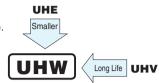


Miniature Sized, High Ripple Current, High Reliability



- Lower impedance at high frequency range.
- Smaller case size and high ripple current.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

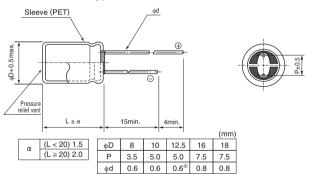




■Specifications

Item		Performance Characteristics											
Category Temperature Range	-40 to +105°C	to +105°C											
Rated Voltage Range	6.3 to 100V	to 100V											
Rated Capacitance Range	33 to 15000μF	to 15000µF											
Capacitance Tolerance	±20% at 120Hz,	20% at 120Hz, 20°C											
Leakage Current ※	After 2 minutes' a	ter 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA)											
	Rated	voltage (V)	6.3	10	16	25	35	50	63	80	100	120Hz
Tangent of loss angle (tan δ)	tan δ (max.)			0.21	0.18	0.15	0.13	0.11	0.10	0.09	0.09	0.08	20°C
	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF.											_	
	Rated voltage (V)		V)	6.3	10	16	25	35	50	63	80	100	120Hz
Stability at Low Temperature	Impedance ratio (max.)	Z(-25°C)	/ Z(+20°C)	2	2	2	2	2	2	2	2	2	
		Z(-40°C)	/ Z(+20°C)	3	3	3	3	3	3	3	3	3	
	The following specifications shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied at 105°C, the peak voltage shall not exceed the rated voltage.											nt is	
	Case	size		8×11.5		3×15 , 8×2	5 , 8×20		\neg				
		6.3V		8000 hou	rs	9000 hours		10000 hours					
Endurance	Rated voltage	10 to 50	V	9000 hou	rs -	0000 hour	s 10	10000 hours					
	(V)	63 to 10	00V 1	0000 houi	rs -	1000 hour	s 12	12000 hours					
	Capacitance cha	nge	Within ±	Nithin ±25% of the initial capacitance value (6.3V10V: ±30%)									
	tan δ 200% or			% or less than the initial specified value									
	Leakage current		Less tha	an or equa	I to the in	nitial specif	ied value						
Marking	Printed with white	e color let	ter on bla	ck sleeve									

■Radial Lead Type



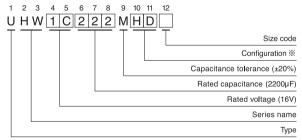
• Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

• Frequency coefficient of rated ripple current

1 7				
Cap. (µF)	120Hz	1kHz	10kHz	10kHz or more
33	0.40	0.70	0.90	1.00
47 to 180	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 15000	0.85	0.95	0.98	1.00

I : Leakage Current (μ A), C : Rated Capacitance (μ F), V : Rated Voltage (V)

Type numbering system (Example: 16V 2200µF)



