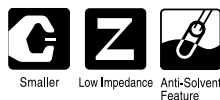
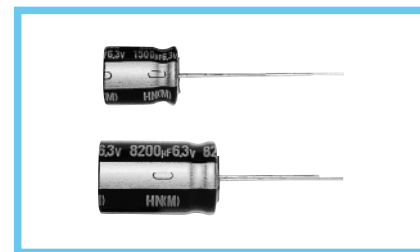


**HN** Ultra Low Impedance series



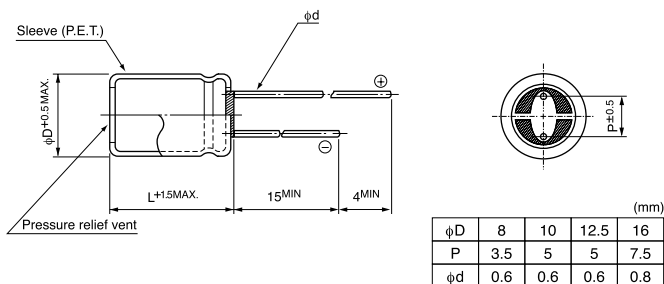
- Lower impedance than HM series.
- Adapted to the RoHS directive (2002/95/EC).



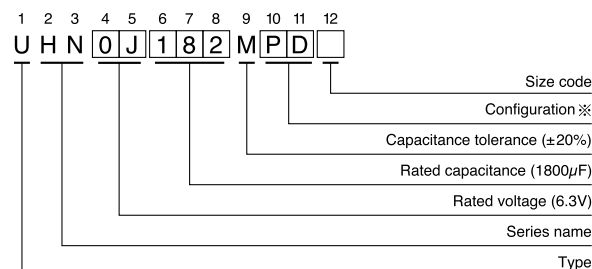
## Specifications

Item	Performance Characteristics				
Category Temperature	- 25 ~ +105°C				
Rated Voltage Range	6.3 ~ 16V				
Rated Capacitance Range	330 ~ 8200μF				
Capacitance Tolerance	±20% (120Hz, 20°C)				
Leakage Current	After 2 minutes' application of rated voltage, leakage current is less than 0.03CV				
tan δ	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF				
	Rated voltage (V)	6.3	10	16	120Hz 20°C
	tan δ (MAX.)	0.22	0.19	0.16	
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	120Hz
	Impedance ratio ZT / Z20 (MAX.)   Z-25°C / Z+20°C	3	3	3	
Endurance	After an application of D.C. bias voltage plus the rated ripple current for 2000 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 ±30% of initial value			
	tan δ	200% or less of initial specified value			
	Leakage current	Initial specified value or less			
Marking	Printed with gold color on black sleeve.				

## Radial Lead Type



## Type numbering system (Example : 6.3V 1800μF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
8 · 10	PD
12.5 · 16	HD

- Please refer to page 21 about the end seal configuration.

## Standard ratings

Cap. (μF)	V (Code)	Item Code	6.3 (0J)			10 (1A)			16 (1C)		
			Case size φD × L (mm)	Impedance (mΩ) MAX. 20°C / 100kHz	Rated ripple (mA rms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (mΩ) MAX. 20°C / 100kHz	Rated ripple (mA rms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (mΩ) MAX. 20°C / 100kHz	Rated ripple (mA rms) 105°C / 100kHz
330	331							8 × 11.5	21	1300	
470	471				8 × 11.5	21	1300	8 × 11.5	21	1300	
560	561		8 × 11.5	21	1300			▲ 10 × 12.5	18	1760	
680	681				8 × 11.5	21	1300	● 10 × 12.5	18	1760	
820	821		8 × 11.5	21	1300	10 × 12.5	18	1760	○ 10 × 16	11	2280
1000	102		8 × 15	20	1700	10 × 12.5	18	1760	10 × 16	11	2280
1200	122		▲ 10 × 12.5	18	1760	● 10 × 16	11	2280	▲ 8 × 20	12	2220
1500	152		8 × 15	20	1700	○ 8 × 20	12	2220	● 10 × 20	10	2900
1800	182		10 × 12.5	18	1760	10 × 16	11	2280	10 × 20	10	2900
2200	222		▲ 8 × 20	12	2220	▲ 8 × 20	12	2220	10 × 20	10	2900
2700	272		● 10 × 16	11	2280				10 × 25	9	3190
3300	332		▲ 8 × 20	12	2220	10 × 20	10	2900	▲ 12.5 × 20	9	3190
4700	472		10 × 16	11	2280	10 × 25	9	3190	12.5 × 20	9	3190
5600	562		10 × 20	10	2900	▲ 12.5 × 20	9	3190	▲ 12.5 × 25	8	3370
8200	822		10 × 20	10	2900	12.5 × 20	9	3190	12.5 × 25	8	3370
			10 × 25	9	3190	12.5 × 25	8	3370	16 × 25	7	3610
			▲ 12.5 × 20	9	3190						
			12.5 × 20	9	3190	12.5 × 25	8	3370			
			12.5 × 25	8	3370	16 × 25	7	3610			
			16 × 25	7	3610						

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

- ▲ : In this case, [6] will be put at 12th digit of type numbering system.
- : In this case, [3] will be put at 12th digit of type numbering system.
- : In this case, [9] will be put at 12th digit of type numbering system.