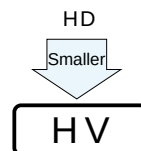


HV High Ripple Low Impedance
series



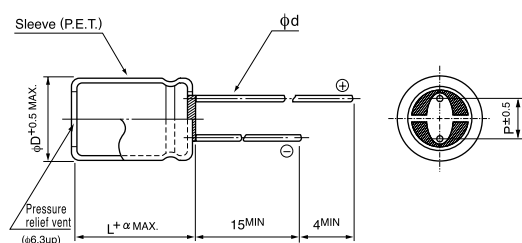
- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Adapted to the RoHS directive (2002/95/EC).



Specifications

Item	Performance Characteristics							
Category Temperature Range	-40 ~ +105°C							
Rated Voltage Range	6.3 ~ 35V							
Rated Capacitance Range	47 ~ 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	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

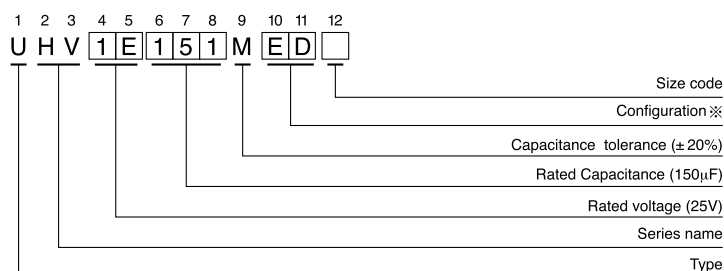


α		(mm)					
		(L < 20)	1.5				
		(L ≥ 20)	2.0				
		φD	5	6.3	8	10	12.5
		P	2.0	2.5	3.5	5.0	5.0
		φd	0.5	0.5	0.6	0.6	0.6 [※]

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

- Please refer to page 21 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 21, 22, 23 about the formed or taped product spec.
Please refer to page 3 for the minimum order quantity.

- Dimension table in next page.

■ Standard ratings

V (Code) Cap.(μF) Item Code		6.3 (0J)				10 (1A)				16 (1C)			
		Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φ D × 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	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
1200	122	10 × 12.5	0.043	0.133	1360	▲ 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	0.016	0.041	2920
3900	392	12.5 × 20	0.016	0.041	2725	12.5 × 25	0.014	0.036	3190	12.5 × 31.5	0.012	0.031	3795
4700	472	12.5 × 25	0.014	0.036	3190	▲ 16 × 20	0.014	0.036	3575	▲ 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	16 × 25	0.012	0.033	3990
6800	682	12.5 × 35.5	0.011	0.029	3925	16 × 25	0.012	0.033	3990				
8200	822	16 × 25	0.012	0.033	3990								

V (Code) Cap.(μF) Item Code		25 (1E)				35 (1V)			
		Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mArms) 105°C / 100kHz	Case size φ D × 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	12.5 × 31.5	0.012	0.031	3795	16 × 25	0.012	0.033	3990
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
47 ~ 150		0.40	0.75	0.90	1.00
220 ~ 560		0.50	0.85	0.94	1.00
680 ~ 1800		0.60	0.87	0.95	1.00
2200 ~ 3900		0.75	0.90	0.95	1.00
4700 ~ 8200		0.85	0.95	0.98	1.00