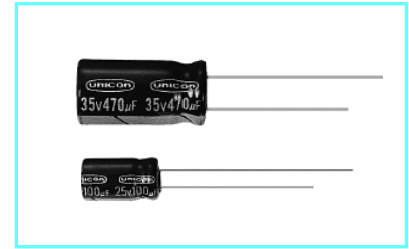


GUM シリーズ 標準品

Series, 105°C, Standard

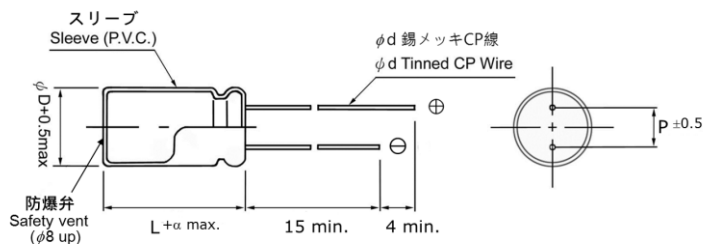
- 民生機器用標準品
Standard for general purpose use
- 105°C 2,000時間保証
Load life: 2,000 hours
- 定格電圧範囲 Rated voltage range : 6.3 ~ 450V
- 静電容量範囲 Capacitance range : 0.22 ~ 22,000 μ F
- RoHS指令対応済/RoHS Compliant



仕様 SPECIFICATIONS

項目 Items	特性 Characteristics											
カテゴリ温度範囲 Operating Temperature Range	-55 ~ +105°C (6.3~100V) / -40 ~ +105°C (160~400V) / -25 ~ +105°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 ~ 15,000 μ 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 μ A のいずれかが大きい値以下(1分値) I \leq 0.03CV or 4 μ A whichever is greater, after 1 minute application of rated voltage. I \leq 0.01CV 又は 3 μ A のいずれかが大きい値以下(2分値) I \leq 0.01CV or 3 μ A whichever is greater, after 2 minutes application of rated voltage.						CV \leq 1,000 : I = 0.1CV + 40 μ A 以下(1分値) : I = 0.1CV + 40 μ A or less after 1 minute application of rated voltage. CV > 1,000 : I = 0.04CV + 100 μ A 以下(1分値) : I = 0.04CV + 100 μ 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 δ (max.)	0.24	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.20	0.25	
1,000 μ F を越えるものについては、1,000 μ F を増す毎に 0.02 を加えた値とする。 For capacitance of more than 1,000 μ F, add 0.02 for every increase of 1,000 μ 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)	4	3	2	2	2	2	2	4	4	6	
Z(-40°C) / Z(+20°C) 8 6 4 3 3 3 3 15 10 -												
高温負荷特性 Load Life	105°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 105°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	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-5102 4.4 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											
	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											

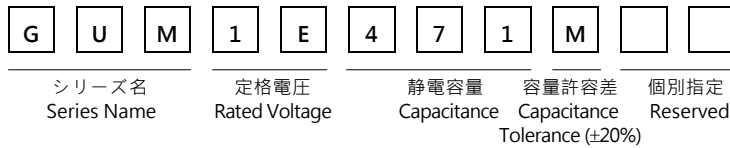
寸法図 Dimensions



unit: mm

ϕ D	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ϕ d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	L < 20 : 1.5, L \geq 20 : 2.0						

■ 品名コード体系 Part Numbering (例 example: 25V 470 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)	
		0.22	R22											5x11	2		
0.33	R33											5x11	3			5x11	7
0.47	R47											5x11	5			5x11	10
1	1R0											5x11	13			5x11	15
2.2	2R2											5x11	20			5x11	21
3.3	3R3											5x11	25			5x11	29
4.7	4R7											5x11	30			5x11	32
10	100											5x11	40	5x11	46	6.3x11	54
22	220								5x11	55	5x11	65	5x11	71	8x11.5	93	
33	330							5x11	65	5x11	70	5x11	90	6.3x11	100	8x11.5	130
47	470					5x11	70	5x11	80	5x11	90	6.3x11	110	6.3x11	120	10x12.5	165
100	101			5x11	145	5x11	110	6.3x11	130	6.3x11	150	8x11.5	180	10x12.5	215	10x20	265
220	221	5x11	140	6.3x11	170	6.3x11	180	8x11.5	230	8x11.5	270	10x12.5	300	10x16	335	12.5x25	440
330	331	6.3x11	190	6.3x11	200	8x11.5	260	8x11.5	310	10x12.5	350	10x16	410	10x20	510	16x25	540
470	471	6.3x11	230	8x11	250	8x11.5	310	10x12.5	380	10x16	460	10x20	530	12.5x20	640	16x31.5	715
1000	102	8x11.5	380	10x12.5	460	10x16	560	10x20	680	12.5x20	810	12.5x25	950	16x25	930	18x40	985
2200	222	10x20	710	10x20	760	12.5x20	920	12.5x25	1090	16x25	1260	16x35.5	1470				
3300	332	10x20	840	12.5x20	1000	12.5x25	1170	16x25	1400	16x35.5	1610	18x35.5	1770				
4700	472	12.5x20	1090	12.5x25	1260	16x25	1480	16x31.5	1710	18x35.5	1910						
6800	682	12.5x25	1350	16x25	1570	16x31.5	1780	18x35.5	2040								
10000	103	16x25	1650	16x35.5	1890	18x35.5	2060										
15000	153	16x35.5	2010	18x35.5	2180												
22000	223	18x40	2350														Size (mm) R.C.

Cap. (μF)	W.V. Code	160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)	
		1	1R0							6.3x11	15	6.3x11	15
2.2	2R2					6.3x11	23	8x11.5	26	8x11.5	26	10x12.5	23
3.3	3R3	6.3x11	28	6.3x11	28	8x11.5	32	10x12.5	38	10x12.5	38	10x16	31
4.7	4R7	6.3x11	34	8x11.5	39	8x11.5	39	10x16	50	10x16	50	10x20	40
10	100	10x12.5	67	10x16	74	10x16	74	10x20	80	10x20	80	12.5x20	65
22	220	10x20	120	10x20	120	12.5x20	130	12.5x20	130	12.5x25	145	16x25	115
33	330	10x20	145	12.5x20	160	12.5x20	160	16x25	195	16x25	195	16x31.5	155
47	470	12.5x20	195	12.5x20	195	12.5x25	210	16x25	230	16x31.5	250	16x35.5	185
100	101	16x25	335	16x25	335	16x31.5	365	18x31.5	375	16x40	350		
220	221	16x31.5	540	18x35.5	575	18x40	585						
330	331	18x35.5	705										Size (mm) R.C.

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

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

周波数 (Hz) Cap (μF)	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz	100 KHz
1.0 ~ 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 ~ 47	0.75	1.00	1.25	1.50	1.75	1.80
100 ~ 1000	0.80	1.00	1.15	1.30	1.40	1.50
2200 ~	0.85	1.00	1.03	1.05	1.08	1.08