

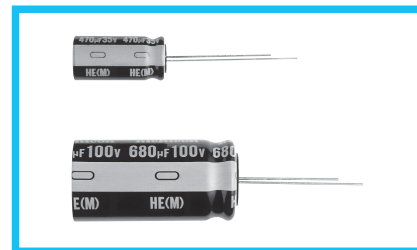
UHE

Miniature Sized, Low Impedance, High Reliability



- Low impedance and high reliability withstanding 4000 hours to 10000 hours.
- Compliant to the RoHS directive (2011/65/EU).

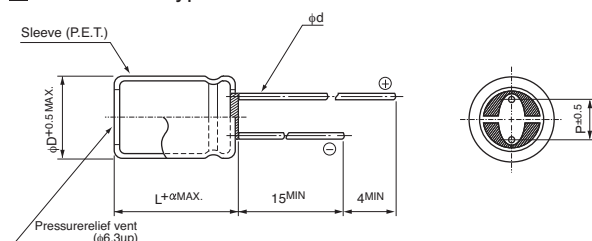
Values marked with an ✖ in the dimension table are scheduled to be discontinued and are not recommended for new designs.



■ Specifications

[illegible]

■ Radial Lead Type



		(mm)							
α	(L < 20) 1.5	ϕD	5	6.3	8	10	12.5	16	18
	(L $\geq$ 20) 2.0	P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
		ϕd	0.5	0.5	0.6	0.6	0.6 [※]	0.8	0.8

※In case $L > 25$ for the $\phi 12.5$ dia. unit, lead dia. $\phi d = 0.8\text{mm}$

- Please refer to page 20 about the end seal configuration.

- Frequency coefficient of rated ripple current

Cap. (µF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
0.47 to 33		0.45	0.55	0.70	0.90	1.00
39 to 330		0.60	0.70	0.85	0.95	1.00
390 to 1000		0.65	0.75	0.90	0.98	1.00
1200 to 18000		0.75	0.80	0.95	1.00	1.00

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

●Dimension table in next page.

Type numbering system (Example : 10V 1000 μ F)

1 2 3 4 5 6 7 8 9 10 11 12

U H E 1 A 1 0 2 M P D

Size code

Configuration ※

Capacitance tolerance (±20%)

Rated capacitance (1000µF)

Rated voltage (10V)

Series name

Type

✧ Configuration

ϕ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 to 18	HD

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■ Standard Ratings

V (Code) Cap.(μF) Code		Item	6.3 (0J)				10 (1A)			
			Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz
				20°C / 100kHz	−10°C / 100kHz			20°C / 100kHz	−10°C / 100kHz	
100	101					5 × 11	0.58	2.3	210	
150	151	5 × 11	0.58	2.3	210					
220	221					6.3 × 11	0.22	0.87	340	
330	331	6.3 × 11	0.22	0.87	340					
470	471					8 × 11.5	0.13	0.52	640	
680	681	8 × 11.5	0.13	0.52	640	8 × 15	0.087	0.35	840	
						▲ 10 × 12.5	0.080	0.32	865	
820	821	10 × 12.5	0.080	0.32	865					
1000	102	8 × 15	0.087	0.35	840	8 × 20	0.069	0.27	1050	
						▲ 10 × 16	0.060	0.24	1210	
1200	122	8 × 20	0.069	0.27	1050	10 × 20	0.046	0.18	1400	
		▲ 10 × 16	0.060	0.24	1210					
1500	152	10 × 20	0.046	0.18	1400	10 × 25	0.042	0.17	1650	
						▲ 12.5 × 15	0.049	0.16	1450	
1800	182	12.5 × 15	0.049	0.16	1450					
2200	222	10 × 25	0.042	0.17	1650	10 × 31.5	0.031	0.12	1910	
						▲ 12.5 × 20	0.035	0.12	1900	
						● 16 × 15	0.042	0.12	1940	
2700	272	▲ 10 × 31.5	0.031	0.12	1910	18 × 15	0.043	0.11	2210	
		16 × 15	0.042	0.12	1940					
3300	332	12.5 × 20	0.035	0.12	1900	12.5 × 25	0.027	0.089	2230	
3900	392	12.5 × 25	0.027	0.089	2230	12.5 × 31.5	0.024	0.078	2650	
		▲ 18 × 15	0.043	0.11	2210	▲ 16 × 20	0.027	0.078	2530	
4700	472	12.5 × 31.5	0.024	0.078	2650	12.5 × 35.5	0.020	0.065	2880	
5600	562	12.5 × 35.5	0.020	0.065	2880	12.5 × 40	0.017	0.056	3350	
		▲ 16 × 20	0.027	0.078	2530	▲ 16 × 25	0.021	0.060	2930	
						● 18 × 20	0.026	0.067	2860	
6800	682	12.5 × 40	0.017	0.056	3350	16 × 31.5	0.017	0.050	3450	
		▲ 16 × 25	0.021	0.060	2930					
		● 18 × 20	0.026	0.067	2860					▲ 18 × 25
8200	822	16 × 31.5	0.017	0.050	3450	16 × 35.5	0.015	0.044	3610	
						▲ 18 × 31.5	0.015	0.040	4170	
10000	103	16 × 35.5	0.015	0.044	3610	16 × 40	0.013	0.038	4080	
		▲ 18 × 25	0.019	0.049	3140	▲ 18 × 35.5	0.014	0.038	4220	
12000	123	16 × 40	0.013	0.038	4080	18 × 40	0.012	0.032	4280	
		▲ 18 × 31.5	0.015	0.040	4170					
15000	153	18 × 35.5	0.014	0.038	4220					
18000	183	18 × 40	0.012	0.032	4280					

