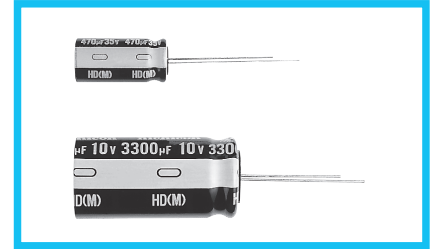
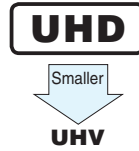


UHD

High Ripple Low Impedance



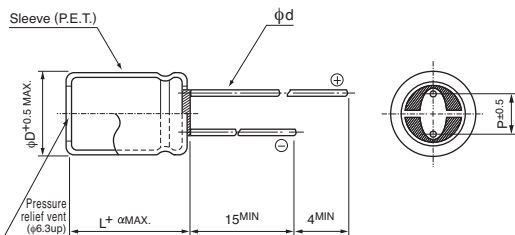
- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2011/65/EU).



Specifications

Item	Performance Characteristics															
Category Temperature Range	-40 to +105°C															
Rated Voltage Range	6.3 to 50V															
Rated Capacitance Range	22 to 6800μF															
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	50	120Hz 20°C								
	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10									
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	50	120Hz								
	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	2	2	2	2	2		2							
		Z-40°C / Z+20°C	3	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 5000 hours (2000 hours for φD=5 and 6.3, 3000 hours for φD=8, 4000 hours for φD=10), at 105°C, the peak voltage shall not exceed the rated voltage.															
									Capacitance change	Within ±25% of the initial capacitance value						
									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.															

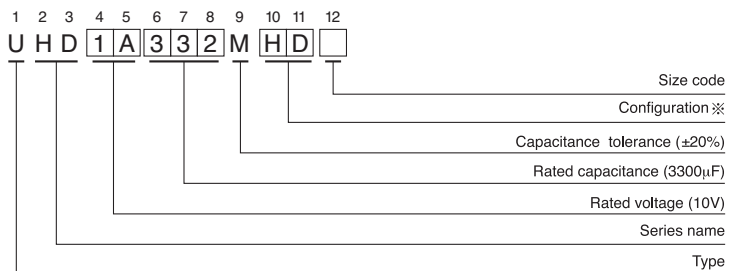
Radial Lead Type



α		(mm)						
		φD	5	6.3	8	10	12.5	16
α	(L < 20)	1.5						
	(L ≥ 20)	2.0	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. φd = 0.8mm.

Type numbering system (Example : 10V 3300μF)



※ 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 about the end seal configuration.

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.



■ Standard Ratings

V (Code)		6.3 (0J)				10 (1A)			
Cap. (μF)	Item Code	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	0.30	1.0	250
150	151	5 × 11	0.30	1.0	250				
220	221					6.3 × 11	0.13	0.41	405
330	331	6.3 × 11	0.13	0.41	405				
470	471					8 × 11.5	0.072	0.22	760
560	561	8 × 11.5	0.072	0.22	760				
680	681					8 × 15	0.056	0.17	995
		▲10 × 12.5	0.053	0.16	1030				
820	821	8 × 15	0.056	0.17	995				
1000	102	10 × 12.5	0.053	0.16	1030	8 × 20	0.041	0.13	1250
		▲10 × 16	0.038	0.12	1430	▲10 × 16	0.038	0.12	1430
1200	122	8 × 20	0.041	0.13	1250	10 × 20	0.023	0.069	1820
		▲10 × 16	0.038	0.12	1430				
1500	152	10 × 20	0.023	0.069	1820	10 × 25	0.022	0.066	2150
2200	222	10 × 25	0.022	0.066	2150	12.5 × 20	0.021	0.053	2360
3300	332	12.5 × 20	0.021	0.053	2360	12.5 × 25	0.018	0.045	2770
3900	392	12.5 × 25	0.018	0.045	2770	12.5 × 31.5	0.016	0.041	3290
		▲16 × 20	0.018	0.045	3140	▲16 × 20	0.018	0.045	3140
4700	472	12.5 × 31.5	0.016	0.041	3290	12.5 × 35.5	0.015	0.039	3400
5600	562	12.5 × 35.5	0.015	0.039	3400	16 × 25	0.016	0.043	3460
		▲16 × 20	0.018	0.045	3140				
6800	682	16 × 25	0.016	0.043	3460				

