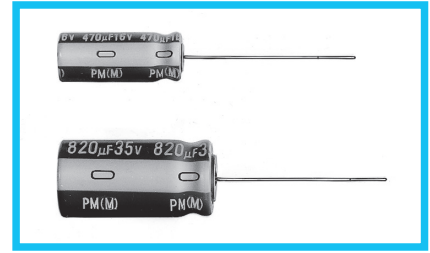
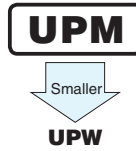


ALUMINUM ELECTROLYTIC CAPACITORS

UPM

Low Impedance, High Reliability



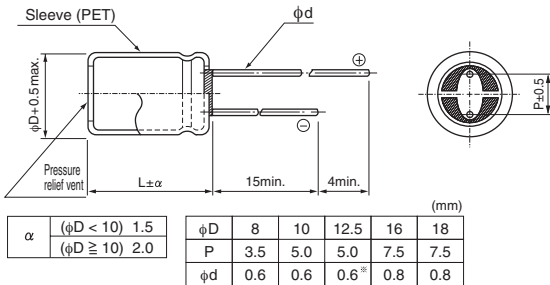
- High reliability withstanding 5000 hour load life at +105°C (3000 hours for smaller case sizes as specified below).
- Capacitance ranges available based on the numerical values in E12 series under JIS.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

Specifications

Item	Performance Characteristics	
Category Temperature Range	-55 to +105°C	
Rated Voltage Range	6.3 to 100V	
Rated Capacitance Range	22 to 15000µF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV(µA).	
Tangent of loss angle (tan δ)	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF. Measurement frequency : 120Hz at 20°C	
	Rated Voltage (V)	6.3 10 16 25 35 50 63 to 100
	tan δ (max.)	0.22 0.19 0.16 0.14 0.12 0.10 0.08
Stability at Low Temperature	Rated voltage (V)	6.3 · 10 16 25 · 35 50 to 100
	Impedance ratio (max.)	Z(-55°C) / Z(+20°C)
Endurance	The specifications listed below shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied at 105°C for the condition listed at right. The peak voltage shall not exceed the rated voltage.	
	Rated Voltage	φD(mm) φ8 ≥φ10
	6.3~100V	3000hrs. 5000hrs.
	Capacitance change	Within ±20% of the initial capacitance value
	tan δ	200% or less than the initial specified value
	Leakage current	Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right.	
	Capacitance change	Within ±20% of the initial capacitance value
	tan δ	150% 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 dark brown sleeve.	

※ I : Leakage Current (µA), C : Rated Capacitance (µF), V : Rated Voltage (V)

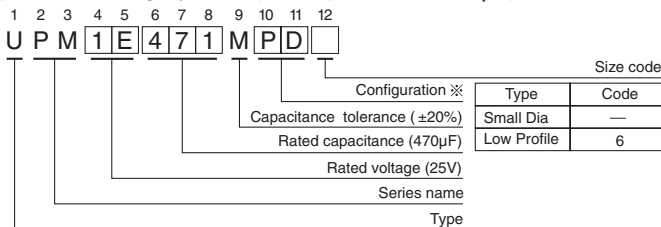
Radial Lead Type



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

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

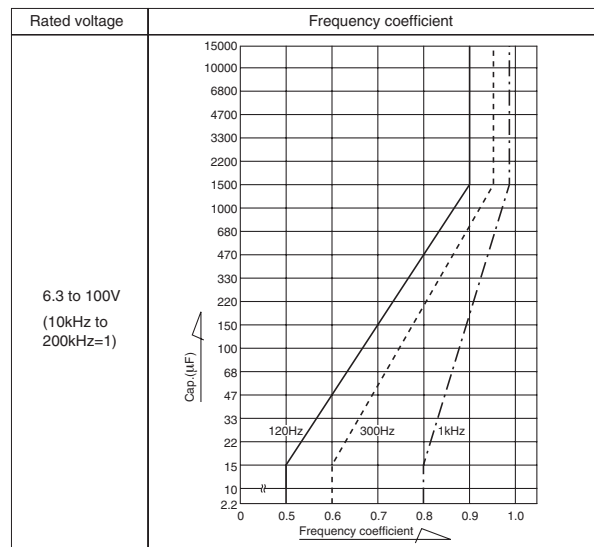
Type numbering system (Example : 25V 470µF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
8 · 10	PD
12.5 to 18	HD

Frequency coefficient of rated ripple current



● Dimension table in next page.

UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
6.3 (0J)	390	8×11.5	0.22	73.71	0.17	0.34	445	345	UPM0J391MPD
	470	8×15	0.22	88.83	0.14	0.28	550	440	UPM0J471MPD
	470	10×12.5	0.22	88.83	0.14	0.28	635	505	UPM0J471MPD6
	560	8×15	0.22	105.84	0.12	0.24	595	485	UPM0J561MPD
	560	10×12.5	0.22	105.84	0.13	0.26	670	545	UPM0J561MPD6
	680	8×20	0.22	128.52	0.10	0.20	730	605	UPM0J681MPD
	680	10×16	0.22	128.52	0.11	0.22	825	685	UPM0J681MPD6
	820	8×20	0.22	154.98	0.085	0.17	795	675	UPM0J821MPD
	820	10×16	0.22	154.98	0.095	0.19	840	715	UPM0J821MPD6
	1000	10×20	0.22	189	0.075	0.15	950	820	UPM0J102MPD
	1000	12.5×15	0.22	189	0.085	0.17	890	770	UPM0J102MHD6
	1200	10×20	0.22	226.8	0.065	0.13	1060	930	UPM0J122MPD
	1200	12.5×15	0.22	226.8	0.075	0.15	950	835	UPM0J122MHD6
	1500	10×25	0.22	283.5	0.055	0.11	1260	1130	UPM0J152MPD
	1500	12.5×15	0.22	283.5	0.065	0.13	1020	915	UPM0J152MHD6
	1800	10×30.5	0.22	340.2	0.050	0.10	1370	1230	UPM0J182MPD
	1800	16×15	0.22	340.2	0.055	0.11	1270	1140	UPM0J182MHD6
	2200	10×30.5	0.24	415.8	0.043	0.086	1470	1320	UPM0J222MPD
	2200	16×15	0.24	415.8	0.049	0.098	1340	1200	UPM0J222MHD6
	2700	12.5×25	0.24	510.3	0.038	0.076	1700	1530	UPM0J272MHD
	2700	18×15	0.24	510.3	0.044	0.088	1500	1350	UPM0J272MHD6
	3300	12.5×25	0.26	623.7	0.034	0.068	1710	1530	UPM0J332MHD
	3300	18×15	0.26	623.7	0.039	0.078	1600	1440	UPM0J332MHD6
	3900	12.5×30.5	0.26	737.1	0.031	0.062	1980	1780	UPM0J392MHD
	3900	16×20	0.26	737.1	0.036	0.072	1770	1590	UPM0J392MHD6
	4700	12.5×35.5	0.28	888.3	0.028	0.056	2230	2000	UPM0J472MHD
	4700	18×20	0.28	888.3	0.032	0.064	1920	1720	UPM0J472MHD6
	5600	12.5×40	0.30	1058.4	0.026	0.052	2460	2210	UPM0J562MHD
	5600	18×20	0.30	1058.4	0.030	0.060	1980	1780	UPM0J562MHD6
	6800	16×30.5	0.32	1285.2	0.024	0.048	2510	2250	UPM0J682MHD
	6800	18×25	0.32	1285.2	0.027	0.054	2350	2110	UPM0J682MHD6
	8200	16×35.5	0.36	1549.8	0.022	0.044	2770	2490	UPM0J822MHD
	8200	18×30.5	0.36	1549.8	0.025	0.050	2600	2340	UPM0J822MHD6
10000	16×40	0.40	1890	0.020	0.040	3110	2790	UPM0J103MHD	
10000	18×30.5	0.40	1890	0.023	0.046	2720	2440	UPM0J103MHD6	
12000	18×35.5	0.44	2268	0.019	0.038	3050	2740	UPM0J123MHD	
15000	18×40	0.50	2835	0.018	0.036	3300	2970	UPM0J153MHD	