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.

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■ Standard Ratings

V (Code) Item Cap.(μF)Code		16 (1C)				25 (1E)			
		Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz
			20°C / 100kHz	−10°C / 100kHz			20°C / 100kHz	−10°C / 100kHz	
47	470					5 × 11	0.58	2.3	210
56	560	5 × 11	0.58	2.3	210				
100	101					6.3 × 11	0.22	0.87	340
120	121	6.3 × 11	0.22	0.87	340				
220	221					8 × 11.5	0.13	0.52	640
330	331	8 × 11.5	0.13	0.52	640	8 × 15	0.087	0.35	840
						▲ 10 × 12.5	0.080	0.32	865
470	471	8 × 15	0.087	0.35	840	8 × 20	0.069	0.27	1050
		▲ 10 × 12.5	0.080	0.32	865	▲ 10 × 16	0.06	0.24	1210
680	681	8 × 20	0.069	0.27	1050	10 × 20	0.046	0.18	1400
		▲ 10 × 16	0.060	0.24	1210	▲ 12.5 × 15	0.049	0.16	1450
820	821					10 × 25	0.042	0.17	1650
1000	102	10 × 20	0.046	0.18	1400	10 × 31.5	0.031	0.12	1910
		▲ 12.5 × 15	0.049	0.16	1450	▲ 12.5 × 20	0.035	0.12	1900
						● 16 × 15	0.042	0.12	1940
1200	122	10 × 25	0.042	0.17	1650	18 × 15	0.043	0.11	2210
1500	152	10 × 31.5	0.031	0.12	1910	12.5 × 25	0.027	0.089	2230
		▲ 12.5 × 20	0.035	0.12	1900				
		● 16 × 15	0.042	0.12	1940				
1800	182					12.5 × 31.5	0.024	0.078	2650
						▲ 16 × 20	0.027	0.078	2530
2200	222	12.5 × 25	0.027	0.089	2230	12.5 × 35.5	0.020	0.065	2880
		▲ 18 × 15	0.043	0.11	2210	▲ 18 × 20	0.026	0.067	2860
2700	272	12.5 × 31.5	0.024	0.078	2650	12.5 × 40	0.017	0.056	3350
		▲ 16 × 20	0.027	0.078	2530	▲ 16 × 25	0.021	0.060	2930
3300	332	12.5 × 35.5	0.020	0.065	2880	16 × 31.5	0.017	0.050	3450
						▲ 18 × 25	0.019	0.049	3140
3900	392	12.5 × 40	0.017	0.056	3350	16 × 35.5	0.015	0.044	3610
		▲ 16 × 25	0.021	0.060	2930				
		● 16 × 20	0.026	0.067	2860				
4700	472	16 × 31.5	0.017	0.050	3450	16 × 40	0.013	0.038	4080
		▲ 18 × 25	0.019	0.049	3140	▲ 18 × 35.5	0.014	0.038	4220
5600	562	16 × 35.5	0.015	0.044	3610	18 × 40	0.012	0.032	4280
		▲ 18 × 31.5	0.015	0.040	4170				
6800	682	16 × 40	0.013	0.038	4080				
8200	822	18 × 35.5	0.014	0.038	4220				
10000	103	18 × 40	0.012	0.032	4280				

