UCK チップ，標準品 Series, SMD 105°C, Standard

- 小形・薄形セットへの高密度表面実装に対応
  Chip type for high-density circuit use
- 105℃ 2,000時間保証
  Load life: 2,000 hours
- 定格電圧範囲 Rated voltage range：4～450V
- 静電容量範囲 Capacitance range： 0.1～6800μF
- 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 ~ +105°C
定格電圧範囲 Rated Voltage Range	4V ~ 450V
静電容量範囲 Nominal Capacitance Range	0.1 ~ 6800 μF
静電容量許容差 Capacitance Tolerance	±20% (120Hz, 20°C)
漏れ電流 Leakage Current	I ≤ 0.01CV 又は 3 μA のいずれか大きい値以下(2 分値) I ≤ 0.01CV or 3 μA whichever is greater, after 2 minutes application of rated voltage.

損失角の正接 Dissipation Factor

定格電圧(V) Rated voltage		4	6.3	10	16	25	35	50	63	100	160~250	350~450
tan δ (max.)	φ4~10	0.42	0.30	0.22	0.22	0.16	0.14	0.12	0.10	0.10	0.20	0.25
	φ12.5~16	0.45	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25

1,000μF を越えるものについては, 1,000μF を増す毎に 0.02 を加えた値とする。
For capacitance of more than 1,000μF, add 0.02 for every increase of 1,000 μF (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		4	6.3	10	16	25	35	50	63	100	160~250	350~450
φ4~10	Z(-25°C) / Z(+20°C)	7	4	3	2	2	2	2	2	3	2	3
	Z(-40°C) / Z(+20°C)	15	8	6	4	4	3	3	3	4	3	6
φ12.5~16	Z(-25°C) / Z(+20°C)	7	5	4	3	2	2	2	2	2	2	4
	Z(-40°C) / Z(+20°C)	15	12	10	6	5	4	3	3	3	6	10

高温負荷特性 Load Life

105℃ 2,000 時間定格電圧連続印加後、20℃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 105°C, capacitor meet the characteristic requirements as below.

静電容量変化率 Capacitance change	初期値の±30%以内/4V、±20%以内/6.3~450V Within ±30%/4V、±20%/6.3~450V 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

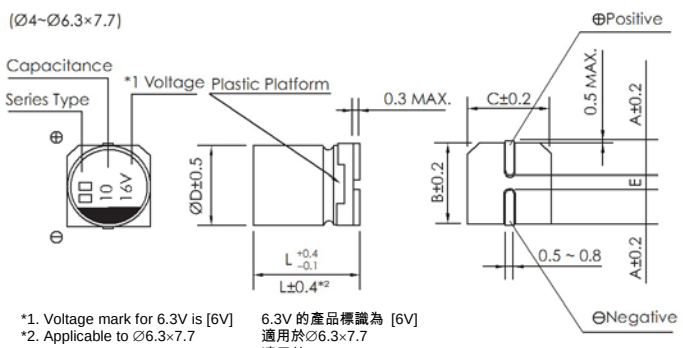
105°C 1,000 時間無負荷放置後,下記規格を満足する。(但し,JIS C-5101-4 4.1 項の電圧処理後)
After storing the capacitors under no load at 105°C for 1,000 hours, capacitors meet the characteristic requirements as below. Be sure to apply voltage to the capacitors before test according to JIS-C-5101-4 4.1

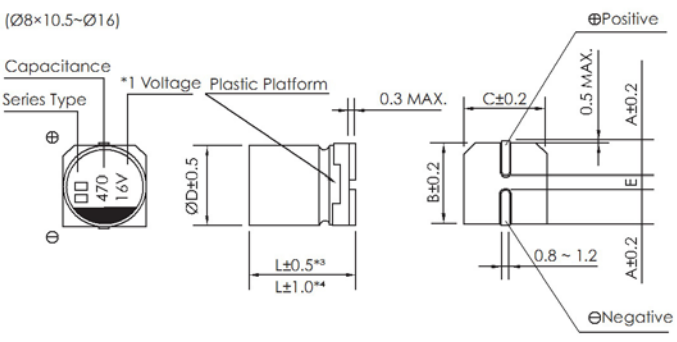
はんだ耐熱性 Resistance to soldering heat

電極端子面を 250℃の熱板上に 30 秒間放置後、20℃に戻し測定を行ったとき、下記項目を満足する
Capacitors placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following requirements after being cooled to room temperature.

