	UPL1E471M0812
	470	10 x 12	0.12	2,350	16	4,700	1,880	UPL1E471M1012
	560	10 x 12	0.12	2,800	16	4,700	1,880	UPL1E561M1012
	680	10 x 12	0.12	3,400	16	4,700	1,880	UPL1E681M1012
	1,200	10 x 17	0.12	6,000	14	5,000	2,000	UPL1E122M1017
	1,800	10 x 21	0.12	9,000	14	5,400	2,160	UPL1E182M1021
35 (1V)	47	8 x 8	0.12	329	30	2,600	1,040	UPL1V470M0808
	68	8 x 8	0.12	476	30	2,600	1,040	UPL1V680M0808
	100	8 x 12	0.12	700	26	2,950	1,180	UPL1V101M0812
	150	8 x 12	0.12	1,050	26	2,950	1,180	UPL1V151M0812
	180	8 x 12	0.12	1,260	26	2,950	1,180	UPL1V181M0812
	220	8 x 12	0.12	1,540	26	2,950	1,180	UPL1V221M0812
	220	10 x 12	0.12	1,540	24	3,400	1,360	UPL1V221M1012
	330	10 x 12	0.12	2,310	24	3,400	1,360	UPL1V331M1012
	1,000	10 x 21	0.12	7,000	24	4,580	1,830	UPL1V102M1021
50 (1H)	47	8 x 12	0.12	470	32	2,250	900	UPL1H470M0812
	68	8 x 12	0.12	680	32	2,250	900	UPL1H680M0812
	82	8 x 12	0.12	820	32	2,250	900	UPL1H820M0812
	120	8 x 12	0.12	1,200	32	2,250	900	UPL1H121M0812
	120	10 x 12	0.12	1,200	28	2,620	1,040	UPL1H121M1012
	180	10 x 12	0.12	1,800	28	2,620	1,040	UPL1H181M1012
	220	10 x 12	0.12	2,200	28	2,620	1,040	UPL1H221M1012
	470	10 x 21	0.12	4,700	28	4,250	1,700	UPL1H471M1021

定格電圧 Rated voltage (V.DC)	静電容量範囲 Rated Capacitance (μF)	ケースサイズ Case Size D x L (mm)	tan δ	漏れ電流 Leakage Current (μA)	等価直列抵抗 ESR (mΩ max./20°C 100KHz ~ 300KHz)	定格リップル電流 Rated ripple current (mA rms, 100KHz)		品番 Part Number
						Tx ≤ 105°C	105°C < Tx ≤ 125°C	
63 (1J)	82	8 x 12	0.12	1,033	32	2,100	840	UPL1J820M0812
	100	8 x 12	0.12	1,260	32	2,100	840	UPL1J101M0812
	150	10 x 12	0.12	1,890	28	2,550	1,020	UPL1J151M1012
	180	10 x 12	0.12	2,268	28	2,550	1,020	UPL1J181M1012
	330	10 x 21	0.12	4,158	28	3,570	1,420	UPL1J331M1021
100 (2A)	22	8 x 12	0.12	440	40	1,850	740	UPL2A220M0812
	33	10 x 12	0.12	660	38	2,100	840	UPL2A330M1012
	47	10 x 12	0.12	940	38	2,100	840	UPL2A470M1012
	100	10 x 21	0.12	2,000	36	2,940	1,180	UPL2A101M1021
160 (2C)	4.7	8 x 12	0.12	150	130	720	280	UPL2C4R7M0812
	6.8	8 x 12	0.12	217	130	720	280	UPL2C6R8M0812
	12	10 x 12	0.12	384	130	960	380	UPL2C120M1012

■ 許容リップル電流の周波数係数 Frequency coefficient of allowable ripple current

周波数 Frequency	120 Hz ≤ f < 1 KHz	1 KHz ≤ f < 10 KHz	10 KHz ≤ f < 100 KHz	100 KHz ≤ f ≤ 300 KHz
係数 Coefficient	0.05	0.30	0.70	1.00