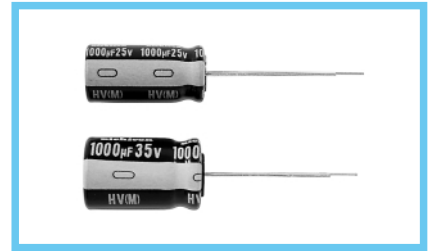
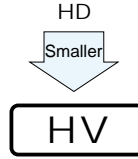


HV High Ripple Low Impedance series



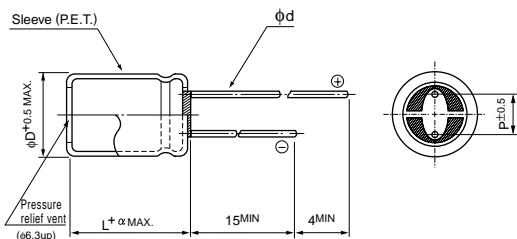
- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Adapted to the RoHS directive (2002/95/EC).



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, leakage current is not more than 0.01CV or 3 (µA), whichever is greater.						
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 ZT / Z20 (MAX.)	Z-25°C / Z+20°C	2	2	2	2	
		Z-40°C / Z+20°C	3	3	3	3	3
Endurance	After an application of D.C. bias voltage plus the rated ripple current for 6000 hours (φD ≤ 6.3 : 5000 hours) at 105°C the peak voltage shall not exceed the rated D.C. voltage, capacitors meet the characteristic requirements listed below.						
	Capacitance change	Within ±25% of initial value (6.3V 10V : ±30%)					
	tan δ	200% or less of initial specified value					
	Leakage current	Initial specified value or less					
Marking	Printed with white color letter on black sleeve.						

Radial Lead Type

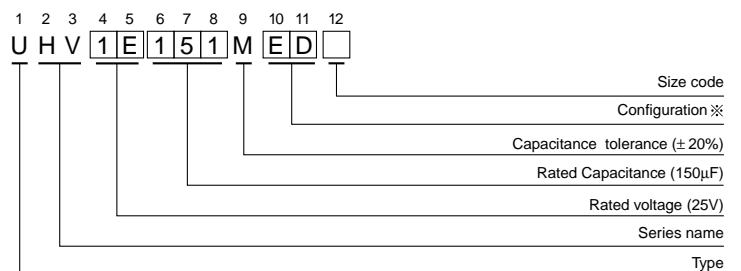


		(mm)						
α	(L < 20) 1.5	φD	5	6.3	8	10	12.5	16
	(L ≥ 20) 2.0	P	2.0	2.5	3.5	5.0	5.0	7.5
		φd	0.5	0.5	0.6	0.6	0.6 [※]	0.8

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

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

Type numbering system (Example : 25V 150µF)



※ 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.



Standard ratings

V (Code)		6.3 (0J)				10 (1A)				16 (1C)			
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	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			20°C / 100kHz	-10°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
820	821	8 × 11.5	0.059	0.181	990	10 × 12.5	0.043	0.133	1250	▲ 8 × 15	0.046	0.143	1330
1000	102	10 × 12.5	0.043	0.133	1250	10 × 12.5	0.043	0.133	1360	10 × 16	0.030	0.095	1650
1200	122	▲ 8 × 15	0.046	0.143	1330	▲ 8 × 15	0.046	0.143	1330	▲ 8 × 20	0.031	0.105	1550
1500	152	8 × 20	0.031	0.105	1550	10 × 16	0.030	0.095	1650	10 × 20	0.019	0.057	1930
1800	182	10 × 16	0.030	0.095	1815	▲ 8 × 20	0.031	0.105	1550	10 × 20	0.019	0.057	2160
2200	222	10 × 20	0.019	0.057	2160	10 × 20	0.019	0.057	2160	10 × 25	0.017	0.051	2475
2700	272	10 × 25	0.017	0.051	2475	10 × 25	0.017	0.051	2475	12.5 × 20	0.016	0.041	2725
3300	332	12.5 × 20	0.016	0.041	2500	12.5 × 20	0.016	0.041	2725	12.5 × 25	0.014	0.036	3190
3900	392	12.5 × 20	0.016	0.041	2725	12.5 × 20	0.016	0.041	2725	▲ 16 × 20	0.014	0.036	3575
4700	472	12.5 × 25	0.014	0.036	3190	12.5 × 25	0.014	0.036	3190	12.5 × 31.5	0.012	0.031	3795
5600	562	12.5 × 31.5	0.012	0.031	3795	▲ 16 × 20	0.014	0.036	3575	16 × 25	0.011	0.029	3925
6800	682	▲ 16 × 20	0.014	0.036	3575	12.5 × 35.5	0.011	0.029	3925				
8200	822	16 × 25	0.012	0.033	3990	16 × 25	0.012	0.033	3990				

V (Code)		25 (1E)				35 (1V)			
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	0.23	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	2180	12.5 × 25	0.014	0.036	3190
1500	152	12.5 × 20	0.016	0.041	2725	12.5 × 31.5	0.012	0.031	3795
1800	182	12.5 × 25	0.014	0.036	3190	▲ 16 × 20	0.014	0.036	3575
2200	222	▲ 16 × 20	0.014	0.036	3575	12.5 × 35.5	0.011	0.029	3925
2700	272	12.5 × 35.5	0.011	0.029	3925	16 × 25	0.012	0.033	3990
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
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