静電容量変化率 Capacitance change	初期値の±10%以内 Within ±10% of initial value
損失角の正接 Dissipation Factor	初期規格値以下 Initial specified value or less
漏れ電流 Leakage current	初期規格値以下 Initial specified value or less

■ 寸法図 Dimensions





*1. Voltage mark for 6.3V is [6V] 6.3V 的產品標識為 [6V]
*2. Applicable to ∅6.3×7.7 適用於∅6.3×7.7
*3. Applicable to ∅8×10.5~∅10 適用於∅8×10.5~∅10
*4. Applicable to ∅12.5~∅16 適用於∅12.5~∅16

ØD x L	4 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 7.7	8 x 10.5	10 x 10.5	10 x 13.5	12.5 x 13.5	12.5 x 16	16 x 16.5
A	2.0	2.2	2.6	2.6	3.0	3.3	3.3	4.9	4.9	5.8
B	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.4	10.4	10.4	13.0	13.0	17.0
E ± 0.2	1.0	1.4	1.9	1.9	3.1	4.7	4.7	4.7	4.7	6.4
L	5.4	5.4	5.4	7.7	10.5	10.5	13.5	13.5	16.0	16.5

■ 品名コード体系 Part Numbering (例 example: 25V 100 µF)

U	C	K	1	E	1	0	1	M		

シリーズ名 Series Name / 定格電圧 Rated Voltage / 静電容量 Capacitance / 容量許容差 Capacitance Tolerance (±20%) / 個別指定 Reserved

■ 許容リプル電流周波数補正係数 Frequency coefficient of allowable ripple current

Frequency 頻率			50Hz	120Hz	300Hz	1KHz	10KHz~
Coefficient 系數	∅4 ~ ∅10	0.1 ~ 68µF	0.70	1.00	1.17	1.36	1.50
		100 ~ 3300µF	0.85	1.00	1.08	1.20	1.30
	∅12.5 ~ ∅16	~ 68µF	0.75	1.00	1.35	1.57	2.00
		100 ~ 680µF	0.80	1.00	1.23	1.34	1.50
		1000 ~ 6800µF	0.85	1.00	1.10	1.13	1.15

■ 寸法表 Standard Products Table

WV / Code / Cap. (µF)		4		6.3		10		16		25	
		0G		0J		1A		1C		1E	
4.7	4R7							4 × 5.4	13	4 × 5.4	14
10	100							4 × 5.4	19	5 × 5.4 (4 × 5.4)	23 (16)
22	220	4 × 5.4	20	4 × 5.4	23	5 × 5.4 (4 × 5.4)	29 (20)	5 × 5.4 (4 × 5.4)	32 (25)	6.3 × 5.4 (5 × 5.4)	39 (32)
33	330	5 × 5.4 (4 × 5.4)	30 (25)	5 × 5.4 (4 × 5.4)	32 (30)	5 × 5.4 (4 × 5.4)	35 (22)	6.3 × 5.4 (5 × 5.4)	45 (35)	6.3 × 5.4 (5 × 5.4)	48 (35)
47	470	5 × 5.4 (4 × 5.4)	36 (30)	5 × 5.4 (4 × 5.4)	38 (35)	5 × 5.4	38	6.3 × 5.4 (5 × 5.4)	55 (40)	6.3 × 5.4 (5 × 5.4)	55 (40)
68	680									6.3 × 5.4	60
100	101	6.3 × 5.4 (5 × 5.4)	60 (49)	6.3 × 5.4 (5 × 5.4)	65 (54)	6.3 × 5.4 (5 × 5.4)	70 (60)	6.3 × 5.4	80	6.3 × 7.7 (6.3 × 5.4)	100 (80)
150	151	6.3 × 5.4	70	6.3 × 5.4	55	6.3 × 5.4	62	6.3 × 7.7	105	8 × 10.5 (6.3 × 7.7)	140 (120)
220	221	6.3 × 5.4	85	6.3 × 7.7 (6.3 × 5.4)	120 (95)	6.3 × 7.7 (6.3 × 5.4)	120 (95)	8 × 10.5 (6.3 × 7.7)	180 (120)	8 × 10.5	200
330	331	6.3 × 7.7	100	6.3 × 7.7	120	8 × 10.5 (6.3 × 7.7)	200 (135)	8 × 10.5	220	10 × 10.5 (8 × 10.5)	240 (250)
470	471	6.3 × 7.7	105	8 × 10.5 (6.3 × 7.7)	230 (120)	10 × 10.5 (8 × 10.5)	270 (230)	10 × 10.5 (8 × 10.5)	300 (270)	10 × 10.5	280
680	681	8 × 10.5	210	8 × 10.5	230	10 × 10.5 (8 × 10.5)	270 (220)	10 × 10.5	315	10 × 13.5	400
1000	102	8 × 10.5	230	10 × 10.5 (8 × 10.5)	340 (290)	10 × 10.5	315	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	500 (390) (340)	12.5 × 13.5	580
1500	152	10 × 10.5	315	10 × 13.5 (10 × 10.5)	450 (410)	10 × 13.5	460	12.5 × 13.5	550	12.5 × 16	850
2200	222	10 × 13.5 (10 × 10.5)	440 (340)	12.5 × 13.5 (10 × 13.5)	620 (500)	12.5 × 13.5	680	16 × 16.5 (12.5 × 16)	950 (750)	16 × 16.5	1050
3300	332	10 × 13.5	490	12.5 × 16 (12.5 × 13.5)	700 (660)	16 × 16.5	1000	16 × 16.5	1000		
4700	472	12.5 × 13.5	600	16 × 16.5	1000					Case size 尺寸	Ripple current 紋波電流
6800	682	16 × 16.5 (12.5 × 16)	950 (650)								