※ Configuration

3	
φD	Pb-free leadwire Pb-free PET sleeve
8 · 10	PD
12.5 to 18	HD

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (µF)	Case Size	tan δ	Leakage Current (µA) / at 20°C after \	Impeda ma 20°C/	nce(Ω) ax. —10°C/	Rated Ripple (mArms) (105°C/100kHz)	Part Number	
(code)	(μΓ)			2 minutes /	100kHz	100kHz	(105 C/100kHz)		
_	820	8×11.5	0.21	51.66	0.10	0.36	1200	UHW0J821MPD	
-	1000	8×15	0.21	63	0.054	0.17	1600	UHW0J102MPD	
	1200	10×12.5	0.21	75.6	0.048	0.15	1700	UHW0J122MPD	
	1500	8×20	0.21	94.5	0.038	0.12	1960	UHW0J152MPD	
	1800	10×16	0.21	113.4	0.030	0.090	2000	UHW0J182MPD	
	2200	10×20	0.23	138.6	0.020	0.060	2500	UHW0J222MPD	
	2700	10×20	0.23	170.1	0.020	0.060	2500	UHW0J272MPD	
	3300	10×25	0.25	207.9	0.017	0.051	2900	UHW0J332MPD	
6.3	3900	12.5×20	0.25	245.7	0.017	0.051	2600	UHW0J392MHD	
(0J)	4700	12.5×25	0.27	296.1	0.015	0.045	3200	UHW0J472MHD	
	5600	12.5×30.5	0.29	352.8	0.012	0.036	3795	UHW0J562MHD	
	5600	12.5×25	0.29	352.8	0.015	0.045	3200	UHW0J562MHD	
	6800	12.5×30.5	0.31	428.4	0.012	0.033	3795	UHW0J682MHD	
	6800	16×20	0.31	428.4	0.015	0.045	3575	UHW0J682MHD	
	8200	16×25	0.35	516.6	0.013	0.039	3810	UHW0J822MHD	
	10000	16×25	0.39	630	0.013	0.039	3810	UHW0J103MHD	
	12000	16×30.5	0.43	756	0.011	0.033	4000	UHW0J123MHD	
	15000	16×35.5	0.49	945	0.010	0.030	4200	UHW0J153MHD	
	560	8×11.5	0.18	56	0.10	0.36	1200	UHW1A561MPD	
	820	8×15	0.18	82	0.054	0.17	1600	UHW1A821MPD	
	1000	10×12.5	0.18	100	0.048	0.15	1700	UHW1A102MPD	
	1200	8×20	0.18	120	0.038	0.12	1960	UHW1A122MPD	
	1200	10×16	0.18	120	0.030	0.090	2000	UHW1A122MPD	
	1500	10×16	0.18	150	0.030	0.090	2000	UHW1A152MPD	
	1800	10×20	0.18	180	0.020	0.060	2500	UHW1A182MPD	
	2200	10×25	0.20	220	0.017	0.051	2900	UHW1A222MPD	
	2700	12.5×20	0.20	270	0.017	0.051	2600	UHW1A272MHD	
10 (1A)	3300	12.5×20	0.22	330	0.017	0.051	2600	UHW1A332MHD	
	3900	12.5×25	0.22	390	0.015	0.045	3200	UHW1A392MHD	
	4700	12.5×30.5	0.24	470	0.012	0.036	3795	UHW1A472MHD	
	4700	16×20	0.24	470	0.015	0.045	3575	UHW1A472MHD	
<u> </u>	5600	12.5×35.5	0.26	560	0.011	0.033	4120	UHW1A562MHD	
<u> </u>	5600	16×25	0.26	560	0.013	0.039	3810	UHW1A562MHD	
_	6800	16×25	0.28	680	0.013	0.039	3810	UHW1A682MHD	
	8200	16×30.5	0.32	820	0.011	0.033	4000	UHW1A822MHD	
_	10000	16×30.5	0.36	1000	0.011	0.033	4000	UHW1A103MHD	
	12000	16×35.5	0.40	1200	0.010	0.030	4200	UHW1A123MHD	
	470	8×11.5	0.15	75.2	0.10	0.36	1200	UHW1C471MPD	
	560	8×15	0.15	89.6	0.054	0.17	1600	UHW1C561MPD	
<u> </u>	680	10×12.5	0.15	108.8	0.048	0.15	1700	UHW1C681MPD	
16	820	8×20	0.15	131.2	0.038	0.12	1960	UHW1C821MPD	
(1C)	820	10×16	0.15	131.2	0.030	0.090	2000	UHW1C821MPD	
	1000	8×20	0.15	160	0.038	0.12	1960	UHW1C102MPD	
	1000	10×16	0.15	160	0.030	0.090	2000	UHW1C102MPD	
	1200	10×20	0.15	192	0.020	0.060	2500	UHW1C122MPD	

