

# UKZ チップ 低インピーダンス品

Series, SMD 105°C, Low Impedance

- 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°C 1,000~3,000時間保証  
Load life: 1,000~3,000 hours
- 定格電圧範囲 Rated voltage range : 6.3 ~ 50V
- 静電容量範囲 Capacitance range : 4.7 ~ 4,700μF
- RoHS指令対応済/RoHS Compliant

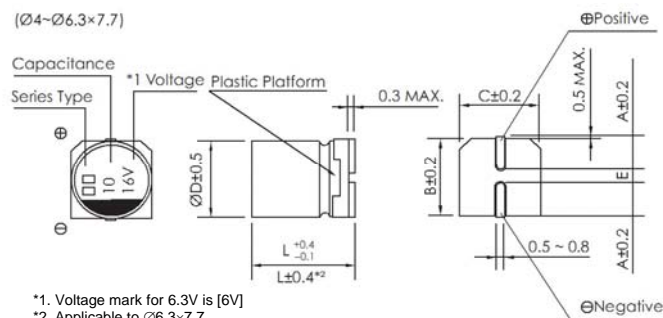


## 仕様 SPECIFICATIONS

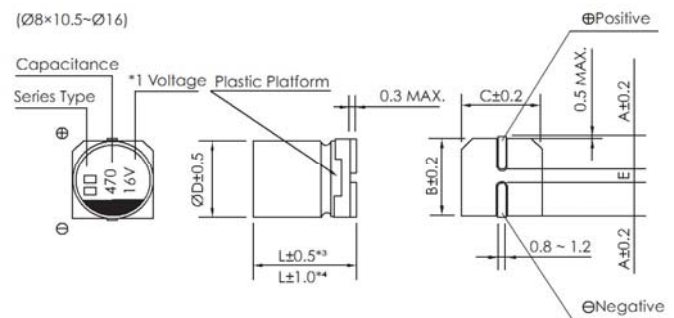
項目 Items	特性 Characteristics								
カテゴリ温度範囲 Operating Temperature Range	-55 ~ +105°C								
定格電圧範囲 Rated Voltage Range	6.3V ~ 50V								
静電容量範囲 Nominal Capacitance Range	4.7 ~ 4700 μF								
静電容量許容差 Capacitance Tolerance	±20% (120Hz, 20°C)								
漏れ電流 Leakage Current	φ4~10	I ≤ 0.01CV 又は 3 μA のい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.							
	φ12.5~16	I ≤ 0.03CV 又は 4 μA のいずれか大きい値以下(1分値) I ≤ 0.03CV or 4 μA whichever is greater, after 1 minutes 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		
	tan δ (max.)	φ4~10 φ12.5~16	0.22 0.26	0.19 0.22	0.16 0.18	0.14 0.16	0.12 0.14	0.12 0.12	
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		6.3	10	16	25	35	50	
	インピーダンス比 Impedance Ratio	φ4~10	Z(-25°C) / Z(+20°C)	2	2	2	2	2	2
			Z(-55°C) / Z(+20°C)	5	4	4	3	3	3
Z <sub>T</sub> /Z <sub>0</sub> (max)	φ12.5~16	Z(-25°C) / Z(+20°C)	3	3	2	2	2	2	
Z(-55°C) / Z(+20°C)	10	8	6	4	3	3			
高温負荷特性 Load Life	105°C 3,000(φ4~φ6.3×5.8 は 1,000 時間) (φ6.3×7.7~φ8×10.5 は 2,000 時間)時間定格電圧連続印加後、20°Cに直し測定を行ったとき、下記項目を満足する After 3,000(1000 hrs. for φ4~φ6.3×5.8) (2000 hrs. for φ6.3×7.7 ~ 8×10.5) 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±25%以内 Within ±25% 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、上記高温負荷特性の規格を満足する。(但し、JIS C-5101 4.4.1 項の電圧処理後) After leaving capacitors under no load at 105°C for 1,000 hours and applying voltage according to JIS C5101 4.4.1 they meet the specified value for load life characteristics listed above.							
はんだ耐熱性 Resistance to soldering heat	電極端子面を 250°Cの熱板上に 30 秒間放置後、20°Cに直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