チップ形アルミ電解コンデンサ CHIP TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Cap. (μF) \ WV / Code		35		50		63		100	
		1V		1H		1J		2A	
0.1	0R1			4 × 5.4	2	4 × 5.4	2		
0.22	R22			4 × 5.4	4	4 × 5.4	4		
0.33	R33			4 × 5.4	4	4 × 5.4	4		
0.47	R47			4 × 5.4	5	4 × 5.4	5		
1	010			4 × 5.4	8	4 × 5.4	8	4 × 5.4	8
2.2	2R2			4 × 5.4	11	4 × 5.4	11	6.3 × 5.4 (5 × 5.4)	14 (12)
3.3	3R3	4 × 5.4	13	4 × 5.4	14	5 × 5.4	14	6.3 × 7.7 (6.3 × 5.4)	32 (20)
4.7	4R7	4 × 5.4	15	5 × 5.4 (4 × 5.4)	19 (14)	5 × 5.4	19	6.3 × 7.7 (6.3 × 5.4)	35 (21)
10	100	5 × 5.4 (4 × 5.4)	25 (18)	6.3 × 5.4 (5 × 5.4)	31 (20)	6.3 × 7.7 (6.3 × 5.4)	39 (24)	8 × 10.5 (6.3 × 7.7)	77 (35)
22	220	6.3 × 5.4 (5 × 5.4)	42 (34)	6.3 × 7.7 (6.3 × 5.4)	51 (42)	8 × 10.5 (6.3 × 7.7)	98 (49)	10 × 10.5 (8 × 10.5)	126 (84)
33	330	6.3 × 5.4	50	6.3 × 7.7	60	8 × 10.5	112	10 × 10.5	133
47	470	6.3 × 7.7 (6.3 × 5.4)	78 (58)	8 × 10.5 (6.3 × 7.7)	120 (63)	10 × 10.5 (8 × 10.5)	160 (119)	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	250 (160) (140)
68	680					Case size 尺寸	Ripple current 紋波電流	12.5 × 13.5 (10 × 13.5)	300 (180)

Cap. (μF) \ WV / Code		35		50		63		100		160	
		1V		1H		1J		2A		2C	
22	220									10 × 13.5	50
33	330									12.5 × 13.5	95
47	470									12.5 × 13.5 (16 × 16.5)	205 (240)
100	101	8 × 10.5 (6.3 × 7.7)	150 (92)	10 × 10.5 (8 × 10.5)	180 (160)	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	270 (210) (196)	16 × 16.5 (12.5 x 13.5)	450 (380)	16 × 16.5	250
150	151	8 × 10.5	185	10 × 10.5	200	10 × 13.5	225				
220	221	10 × 10.5 (8 × 10.5)	250 (220)	10 × 13.5 (10 × 10.5)	280 (220)	16 × 16.5 (12.5 × 13.5)	560 (470)	16 × 16.5	550		
330	331	10 × 10.5	300	16 × 16.5 (12.5 × 13.5) (10 × 13.5)	600 (420) (295)	16 × 16.5 (12.5 × 16)	700 (510)				
470	471	12.5 × 13.5 (10 × 13.5) (10 × 10.5)	520 (375) (310)	16 × 16.5 (12.5 × 16) (12.5 × 13.5)	700 (520) (470)	16 × 16.5	750				
680	681	12.5 × 13.5	530	16 × 16.5	750						
1000	102	16 × 16.5 (12.5 × 16)	750 (600)							Case size 尺寸	Ripple current 紋波電流
1500	152	16 × 16.5	750								

Cap. (μF) \ WV / Code		200		250		350		400		450	
		2D		2E		2V		2G		2W	
3.3	3R3							10 × 13.5 (8 × 10.5)	40 (35)	10 × 13.5 (8 × 12.5)	40 (38)
4.7	4R7			10 × 13.5	75	10 × 13.5	85	10 × 13.5 (12.5 × 13.5)	45 (48)	10 × 13.5 (12.5 × 13.5)	42 45
10	100	10 × 13.5	75	10 × 13.5	75	12.5 × 13.5	105	12.5 × 13.5	50	12.5 × 13.5	55
22	220	12.5 × 13.5	105	12.5 × 13.5	105	16 × 16.5	130	16 × 16.5	85	16 × 16.5	85
33	330	12.5 × 13.5	120	16 × 16.5	135					Case size 尺寸	Ripple current 紋波電流
47	470	16 × 16.5	220								

Allowable Ripple Current/定格リプル電流 (mArms) at 105℃ 120Hz