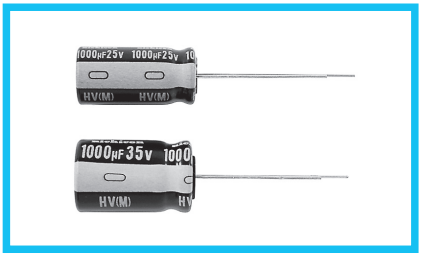
nichicon

UHV

High Ripple Low Impedance

Smaller | Low Impedance | Long Life | Anti-Solvent Feature

- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



UHD (Smaller) — UHW (Long Life) — UHV

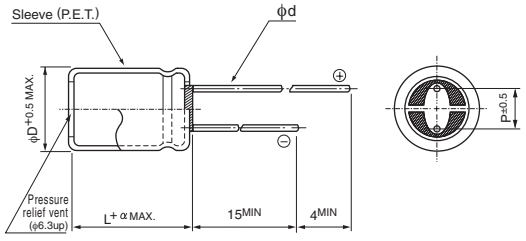
■Specifications

Item	Performance Characteristics						
Category Temperature Range	−40 to +105˚C						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	47 to 8200μF						
Capacitance Tolerance	±20% at 120Hz, 20˚C						
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.						
Tangent of loss angle (tan δ)	Rated voltage (V)	6.3	10	16	25	35	120Hz 20˚C
	tan δ (MAX.)	0.21	0.18	0.15	0.13	0.11	
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.						
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	25	35	120Hz
	Impedance ratio (MAX.) Z−25˚C / Z+20˚C	2	2	2	2	2	
	Impedance ratio (MAX.) Z−40˚C / Z+20˚C	3	3	3	3	3	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 6000 hours (5000 hours for φD=5 and 6.3) at 105˚C, the peak voltage shall not exceed the rated voltage.						

Capacitance change	Within ± 25% of the initial capacitance value (6.3V 10V : ±30%)
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking	Printed with white color letter on black sleeve.

■Radial Lead Type



α	
	(L < 20) 1.5
	(L ≧ 20) 2.0

(mm)

φD	5	6.3	8	10	12.5	16
P	2.0	2.5	3.5	5.0	5.0	7.5
φd	0.5	0.5	0.6	0.6	0.6※	0.8

※In case L > 25 for the φ12.5 dia. unit, lead dia. φ d = 0.8mm.

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

Type numbering system (Example : 25V 150μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	H	V	1	E	1	5	1	M	E	D	

- Size code
- Configuration※
- Capacitance tolerance (±20%)
- Rated capacitance (150μF)
- Rated voltage (25V)
- Series name
- Type

※Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 · 16	HD

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.

UHV

■Dimensions

Cap.(μF)	Code	6.3 (0J) Case size φD × L (mm)	6.3 (0J) Impedance (Ω) MAX. 20°C / 100kHz	6.3 (0J) Impedance (Ω) MAX. -10°C / 100kHz	6.3 (0J) Rated ripple (mArms) 105°C / 100kHz	10 (1A) Case size φD × L (mm)	10 (1A) Impedance (Ω) MAX. 20°C / 100kHz	10 (1A) Impedance (Ω) MAX. -10°C / 100kHz	10 (1A) Rated ripple (mArms) 105°C / 100kHz	16 (1C) Case size φD × L (mm)	16 (1C) Impedance (Ω) MAX. 20°C / 100kHz	16 (1C) Impedance (Ω) MAX. -10°C / 100kHz	16 (1C) Rated ripple (mArms) 105°C / 100kHz
100	101									5 × 11	0.23	0.76	360
150	151					5 × 11	0.23	0.76	360	6.3 × 11	0.10	0.33	450
220	221	5 × 11	0.23	0.76	360	6.3 × 11	0.10	0.33	450	6.3 × 11	0.10	0.33	550
330	331	6.3 × 11	0.10	0.33	460	6.3 × 11	0.10	0.33	550	8 × 11.5	0.059	0.181	830
470	471	6.3 × 11	0.10	0.33	550	8 × 11.5	0.059	0.181	820	8 × 11.5	0.059	0.181	990
680	681	8 × 11.5	0.059	0.181	900	8 × 11.5	0.059	0.181	990	10 × 12.5	0.043	0.133	1360
										▲8 × 15	0.046	0.143	1330
820	821	8 × 11.5	0.059	0.181	990	10 × 12.5	0.043	0.133	1250	10 × 16	0.030	0.095	1650
1000	102	10 × 12.5	0.043	0.133	1250	10 × 12.5	0.043	0.133	1360	10 × 16	0.030	0.095	1815
						▲8 × 15	0.046	0.143	1330	▲8 × 20	0.031	0.105	1550
1200	122	10 × 12.5	0.043	0.133	1360	10 × 16	0.030	0.095	1650	10 × 20	0.019	0.057	1930
		▲8 × 15	0.046	0.143	1330								
1500	152	8 × 20	0.031	0.105	1550	10 × 16	0.030	0.095	1815	10 × 20	0.019	0.057	2160
						▲8 × 20	0.031	0.105	1550				
1800	182	10 × 16	0.030	0.095	1815	10 × 20	0.019	0.057	2160	10 × 25	0.017	0.051	2475
2200	222	10 × 20	0.019	0.057	2160	10 × 25	0.017	0.051	2475	12.5 × 20	0.016	0.041	2725
2700	272	10 × 25	0.017	0.051	2475	12.5 × 20	0.016	0.041	2475	12.5 × 25	0.014	0.036	3190
3300	332	12.5 × 20	0.016	0.041	2500	12.5 × 20	0.016	0.041	2725	12.5 × 31.5	0.012	0.031	3795
										▲16 × 20	0.014	0.036	3575
3900	392	12.5 × 20	0.016	0.041	2725	12.5 × 25	0.014	0.036	3190	12.5 × 35.5	0.011	0.029	3925
4700	472	12.5 × 25	0.014	0.036	3190	12.5 × 31.5	0.012	0.031	3795	16 × 25	0.012	0.033	3990
						▲16 × 20	0.014	0.036	3575				
5600	562	12.5 × 31.5	0.012	0.031	3795	12.5 × 35.5	0.011	0.029	3925				
6800	682	12.5 × 35.5	0.011	0.029	3925	16 × 25	0.012	0.033	3990				
		▲16 × 20	0.014	0.036	3575								
8200	822	16 × 25	0.012	0.033	3990								