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mA _{rms})		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
10 (1A)	330	8×11.5	0.19	99	0.16	0.32	460	350	UPM1A331MPD
	390	8×15	0.19	117	0.14	0.28	550	430	UPM1A391MPD
	390	10×12.5	0.19	117	0.15	0.30	635	490	UPM1A391MPD6
	470	8×15	0.19	141	0.12	0.24	595	475	UPM1A471MPD
	470	10×12.5	0.19	141	0.13	0.26	670	535	UPM1A471MPD6
	560	8×20	0.19	168	0.10	0.20	730	595	UPM1A561MPD
	560	10×16	0.19	168	0.11	0.22	700	570	UPM1A561MPD6
	680	8×20	0.19	204	0.085	0.17	795	660	UPM1A681MPD
	680	10×16	0.19	204	0.090	0.18	825	685	UPM1A681MPD6
	820	10×20	0.19	246	0.070	0.14	985	835	UPM1A821MPD
	820	12.5×15	0.19	246	0.080	0.16	920	780	UPM1A821MHD6
	1000	10×20	0.19	300	0.060	0.12	1060	915	UPM1A102MPD
	1000	12.5×15	0.19	300	0.065	0.13	1040	900	UPM1A102MHD6
	1200	10×25	0.19	360	0.050	0.10	1260	1120	UPM1A122MPD
	1200	12.5×15	0.19	360	0.060	0.12	1060	930	UPM1A122MHD6
	1500	10×30.5	0.19	450	0.045	0.09	1450	1300	UPM1A152MPD
	1500	16×15	0.19	450	0.050	0.10	1330	1190	UPM1A152MHD6
	1800	12.5×20	0.19	540	0.039	0.078	1470	1320	UPM1A182MHD
	1800	16×15	0.19	540	0.044	0.088	1420	1270	UPM1A182MHD6
	2200	12.5×25	0.21	660	0.034	0.068	1710	1530	UPM1A222MHD
	2200	18×15	0.21	660	0.039	0.078	1600	1440	UPM1A222MHD6
	2700	12.5×30.5	0.21	810	0.030	0.060	1980	1780	UPM1A272MHD
	2700	16×20	0.21	810	0.035	0.070	1740	1560	UPM1A272MHD6
	3300	12.5×35.5	0.23	990	0.026	0.052	2230	2000	UPM1A332MHD
	3300	16×20	0.23	990	0.031	0.062	1850	1660	UPM1A332MHD6
	3900	12.5×40	0.23	1170	0.024	0.048	2460	2210	UPM1A392MHD
	3900	18×20	0.23	1170	0.028	0.056	2050	1840	UPM1A392MHD6
	4700	16×30.5	0.25	1410	0.023	0.046	2420	2170	UPM1A472MHD
	4700	18×25	0.25	1410	0.026	0.052	2350	2110	UPM1A472MHD6
	5600	16×35.5	0.27	1680	0.021	0.042	2610	2340	UPM1A562MHD
5600	18×25	0.27	1680	0.024	0.048	2440	2190	UPM1A562MHD6	
6800	16×35.5	0.29	2040	0.020	0.040	2770	2490	UPM1A682MHD	
6800	18×30.5	0.29	2040	0.022	0.044	2720	2440	UPM1A682MHD6	
8200	16×40	0.33	2460	0.019	0.038	3110	2790	UPM1A822MHD	
8200	18×35.5	0.33	2460	0.021	0.042	3050	2740	UPM1A822MHD6	
10000	18×40	0.37	3000	0.017	0.034	3300	2970	UPM1A103MHD	
16 (1C)	220	8×11.5	0.16	105.6	0.16	0.32	460	335	UPM1C221MPD
	270	8×15	0.16	129.6	0.14	0.28	550	410	UPM1C271MPD
	270	10×12.5	0.16	129.6	0.14	0.28	635	470	UPM1C271MPD6
	330	8×15	0.16	158.4	0.12	0.24	595	455	UPM1C331MPD
	330	10×12.5	0.16	158.4	0.12	0.24	670	510	UPM1C331MPD6
	390	8×20	0.16	187.2	0.10	0.20	730	570	UPM1C391MPD