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.

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■ Standard Ratings

Cap. (μF)	V (Code)	Item Code	35 (1V)				50 (1H)			
			Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz
				20°C / 100kHz	-10°C / 100kHz			20°C / 100kHz	-10°C / 100kHz	
0.47	R47						※ 5 × 11	5.5	22	17
1	010						※ 5 × 11	4	16	30
2.2	2R2						5 × 11	2.5	10	43
3.3	3R3						5 × 11	2.2	8.8	53
4.7	4R7						5 × 11	1.9	7.6	88
10	100						5 × 11	1.5	6	100
22	220						5 × 11	0.70	2.8	180
33	330		5 × 11	0.58	2.3	210	6.3 × 11	0.30	1.2	295
47	470		6.3 × 11	0.22	0.87	250	6.3 × 11	0.30	1.2	295
56	560		6.3 × 11	0.22	0.87	340	6.3 × 11	0.30	1.2	295
100	101		8 × 11.5	0.13	0.52	640	8 × 11.5	0.17	0.68	555
120	121						8 × 15	0.12	0.48	730
150	151		8 × 11.5	0.13	0.52	640	10 × 12.5	0.12	0.48	760
180	181						8 × 20	0.091	0.36	910
220	221		8 × 15 ▲ 10 × 12.5	0.087 0.080	0.35 0.32	840 865	10 × 16	0.084	0.34	1050
270	271		8 × 20	0.069	0.27	1050	10 × 20 ▲ 12.5 × 15	0.060 0.061	0.24 0.20	1220 1260
330	331		10 × 16	0.060	0.24	1210	10 × 25 ▲ 10 × 20	0.055 0.060	0.22 0.24	1440 1220
470	471		10 × 20 ▲ 12.5 × 15	0.046 0.049	0.18 0.16	1400 1450	10 × 31.5 ▲ 12.5 × 20 ● 16 × 15	0.043 0.045 0.055	0.17 0.15 0.17	1690 1660 1690
560	561		10 × 25	0.042	0.17	1650	12.5 × 25 ▲ 18 × 15	0.034 0.054	0.11 0.15	1950 1930
680	681		10 × 31.5 ▲ 12.5 × 20 ● 16 × 15	0.031 0.035 0.042	0.12 0.12 0.12	1910 1900 1940	12.5 × 31.5	0.030	0.10	2310
820	821						12.5 × 35.5 ▲ 16 × 20	0.025 0.034	0.083 0.10	2510 2210
1000	102		12.5 × 25 ▲ 18 × 15	0.027 0.043	0.089 0.11	2230 2210	12.5 × 40 ▲ 16 × 25 ● 18 × 20	0.021 0.025 0.036	0.069 0.075 0.097	2920 2555 2490
1200	122		12.5 × 31.5 ▲ 16 × 20	0.024 0.027	0.078 0.078	2650 2530	16 × 31.5 ▲ 18 × 25	0.022 0.026	0.066 0.070	3010 2740
1500	152		12.5 × 35.5	0.020	0.065	2880	16 × 35.5	0.019	0.057	3150
1800	182		12.5 × 40 ▲ 16 × 25 ● 18 × 20	0.017 0.021 0.026	0.056 0.060 0.067	3350 2930 2860	16 × 40 ▲ 18 × 31.5	0.016 0.021	0.048 0.057	3710 3635
2200	222		16 × 31.5 ▲ 18 × 25	0.017 0.019	0.050 0.049	3450 3140	▲ 18 × 35.5	0.017	0.046	3680
2700	272		16 × 35.5 ▲ 18 × 31.5	0.015 0.015	0.044 0.040	3610 4170	18 × 40	0.014	0.038	3800
3300	332		16 × 40 ▲ 18 × 35.5	0.013 0.014	0.038 0.038	4080 4220				
3900	392		18 × 40	0.012	0.032	4280				

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.