Cap.(μF)	Code	25 (1E) Case size φD × L (mm)	25 (1E) Impedance (Ω) MAX. 20°C / 100kHz	25 (1E) Impedance (Ω) MAX. -10°C / 100kHz	25 (1E) Rated ripple (mArms) 105°C / 100kHz	35 (1V) Case size φD × L (mm)	35 (1V) Impedance (Ω) MAX. 20°C / 100kHz	35 (1V) Impedance (Ω) MAX. -10°C / 100kHz	35 (1V) Rated ripple (mArms) 105°C / 100kHz
47	470					5 × 11	0.23	0.76	360
68	680	5 × 11	0.23	0.76	360	6.3 × 11	0.10	0.33	450
100	101	6.3 × 11	0.10	0.33	450	6.3 × 11	0.10	0.33	550
150	151	6.3 × 11	0.10	0.33	550	8 × 11.5	0.059	0.181	820
220	221	8 × 11.5	0.059	0.181	810	8 × 11.5	0.059	0.181	990
270	271	8 × 11.5	0.059	0.181	900	8 × 15	0.046	0.143	1330
330	331	8 × 11.5	0.059	0.181	990	10 × 12.5	0.043	0.133	1360
390	391	8 × 15	0.046	0.143	1330	8 × 20	0.031	0.105	1550
470	471	10 × 12.5	0.043	0.133	1360	10 × 16	0.030	0.095	1815
560	561	8 × 20	0.031	0.105	1550	10 × 20	0.019	0.057	2160
680	681	10 × 16	0.030	0.095	1815	10 × 25	0.017	0.051	2475
820	821	10 × 20	0.019	0.057	2160	12.5 × 20	0.016	0.041	2725
1000	102	10 × 25	0.017	0.051	2475	12.5 × 20	0.016	0.041	2920
1200	122	12.5 × 20	0.016	0.041	2475	12.5 × 25	0.014	0.041	3190
1500	152	12.5 × 20	0.016	0.041	2725	12.5 × 31.5	0.012	0.031	3795
						▲16 × 20	0.014	0.036	3575
1800	182	12.5 × 25	0.014	0.036	3190	12.5 × 35.5	0.011	0.029	3925
2200	222	12.5 × 31.5	0.012	0.031	3795	16 × 25	0.012	0.033	3990
		▲16 × 20	0.014	0.036	3575				
2700	272	12.5 × 35.5	0.011	0.029	3925				
3300	332	16 × 25	0.012	0.033	3990				

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

● Frequency coefficient of rated ripple current

Cap. (μF) \ Frequency	120Hz	1kHz	10kHz	100kHz or more
47 to 150	0.40	0.75	0.90	1.00
220 to 560	0.50	0.85	0.94	1.00
680 to 1800	0.60	0.87	0.95	1.00
2200 to 3900	0.75	0.90	0.95	1.00
4700 to 8200	0.85	0.95	0.98	1.00