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If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mArms)		Part Number
					20°C/100kHz	-10°C/100kHz	105°C/10 to 200kHz	105°C/120Hz	
16 (1C)	390	10×16	0.16	187.2	0.10	0.20	730	570	UPM1C391MPD6
	470	8×20	0.16	225.6	0.090	0.18	770	615	UPM1C471MPD
	470	10×16	0.16	225.6	0.090	0.18	825	660	UPM1C471MPD6
	560	10×20	0.16	268.8	0.075	0.15	950	775	UPM1C561MPD
	560	12.5×15	0.16	268.8	0.080	0.16	920	750	UPM1C561MHD6
	680	10×20	0.16	326.4	0.065	0.13	1060	880	UPM1C681MPD
	680	12.5×15	0.16	326.4	0.070	0.14	985	820	UPM1C681MHD6
	820	10×25	0.16	393.6	0.055	0.11	1260	1070	UPM1C821MPD
	820	12.5×15	0.16	393.6	0.060	0.12	1060	900	UPM1C821MHD6
	1000	10×30.5	0.16	480	0.047	0.094	1410	1220	UPM1C102MPD
	1000	16×15	0.16	480	0.055	0.11	1270	1100	UPM1C102MHD6
	1200	12.5×20	0.16	576	0.041	0.082	1430	1250	UPM1C122MHD
	1200	16×15	0.16	576	0.046	0.092	1390	1220	UPM1C122MHD6
	1500	12.5×25	0.16	720	0.036	0.072	1700	1530	UPM1C152MHD
	1500	18×15	0.16	720	0.041	0.082	1560	1400	UPM1C152MHD6
	1800	12.5×30.5	0.16	864	0.032	0.064	1880	1690	UPM1C182MHD
	1800	16×20	0.16	864	0.037	0.074	1700	1530	UPM1C182MHD6
	2200	12.5×30.5	0.18	1056	0.028	0.056	2010	1800	UPM1C222MHD
	2200	16×20	0.18	1056	0.033	0.066	1800	1620	UPM1C222MHD6
	2700	12.5×35.5	0.18	1296	0.025	0.050	2230	2000	UPM1C272MHD
	2700	16×25	0.18	1296	0.030	0.060	2190	1970	UPM1C272MHD6
	3300	12.5×40	0.20	1584	0.023	0.046	2460	2210	UPM1C332MHD
	3300	18×20	0.20	1584	0.027	0.054	2090	1880	UPM1C332MHD6
	3900	16×30.5	0.20	1872	0.022	0.044	2510	2250	UPM1C392MHD
	3900	18×25	0.20	1872	0.025	0.050	2350	2110	UPM1C392MHD6
	4700	16×35.5	0.22	2256	0.020	0.040	2770	2490	UPM1C472MHD
	4700	18×30.5	0.22	2256	0.023	0.046	2720	2440	UPM1C472MHD6
	5600	16×40	0.24	2688	0.019	0.038	3110	2790	UPM1C562MHD
5600	18×35.5	0.24	2688	0.022	0.044	2620	2350	UPM1C562MHD6	
6800	18×35.5	0.26	3264	0.018	0.036	3050	2740	UPM1C682MHD	
8200	18×40	0.30	3936	0.017	0.034	3300	2970	UPM1C822MHD	
25 (1E)	150	8×11.5	0.14	112.5	0.16	0.32	460	320	UPM1E151MPD
	180	8×15	0.14	135	0.14	0.28	550	390	UPM1E181MPD
	180	10×12.5	0.14	135	0.15	0.30	635	450	UPM1E181MPD6
	220	8×15	0.14	165	0.11	0.22	625	455	UPM1E221MPD
	220	10×12.5	0.14	165	0.13	0.26	670	485	UPM1E221MPD6
	270	8×20	0.14	202.5	0.095	0.19	750	560	UPM1E271MPD
	270	10×16	0.14	202.5	0.11	0.22	700	525	UPM1E271MPD6
	330	8×20	0.14	247.5	0.085	0.17	795	610	UPM1E331MPD
	330	10×16	0.14	247.5	0.095	0.19	825	630	UPM1E331MPD6
	390	10×20	0.14	292.5	0.070	0.14	985	770	UPM1E391MPD
	390	12.5×15	0.14	292.5	0.080	0.16	920	720	UPM1E391MHD6
	470	10×20	0.14	352.5	0.065	0.13	1060	845	UPM1E471MPD