■Dimensions

ated Voltage (V) (code)	Rated Capacitance (µF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20°C after)	20°C/	ax. ─10°C/	Rated Ripple (mArms) (105°C/100kHz)	Part Number
	1200	10×16	0.15	192	100kHz 0.030	100kHz 0.090	2000	UHW1C122MPD6
- - -	1500	10×16	0.15	240	0.030	0.090	2500	UHW1C152MPD
	1800	10×25	0.15	288	0.020	0.060	2900	UHW1C132MPD
	2200	12.5×20	0.13	352	0.017	0.051	2600	UHW1C222MHD
	2700	12.5×25	0.17	432	0.017	0.031	3200	UHW1C272MHD
-	3300	12.5×25	0.17	528	0.015	0.045	3200	UHW1C332MHD
	3300	12.5×25 16×20	0.19	528	0.015	0.045	3575	UHW1C332MHD
16 (1C)	3900	12.5×30.5	0.19	624	0.013	0.045	3795	UHW1C392MHD
, , ,	3900	16×20	0.19	624	0.012	0.030	3575	UHW1C392MHD
-	4700	12.5×35.5	0.19	752	0.013	0.043	4120	UHW1C472MHD
-	4700	16×25	0.21	752	0.011	0.033	3810	UHW1C472MHD
-	5600	16×25	0.23	896	0.013	0.039	3810	UHW1C562MHD
-	6800	16×30.5	0.25	1088	0.013	0.033	4000	UHW1C682MHD
-	8200	16×35.5	0.29	1312	0.010	0.030	4200	UHW1C822MHD
	330	8×11.5	0.13	82.5	0.10	0.36	1200	UHW1E331MPD
-	390	8×15	0.13	97.5	0.054	0.17	1600	UHW1E391MPD
ŀ	470	10×12.5	0.13	117.5	0.048	0.15	1700	UHW1E471MPD
ŀ	560	8×20	0.13	140	0.038	0.12	1960	UHW1E561MPD
-	680	10×16	0.13	170	0.030	0.090	2000	UHW1E681MPD
	820	10×20	0.13	205	0.020	0.060	2500	UHW1E821MPD
	820	10×16	0.13	205	0.030	0.090	2000	UHW1E821MPD
-	1000	10×20	0.13	250	0.020	0.060	2500	UHW1E102MPD
	1200	10×25	0.13	300	0.017	0.051	2900	UHW1E122MPD
25	1500	12.5×20	0.13	375	0.017	0.051	2600	UHW1E152MHD
(1E)	1800	12.5×25	0.13	450	0.015	0.045	3200	UHW1E182MHD
	2200	12.5×25	0.15	550	0.015	0.045	3200	UHW1E222MHD
	2200	16×20	0.15	550	0.015	0.045	3575	UHW1E222MHD
	2700	12.5×30.5	0.15	675	0.012	0.036	3795	UHW1E272MHD
	2700	16×20	0.15	675	0.015	0.045	3575	UHW1E272MHD
	3300	12.5×35.5	0.17	825	0.011	0.033	4120	UHW1E332MHD
	3300	16×25	0.17	825	0.013	0.039	3810	UHW1E332MHD
	3900	16×25	0.17	975	0.013	0.039	3810	UHW1E392MHD
ļ	4700	16×30.5	0.19	1175	0.011	0.033	4000	UHW1E472MHD
	5600	16×35.5	0.21	1400	0.010	0.030	4200	UHW1E562MHD
	180	8×11.5	0.11	63	0.10	0.36	1200	UHW1V181MPD
Ī	220	8×15	0.11	77	0.054	0.17	1600	UHW1V221MPD
İ	270	8×15	0.11	94.5	0.054	0.17	1600	UHW1V271MPD
ļ	270	10×12.5	0.11	94.5	0.048	0.15	1700	UHW1V271MPD
ļ	330	10×12.5	0.11	115.5	0.048	0.15	1700	UHW1V331MPD
35 (1V)	390	8×20	0.11	136.5	0.038	0.12	1960	UHW1V391MPD
(10)	390	10×16	0.11	136.5	0.030	0.090	2000	UHW1V391MPD
ļ	470	10×16	0.11	164.5	0.030	0.090	2000	UHW1V471MPD
ļ	560	10×20	0.11	196	0.020	0.060	2500	UHW1V561MPD
ļ	680	10×25	0.11	238	0.017	0.051	2900	UHW1V681MPD
F	680	10×20	0.11	238	0.020	0.060	2500	UHW1V681MPD