V (Code)		16 (1C)				25 (1E)			
Cap. (μF)	Item Code	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	0.30	1.0	250
56	560	5 × 11	0.30	1.0	250				
100	101					6.3 × 11	0.13	0.41	405
120	121	6.3 × 11	0.13	0.41	405				
220	221					8 × 11.5	0.072	0.22	760
330	331	8 × 11.5	0.072	0.22	760	8 × 15	0.056	0.17	995
		▲10 × 12.5	0.053	0.16	1030	▲10 × 12.5	0.053	0.16	1030
470	471	8 × 15	0.056	0.17	995	8 × 20	0.041	0.13	1250
		▲10 × 12.5	0.053	0.16	1030	▲10 × 16	0.038	0.12	1430
680	681	8 × 20	0.041	0.13	1250	10 × 20	0.023	0.069	1820
		▲10 × 16	0.038	0.12	1430				
820	821				10 × 25	0.022	0.066	2150	
1000	102	10 × 20	0.023	0.069	1820	12.5 × 20	0.021	0.053	2360
1200	122	10 × 25	0.022	0.066	2150				
1500	152	12.5 × 20	0.021	0.053	2360	12.5 × 25	0.018	0.045	2770
1800	182					12.5 × 31.5	0.016	0.041	3290
		▲16 × 20	0.018	0.045	3140	▲16 × 20	0.018	0.045	3140
2200	222	12.5 × 25	0.018	0.045	2770	12.5 × 35.5	0.015	0.039	3400
2700	272	12.5 × 31.5	0.016	0.041	3290	16 × 25	0.016	0.043	3460
		▲16 × 20	0.018	0.045	3140				
3300	332	12.5 × 35.5	0.015	0.039	3400				
3900	392	16 × 25	0.016	0.043	3460				

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

UHD

Standard Ratings

Cap.(μ F)	V (Code) Item Code	35 (1V)				50 (1H)			
		Case size ϕ D \times L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size ϕ D \times L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz
			20°C / 100kHz	-10°C / 100kHz			20°C / 100kHz	-10°C / 100kHz	
22	220				5 \times 11	0.34	1.18	238	
33	330	5 \times 11	0.30	1.0	250				
56	560	6.3 \times 11	0.13	0.41	405	6.3 \times 11	0.14	0.50	385
100	101					8 \times 11.5	0.074	0.22	724
120	121					8 \times 15	0.061	0.18	950
150	151	8 \times 11.5	0.072	0.22	760	10 \times 12.5	0.061	0.18	979
180	181					8 \times 20	0.046	0.14	1190
220	221	8 \times 15	0.056	0.17	995	10 \times 16	0.042	0.12	1370
		▲10 \times 12.5	0.053	0.16	1030				
270	271	8 \times 20	0.041	0.13	1250	10 \times 20	0.030	0.090	1580
330	331	10 \times 16	0.038	0.12	1430	10 \times 25	0.028	0.085	1870
470	471	10 \times 20	0.023	0.069	1820	12.5 \times 20	0.027	0.068	2050
560	561	10 \times 25	0.022	0.066	2150	12.5 \times 25	0.023	0.059	2410
680	681	12.5 \times 20	0.021	0.053	2360	12.5 \times 31.5	0.021	0.052	2860
820	821					12.5 \times 35.5	0.019	0.051	2960
		▲16 \times 20	0.023	0.059	2730				
1000	102	12.5 \times 25	0.018	0.045	2770	16 \times 25	0.021	0.056	3010
1200	122	12.5 \times 31.5	0.016	0.041	3290				
		▲16 \times 20	0.018	0.045	3140				
1500	152	12.5 \times 35.5	0.015	0.039	3400				
1800	182	16 \times 25	0.016	0.043	3460				

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

Frequency coefficient of rated ripple current

Cap. (μ F)	Frequency	50Hz	120Hz	1kHz	10kHz	100kHz or more
22 to 33		0.45	0.55	0.75	0.90	1.00
47 to 330		0.60	0.70	0.85	0.95	1.00
470 to 1000		0.65	0.75	0.90	0.98	1.00
1200 to 6800		0.75	0.80	0.95	1.00	1.00