(φ4~φ6.3×7.7)



(φ8×10.5~φ16)



\*1. Voltage mark for 6.3V is [6V]  
 \*2. Applicable to φ6.3×7.7  
 \*3. Applicable to φ8×10.5~φ10  
 \*4. Applicable to φ12.5~φ16

∅D x L	4 x 5.8	5 x 5.8	6.3 x 5.8	6.3 x 7.7	8 x 6.5	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	3.0	3.3	3.3	4.9	4.9	5.8
B	4.3	5.3	6.6	6.6	8.4	8.4	10.4	10.4	13.0	13.0	17.0
C	4.3	5.3	6.6	6.6	8.4	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	3.1	4.7	4.7	4.7	4.7	6.4
L	5.8	5.8	5.8	7.7	6.5	10.5	10.5	13.5	13.5	16.0	16.5

品名コード体系 Part Numbering (例 example: 25V 470 μF)

U	K	Z	1	E	4	7	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		個別指定 Reserved		
		Tolerance (±20%)								

許容リッ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 系数	∅4 ~ ∅10	4.7 ~ 68μF	0.35	0.50	0.64	0.83	1.00
		100 ~ 1500μF	0.40	0.55	0.70	0.85	1.00
	∅12.5 ~ ∅16	~ 68μF	0.40	0.55	0.70	0.85	1.00
		100 ~ 680μF	0.40	0.65	0.80	0.90	1.00
		1000 ~ 4700μF	0.65	0.85	0.95	1.00	1.00

□ DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE 規格尺寸及最大允許紋波電流及阻抗值

μF	WV Code 代碼	6.3			10			16		
		0J			1A			1C		
10	100							4 x 5.8	1.8	80
15	150							4 x 5.8	1.8	80
22	220	4 x 5.8	1.8	80	4 x 5.8	1.8	80	5 x 5.8 (4 x 5.8)	0.76 (1.8)	150 (80)
33	330	5 x 5.8 (4 x 5.8)	0.76 (1.8)	150 (80)	5 x 5.8 (4 x 5.8)	0.76 (1.8)	150 (80)	6.3 x 5.8 (5 x 5.8)	0.44 (0.76)	230 (150)
47	470	5 x 5.8 (4 x 5.8)	0.76 (0.76)	230 (150)	6.3 x 5.8 (5 x 5.8)	0.44 (0.76)	230 (150)	6.3 x 5.8 (5 x 5.8)	0.44 (0.76)	230 (150)
68	680	6.3 x 5.8 (5 x 5.8)	0.44 (0.76)	230 (150)	6.3 x 5.8	0.44	230	6.3 x 7.7 (6.3 x 5.8)	0.34 (0.44)	280 (230)
100	101	6.3 x 5.8 (5 x 5.8)	0.44 (0.76)	230 (150)	6.3 x 7.7 (6.3 x 5.8)	0.34 (0.44)	280 (230)	6.3 x 7.7 (6.3 x 5.8)	0.34 (0.44)	280 (230)
150	151	6.3 x 5.8	0.44	220	6.3 x 7.7	0.34	280	6.3 x 7.7	0.34	280
220	221	6.3 x 7.7 (6.3 x 5.8)	0.34 (0.44)	280 (230)	6.3 x 7.7	0.34	280	8 x 10.5 (6.3 x 7.7)	0.17 (0.34)	450 (280)
330	331	6.3 x 7.7	0.34	280	8 x 10.5	0.17	450	10 x 10.5 (8 x 10.5)	0.09 (0.17)	670 (450)
470	471	8 x 10.5	0.17	450	8 x 10.5	0.17	450	10 x 10.5 (8 x 10.5)	0.09 (0.17)	670 (450)
680	681	10 x 10.5 (8 x 10.5)	0.09 (0.17)	670 (450)	10 x 10.5	0.09	670	10 x 13.5 (10 x 10.5)	0.075 (0.09)	800 (670)
1000	102	10 x 10.5 (8 x 10.5)	0.09 (0.17)	670 (450)	10 x 10.5	0.09	670	12.5 x 16	0.060	1050
1500	152	10 x 13.5 (10 x 10.5)	0.075 (0.09)	800 (670)	12.5 x 13.5	0.065	900	16 x 16.5	0.055	1350
2200	222	12.5 x 13.5	0.065	900	12.5 x 16	0.060	1050	16 x 16.5	0.055	1350
3300	332	12.5 x 16	0.060	1050	16 x 16.5	0.055	1350	Case size ∅D x L (mm) 尺寸	Impedance (Ω) at 20°C, 100KHz 阻抗值	Ripple current (mA rms) at 105°C, 100KHz 紋波電流
4700	472	16 x 16.5	0.055	1350						

□ DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT & IMPEDANCE 規格尺寸及最大允許紋波電流及阻抗值

μF	WV Code 代碼	25			35			50		
		1E			1V			1H		
4.7	4R7				4 × 5.8	1.8	80	5 × 5.8 (4 × 5.8)	1.52 (3.0)	85 (60)
10	100	4 × 5.8	1.8	80	5 × 5.8 (4 × 5.8)	0.76 (1.8)	150 (80)	6.3 × 5.8 (5 × 5.8)	0.88 (1.52)	160 (85)
15	150	5 × 5.8	0.76	150	5 × 5.8	0.76	150	6.3 × 5.8	0.88	165
22	220	6.3 × 5.8 (5 × 5.8)	0.44 (0.76)	230 (150)	6.3 × 5.8 (5 × 5.8)	0.44 (0.76)	230 (150)	6.3 × 7.7 (6.3 × 5.8)	0.68 (0.88)	185 (165)
33	330	6.3 × 5.8 (5 × 5.8)	0.44 (0.76)	230 (150)	6.3 × 5.8	0.44	220	6.3 × 7.7	0.68	185
47	470	6.3 × 7.7 (6.3 × 5.8)	0.34 (0.44)	280 (230)	6.3 × 7.7 (6.3 × 5.8)	0.34 (0.44)	280 (230)	6.3 × 7.7	0.68	185
68	680	6.3 × 7.7	0.34	280	6.3 × 7.7	0.34	280	8 × 10.5	0.34	350
100	101	6.3 × 7.7	0.34	280	8 × 10.5	0.17	450	10 × 10.5 (8 × 10.5)	0.18 (0.34)	670 (350)
150	151	8 × 10.5 (6.3 × 7.7)	0.17 (0.34)	450 (280)	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)	10 × 10.5	0.18	670
220	221	8 × 10.5	0.17	450	10 × 10.5	0.09	670	10 × 13.5 (10 × 10.5)	0.16 (0.18)	750 (670)
330	331	10 × 10.5 (8 × 10.5)	0.09 (0.17)	670 (450)	10 × 10.5	0.09	670	12.5 × 13.5	0.14	800
470	471	10 × 13.5 (10 × 10.5)	0.075 (0.09)	800 (670)	12.5 × 13.5 (10 × 13.5)	0.065 (0.075)	900 (800)	16 × 16.5 (12.5 × 16)	0.10 (0.12)	1150 (900)
680	681	12.5 × 13.5	0.65	900	12.5 × 16 (12.5 × 13.5)	0.060 (0.006)	1350 (1065)			
1000	102	16 × 16.5 (12.5 × 16)	0.055 (0.006)	1350 (1050)	16 × 16.5	0.055	1350			
1500	152	16 × 16.5	0.055	1350				Case size ∅D×L(mm) 尺寸	Impedance (Ω) at 20°C, 100KHz 阻抗值	Ripple current (mA rms) at 105°C, 100KHz 紋波電流
2200	222									