■Dimensions

Rated Voltage	Rated	Case Size		Leakage Current (µA)	Impedance (Ω) max.		Rated Ripple	D. AM. orbit
(V) (code)	Capacitance (µF)	φD×L(mm)	tan δ	(at 20°C after 2 minutes)	20℃/ 100kHz	−10°C/ 100kHz	(mArms) (105°C/100kHz)	Part Number
	820	10×25	0.11	287	0.017	0.051	2900	UHW1V821MPD
	820	12.5×20	0.11	287	0.017	0.051	2600	UHW1V821MHD
	1000	12.5×20	0.11	350	0.017	0.051	2600	UHW1V102MHD
	1200	12.5×25	0.11	420	0.015	0.045	3200	UHW1V122MHD
	1500	16×20	0.11	525	0.015	0.045	3575	UHW1V152MHD
35 (1V)	1800	12.5×30.5	0.11	630	0.012	0.036	3795	UHW1V182MHD
(10)	1800	16×25	0.11	630	0.013	0.039	3810	UHW1V182MHD
	2200	12.5×35.5	0.13	770	0.011	0.033	4120	UHW1V222MHD
	2200	16×25	0.13	770	0.013	0.039	3810	UHW1V222MHD
	3300	16×30.5	0.15	1155	0.011	0.033	4000	UHW1V332MHD
	3900	16×35.5	0.15	1365	0.010	0.030	4200	UHW1V392MHD
	100	8×11.5	0.10	50	0.10	0.36	1200	UHW1H101MPD
	120	8×11.5	0.10	60	0.10	0.36	1200	UHW1H121MPD
	150	8×15	0.10	75	0.054	0.17	1600	UHW1H151MPD
	180	10×12.5	0.10	90	0.048	0.15	1700	UHW1H181MPD
	220	10×12.5	0.10	110	0.048	0.15	1700	UHW1H221MPD
	220	10×16	0.10	110	0.042	0.126	1650	UHW1H221MPD
	270	8×20	0.10	135	0.038	0.12	1960	UHW1H271MPD
	270	10×20	0.10	135	0.030	0.090	2060	UHW1H271MPD
	330	10×20	0.10	165	0.030	0.090	2060	UHW1H331MPD
	390	10×25	0.10	195	0.028	0.084	2420	UHW1H391MPD
	390	10×20	0.10	195	0.030	0.090	2060	UHW1H391MPD
	470	10×25	0.10	235	0.028	0.084	2420	UHW1H471MPD
50 (1H)	470	12.5×20	0.10	235	0.027	0.081	2300	UHW1H471MHD
(111)	560	12.5×20	0.10	280	0.027	0.081	2300	UHW1H561MHD
	680	12.5×25	0.10	340	0.023	0.069	2800	UHW1H681MHD
	820	12.5×25	0.10	410	0.023	0.069	2800	UHW1H821MHD
	820	16×20	0.10	410	0.023	0.069	3070	UHW1H821MHD
	1000	12.5×30.5	0.10	500	0.020	0.060	3500	UHW1H102MHD
	1000	16×25	0.10	500	0.021	0.063	3270	UHW1H102MHD
	1200	16×25	0.10	600	0.021	0.063	3270	UHW1H122MHD
ļ	1500	12.5×35.5	0.10	750	0.019	0.057	3810	UHW1H152MHD
Ī	1500	16×25	0.10	750	0.021	0.063	3270	UHW1H152MHD
	1800	16×30.5	0.10	900	0.019	0.057	3430	UHW1H182MHD
ļ	2200	16×30.5	0.12	1100	0.019	0.057	3430	UHW1H222MHD
Ī	2700	16×35.5	0.12	1350	0.018	0.054	3600	UHW1H272MHD
	68	8×11.5	0.09	42.84	0.29	1.30	950	UHW1J680MPD
Ī	82	8×11.5	0.09	51.66	0.29	1.30	950	UHW1J820MPD
Ī	100	8×15	0.09	63	0.20	0.90	1230	UHW1J101MPD
ļ	120	8×15	0.09	75.6	0.20	0.90	1230	UHW1J121MPD
63 (1J)	120	10×12.5	0.09	75.6	0.17	0.66	1280	UHW1J121MPD
(10)	150	8×20	0.09	94.5	0.16	0.66	1580	UHW1J151MPD
Ī	150	10×12.5	0.09	94.5	0.17	0.66	1280	UHW1J151MPD
Ī	180	8×20	0.09	113.4	0.16	0.66	1580	UHW1J181MPD
	180	10×16	0.09	113.4	0.115	0.47	1200	UHW1J181MPD

