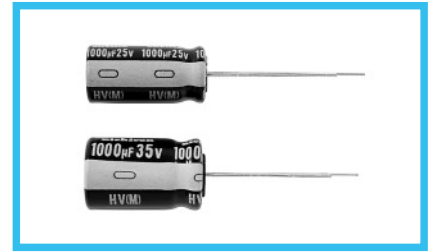
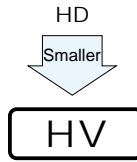


HV High Ripple Low Impedance series



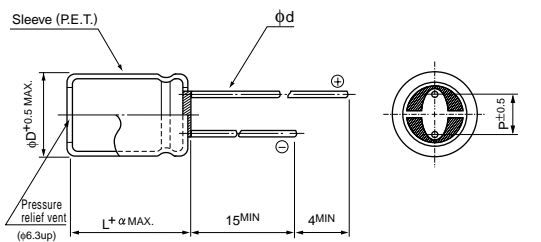
- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2002/95/EC).



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.							
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 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	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



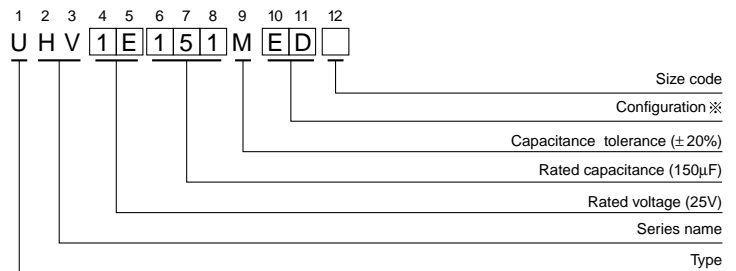
α	(L < 20)	1.5
	(L ≥ 20)	2.0

	(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. 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

Cap. (μF)		V (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														
150	151						5 × 11	0.23	0.76	360	6.3 × 11	0.10	0.33	450	
220	221	5 × 11				360	6.3 × 11	0.10	0.33	450	6.3 × 11	0.10	0.33	550	
330	331	6.3 × 11				460	6.3 × 11	0.10	0.33	550	8 × 11.5	0.059	0.181	830	
470	471	6.3 × 11				550	8 × 11.5	0.059	0.181	820	8 × 11.5	0.059	0.181	990	
680	681	8 × 11.5				900	8 × 11.5	0.059	0.181	990	10 × 12.5	0.043	0.133	1360	
820	821	8 × 11.5				990	10 × 12.5	0.043	0.133	1250	10 × 16	0.030	0.095	1650	
1000	102	10 × 12.5				1250	10 × 12.5	0.043	0.133	1360	10 × 16	0.030	0.095	1815	
1200	122	10 × 12.5				1360	10 × 16	0.030	0.095	1650	10 × 20	0.019	0.057	1930	
1500	152	8 × 20				1550	10 × 16	0.030	0.095	1815	10 × 20	0.019	0.057	2160	
1800	182	10 × 16				1815	10 × 20	0.019	0.057	2160	10 × 25	0.017	0.051	2475	
2200	222	10 × 20				2160	10 × 25	0.017	0.051	2475	12.5 × 20	0.016	0.041	2725	
2700	272	10 × 25				2475	12.5 × 20	0.016	0.041	2475	12.5 × 25	0.014	0.036	3190	
3300	332	12.5 × 20				2500	12.5 × 20	0.016	0.041	2725	12.5 × 31.5	0.012	0.031	3795	
3900	392	12.5 × 20				2725	12.5 × 25	0.014	0.036	3190	12.5 × 35.5	0.011	0.029	3925	
4700	472	12.5 × 25				3190	12.5 × 31.5	0.012	0.031	3795	16 × 25	0.012	0.033	3990	
5600	562	12.5 × 31.5				3795	12.5 × 35.5	0.011	0.029	3925					
6800	682	12.5 × 35.5				3925	16 × 25	0.012	0.033	3990					
8200	822	16 × 25				3990									

Cap. (μF)		V (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										
68	680	5 × 11				360	6.3 × 11	0.10	0.33	450	
100	101	6.3 × 11				450	6.3 × 11	0.10	0.33	550	
150	151	6.3 × 11				550	8 × 11.5	0.059	0.181	820	
220	221	8 × 11.5				810	8 × 11.5	0.059	0.181	990	
270	271	8 × 11.5				900	8 × 15	0.046	0.143	1330	
330	331	8 × 11.5				990	10 × 12.5	0.043	0.133	1360	
390	391	8 × 15				1330	8 × 20	0.031	0.105	1550	
470	471	10 × 12.5				1360	10 × 16	0.030	0.095	1815	
560	561	8 × 20				1550	10 × 20	0.019	0.057	2160	
680	681	10 × 16				1815	10 × 25	0.017	0.051	2475	
820	821	10 × 20				2160	12.5 × 20	0.016	0.041	2725	
1000	102	10 × 25				2475	12.5 × 20	0.016	0.041	2920	
1200	122	12.5 × 20				2475	12.5 × 25	0.014	0.036	3190	
1500	152	12.5 × 20				2725	12.5 × 31.5	0.012	0.031	3795	
1800	182	12.5 × 25				3190	16 × 25	0.012	0.033	3990	
2200	222	12.5 × 31.5				3795	16 × 25	0.012	0.033	3990	
2700	272	12.5 × 35.5				3925					
3300	332	16 × 25				3990					

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

Frequency coefficient of rated ripple current

Cap. (μF)	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