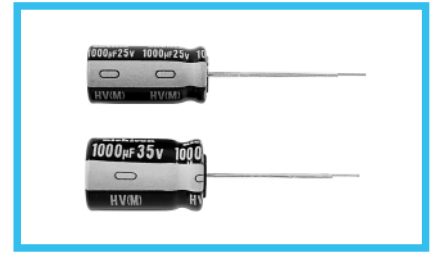
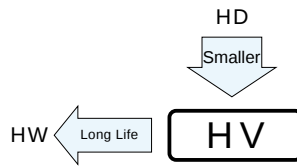


HV High Ripple Low Impedance
series



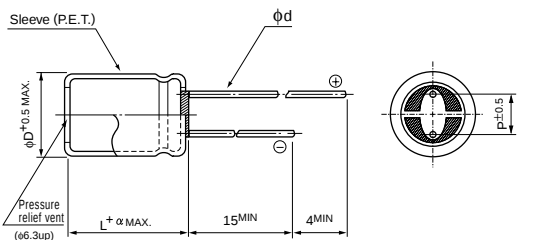
- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2011/65/EU).



Specifications

Item	Performance Characteristics							
Category Temperature Range	-40 to +105°C							
Rated Voltage Range	6.3 to 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		
		Z-40°C / Z+20°C	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.							

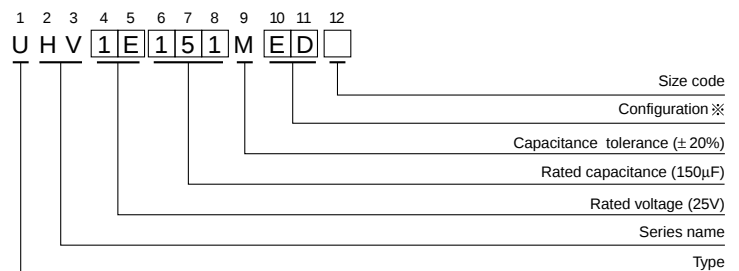
Radial Lead Type



		(mm)					
α	(L < 20)	1.5					
	(L ≥ 20)	2.0					
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.

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 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

Cap.(μF)	V(Code)	Item Code	6.3 (0J)			10 (1A)				16 (1C)				
			Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mA Arms) 105°C / 100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mA Arms) 105°C / 100kHz	Case size φ D × L (mm)	Impedance (Ω) MAX.		Rated ripple (mA Arms) 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
											▲ 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)	V(Code)	Item Code	25 (1E)			35 (1V)		
			Case size φ D × L (mm)	Impedance (Ω) MAX.		Case size φ D × L (mm)	Impedance (Ω) MAX.	
				20°C / 100kHz	-10°C / 100kHz		20°C / 100kHz	-10°C / 100kHz
47		470				5 × 11	0.23	0.76
68		680	5 × 11	0.23	0.76	6.3 × 11	0.10	0.33
100		101	6.3 × 11	0.10	0.33	6.3 × 11	0.10	0.33
150		151	6.3 × 11	0.10	0.33	8 × 11.5	0.059	0.181
220		221	8 × 11.5	0.059	0.181	8 × 11.5	0.059	0.181
270		271	8 × 11.5	0.059	0.181	8 × 15	0.046	0.143
330		331	8 × 11.5	0.059	0.181	10 × 12.5	0.043	0.133
390		391	8 × 15	0.046	0.143	8 × 20	0.031	0.105
470		471	10 × 12.5	0.043	0.133	10 × 16	0.030	0.095
560		561	8 × 20	0.031	0.105	10 × 20	0.019	0.057
680		681	10 × 16	0.030	0.095	10 × 25	0.017	0.051
820		821	10 × 20	0.019	0.057	12.5 × 20	0.016	0.041
1000		102	10 × 25	0.017	0.051	12.5 × 20	0.016	0.041
1200		122	12.5 × 20	0.016	0.041	12.5 × 25	0.014	0.036
1500		152	12.5 × 20	0.016	0.041	12.5 × 31.5	0.012	0.031
						▲ 16 × 20	0.014	0.036
1800		182	12.5 × 25	0.014	0.036	12.5 × 35.5	0.011	0.029
2200		222	12.5 × 31.5	0.012	0.031	16 × 25	0.012	0.033
			▲ 16 × 20	0.014	0.036			
2700		272	12.5 × 35.5	0.011	0.029			
3300		332	16 × 25	0.012	0.033			

▲ : 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