■ Dimensions

Rated Voltage (V)	Rated Capacitance	Case Size φD×L(mm)	tan δ	Leakage Current (µA)	Impedance (Ω) max.		Rated Ripple (mArms)	Part Number
(code)	Capacitance (μF)			(at 20°C after 2 minutes)	20℃/ 100kHz	-10°C/ 100kHz	(105°C/100kHz)	Fait Number
	270	10×20	0.09	170.1	0.088	0.34	1570	UHW1J271MPD
	330	10×25	0.09	207.9	0.072	0.28	1990	UHW1J331MPD
	390	10×30.5	0.09	245.7	0.063	0.18	2050	UHW1J391MPD
-	390	12.5×20	0.09	245.7	0.065	0.18	1990	UHW1J391MHD6
-	560	12.5×25	0.09	352.8	0.049	0.14	2460	UHW1J561MHD
-	680	12.5×30.5	0.09	428.4	0.044	0.13	2760	UHW1J681MHD
-	680	16×20	0.09	428.4	0.050	0.15	2380	UHW1J681MHD6
-	820	12.5×35.5	0.09	516.6	0.038	0.11	3040	UHW1J821MHD
63	820	18×20	0.09	516.6	0.047	0.14	2460	UHW1J821MHD6
(1J)	1000	12.5×40	0.09	630	0.033	0.095	3100	UHW1J102MHD
-	1000	16×25	0.09	630	0.040	0.12	2890	UHW1J102MHD6
-	1200	16×30.5	0.09	756	0.025	0.072	2930	UHW1J122MHD
-	1200	18×25	0.09	756	0.038	0.11	2930	UHW1J122MHD6
-	1500	16×35.5	0.09	945	0.023	0.066	3100	UHW1J152MHD
-	1500	18×30.5	0.09	945	0.024	0.069	3100	UHW1J152MHD6
-	1800	16×40	0.09	1134	0.021	0.060	3510	UHW1J182MHD
-	1800	18×35.5	0.09	1134	0.022	0.063	3510	UHW1J182MHD6
•	2200	18×40	0.11	1386	0.020	0.057	3860	UHW1J222MHD
	47	8×11.5	0.09	37.6	0.29	1.30	950	UHW1K470MPD
	68	8×15	0.09	54.4	0.20	0.90	1230	UHW1K680MPD
-	82	10×12.5	0.09	65.6	0.17	0.66	1280	UHW1K820MPD
-	100	8×20	0.09	80	0.16	0.66	1580	UHW1K101MPD
-	120	10×16	0.09	96	0.115	0.47	1040	UHW1K121MPD
-	180	10×20	0.09	144	0.088	0.34	1430	UHW1K181MPD
-	180	12.5×15	0.09	144	0.115	0.47	1430	UHW1K181MHD6
-	220	10×25	0.09	176	0.072	0.28	1620	UHW1K221MPD
-	270	10×30.5	0.09	216	0.063	0.18	1750	UHW1K271MPD
	270	12.5×20	0.09	216	0.065	0.18	1750	UHW1K271MHD6
-	390	12.5×25	0.09	312	0.049	0.14	2210	UHW1K391MHD
80	470	12.5×30.5	0.09	376	0.044	0.13	2400	UHW1K471MHD
(1K)	470	16×20	0.09	376	0.050	0.15	1950	UHW1K471MHD6
-	560	12.5×35.5	0.09	448	0.038	0.11	2600	UHW1K561MHD
	560	18×20	0.09	448	0.047	0.14	2270	UHW1K561MHD6
	680	12.5×40	0.09	544	0.033	0.095	2860	UHW1K681MHD
	680	16×25	0.09	544	0.040	0.12	2430	UHW1K681MHD6
	820	16×30.5	0.09	656	0.033	0.095	2640	UHW1K821MHD
	820	18×25	0.09	656	0.038	0.11	2500	UHW1K821MHD6
	1000	16×35.5	0.09	800	0.030	0.086	2860	UHW1K102MHD
	1200	16×40	0.09	960	0.028	0.081	3510	UHW1K122MHD
	1200	18×30.5	0.09	960	0.031	0.090	2860	UHW1K122MHD6
	1500	18×35.5	0.09	1200	0.028	0.081	3510	UHW1K152MHD
	1800	18×40	0.09	1440	0.027	0.076	3860	UHW1K182MHD