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■ Standard Ratings

Cap.(μF)	V (Code) Item Code	63 (1J)				100 (2A)			
		Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz
			20°C / 100kHz	-10°C / 100kHz			20°C / 100kHz	-10°C / 100kHz	
6.8	6R8					5 × 11	2.3	9.3	62
15	150	5 × 11	2.3	9.3	62	6.3 × 11	1.2	5.0	126
27	270					8 × 11.5	0.63	2.8	260
33	330	6.3 × 11	1.2	5.0	126				
39	390					8 × 15	0.45	2.1	335
47	470	8 × 11.5	0.63	2.8	260	10 × 12.5	0.43	1.8	325
56	560	8 × 11.5	0.63	2.8	260	8 × 20	0.33	1.6	408
68	680					10 × 16	0.31	1.5	400
82	820	8 × 15	0.45	2.1	335	10 × 20	0.21	0.94	518
		▲ 10 × 12.5	0.43	1.8	325	▲ 12.5 × 15	0.23	1.1	527
100	101					10 × 25	0.20	0.84	595
						▲ 12.5 × 20	0.20	0.84	740
120	121	8 × 20	0.33	1.6	408	10 × 31.5	0.15	0.71	740
		▲ 10 × 16	0.31	1.5	400	▲ 12.5 × 20	0.16	0.64	765
150	151					16 × 15	0.14	0.66	895
180	181	10 × 20	0.21	0.94	518	12.5 × 25	0.12	0.45	875
		▲ 12.5 × 15	0.23	1.1	527	▲ 18 × 15	0.12	0.50	1030
220	221	10 × 25	0.20	0.84	595	12.5 × 31.5	0.10	0.42	1010
						▲ 16 × 20	0.091	0.38	1130
270	271	10 × 31.5	0.15	0.71	740	12.5 × 35.5	0.083	0.35	1140
		▲ 12.5 × 20	0.16	0.64	765				
		● 16 × 15	0.14	0.66	895	▲ 16 × 25	0.073	0.27	1350
330	331	12.5 × 25	0.12	0.45	875	12.5 × 40	0.071	0.30	1280
						▲ 18 × 20	0.080	0.30	1300
390	391	18 × 15	0.12	0.50	1030	16 × 31.5	0.054	0.20	1650
						▲ 18 × 25	0.057	0.21	1560
470	471	12.5 × 31.5	0.10	0.42	1010	16 × 35.5	0.045	0.17	1900
		▲ 16 × 20	0.091	0.38	1130	▲ 18 × 31.5	0.047	0.17	1720
560	561	12.5 × 35.5	0.083	0.35	1140	16 × 40	0.040	0.15	2130
		▲ 16 × 25	0.073	0.27	1350				
680	681	12.5 × 40	0.071	0.30	1280	18 × 35.5	0.040	0.15	1890
		▲ 18 × 20	0.080	0.30	1300				
820	821	16 × 31.5	0.054	0.20	1650	18 × 40	0.036	0.13	2470
		▲ 18 × 25	0.057	0.21	1560				
1000	102	16 × 35.5	0.045	0.17	1900				
		▲ 18 × 31.5	0.047	0.17	1720				
1200	122	16 × 40	0.040	0.15	2130				
		▲ 18 × 35.5	0.040	0.15	1890				
1500	152	18 × 40	0.036	0.13	2470				

▲ : In this case, [6] will be put at 12th digit of type numbering system.

● : In this case, [3] will be put at 12th digit of type numbering system.