■Dimensions

Rated Voltage	Rated Capacitance	Case Size	tan δ	Leakage Current	Impeda ma		Rated Ripple (mArms)	Part Number
(code) (µF)		φD×L(mm)		(at 20°C after 2 minutes)	20℃/ 100kHz	−10°C/ 100kHz	(105°C/100kHz)	Fait Number
	33	8×11.5	0.08	33	0.29	1.30	950	UHW2A330MPD
	47	8×15	0.08	47	0.20	0.90	1230	UHW2A470MPD
	56	10×12.5	0.08	56	0.17	0.66	1280	UHW2A560MPD
	68	8×20	0.08	68	0.16	0.66	1580	UHW2A680MPD
	82	10×16	0.08	82	0.115	0.47	1040	UHW2A820MPD
	100	10×20	0.08	100	0.088	0.34	1430	UHW2A101MPD
	100	12.5×15	0.08	100	0.115	0.47	1430	UHW2A101MHD6
	120	10×25	0.08	120	0.072	0.28	1620	UHW2A121MPD
	180	12.5×20	0.08	180	0.065	0.18	1750	UHW2A181MHD
	220	12.5×25	0.08	220	0.049	0.14	2210	UHW2A221MHD
	270	12.5×30.5	0.08	270	0.044	0.13	2400	UHW2A271MHD
100 (2A)	270	16×20	0.08	270	0.050	0.15	1950	UHW2A271MHD6
(=/ 1)	390	12.5×35.5	0.08	390	0.038	0.11	2600	UHW2A391MHD
	390	16×25	0.08	390	0.040	0.12	2430	UHW2A391MHD6
	390	18×20	0.08	390	0.047	0.14	2270	UHW2A391MHD3
	470	12.5×40	0.08	470	0.033	0.095	2860	UHW2A471MHD
	470	18×25	0.08	470	0.038	0.11	2500	UHW2A471MHD6
	560	16×30.5	0.08	560	0.033	0.095	2640	UHW2A561MHD
	680	16×35.5	0.08	680	0.030	0.086	2860	UHW2A681MHD
	680	18×30.5	0.08	680	0.031	0.090	2860	UHW2A681MHD6
	820	16×40	0.08	820	0.028	0.081	3510	UHW2A821MHD
	820	18×35.5	0.08	820	0.028	0.081	3510	UHW2A821MHD6
	1000	18×40	0.08	1000	0.027	0.076	3860	UHW2A102MHD

[•] For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.