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
 If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D×L(mm)	tan δ	Leakage Current (μ A) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mA _{rms})		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
25 (1E)	470	12.5×15	0.14	352.5	0.070	0.14	985	785	UPM1E471MHD6
	560	10×25	0.14	420	0.055	0.11	1260	1030	UPM1E561MPD
	560	12.5×15	0.14	420	0.060	0.12	1060	860	UPM1E561MHD6
	680	10×30.5	0.14	510	0.046	0.092	1420	1180	UPM1E681MPD
	680	16×15	0.14	510	0.055	0.11	1270	1050	UPM1E681MHD6
	820	12.5×20	0.14	615	0.041	0.082	1440	1220	UPM1E821MHD
	820	16×15	0.14	615	0.049	0.098	1340	1140	UPM1E821MHD6
	1000	12.5×25	0.14	750	0.036	0.072	1700	1470	UPM1E102MHD
	1000	18×15	0.14	750	0.043	0.086	1520	1310	UPM1E102MHD6
	1200	12.5×25	0.14	900	0.032	0.064	1760	1550	UPM1E122MHD
	1200	18×15	0.14	900	0.039	0.078	1600	1400	UPM1E122MHD6
	1500	12.5×30.5	0.14	1125	0.029	0.058	1980	1780	UPM1E152MHD
	1500	16×20	0.14	1125	0.034	0.068	1770	1590	UPM1E152MHD6
	1800	12.5×35.5	0.14	1350	0.026	0.052	2230	2000	UPM1E182MHD
	1800	16×25	0.14	1350	0.031	0.062	2190	1970	UPM1E182MHD6
	2200	12.5×40	0.16	1650	0.024	0.048	2460	2210	UPM1E222MHD
	2200	18×20	0.16	1650	0.028	0.056	2050	1840	UPM1E222MHD6
	2700	16×30.5	0.16	2025	0.022	0.044	2510	2250	UPM1E272MHD
	2700	18×25	0.16	2025	0.025	0.050	2350	2110	UPM1E272MHD6
	3300	16×35.5	0.18	2475	0.020	0.040	2770	2490	UPM1E332MHD
3300	18×30.5	0.18	2475	0.023	0.046	2720	2440	UPM1E332MHD6	
3900	16×40	0.18	2925	0.019	0.038	3110	2790	UPM1E392MHD	
3900	18×35.5	0.18	2925	0.021	0.042	3050	2740	UPM1E392MHD6	
4700	18×40	0.20	3525	0.018	0.036	3300	2970	UPM1E472MHD	
35 (1V)	100	8×11.5	0.12	105	0.16	0.32	460	305	UPM1V101MPD
	120	8×15	0.12	126	0.14	0.28	550	370	UPM1V121MPD
	120	10×12.5	0.12	126	0.15	0.30	635	425	UPM1V121MPD6
	150	8×15	0.12	157.5	0.12	0.24	595	415	UPM1V151MPD
	150	10×12.5	0.12	157.5	0.12	0.24	680	475	UPM1V151MPD6
	180	8×20	0.12	189	0.10	0.20	730	520	UPM1V181MPD
	180	10×16	0.12	189	0.11	0.22	700	500	UPM1V181MPD6
	220	8×20	0.12	231	0.085	0.17	795	580	UPM1V221MPD
	220	10×16	0.12	231	0.090	0.18	825	600	UPM1V221MPD6
	270	10×20	0.12	283.5	0.070	0.14	985	735	UPM1V271MPD
	270	12.5×15	0.12	283.5	0.080	0.16	920	690	UPM1V271MHD6
	330	10×20	0.12	346.5	0.060	0.12	1060	810	UPM1V331MPD
	330	12.5×15	0.12	346.5	0.065	0.13	1020	780	UPM1V331MHD6
	390	10×25	0.12	409.5	0.055	0.11	1260	980	UPM1V391MPD
	390	12.5×15	0.12	409.5	0.060	0.12	1060	825	UPM1V391MHD6
	470	10×30.5	0.12	493.5	0.046	0.092	1450	1160	UPM1V471MPD
	470	16×15	0.12	493.5	0.055	0.11	1270	1010	UPM1V471MHD6
	560	12.5×20	0.12	588	0.041	0.082	1430	1170	UPM1V561MHD
560	16×15	0.12	588	0.048	0.096	1360	1110	UPM1V561MHD6	

For cut leads, formed leads or taped parts, please add the appropriate code after the size code (12th digit).
If there is no size code in the part number, please add size code "1" and then add the appropriate code.

UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D×L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mA _{rms})		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
35 (1V)	680	12.5×25	0.12	714	0.036	0.072	1700	1410	UPM1V681MHD
	680	18×15	0.12	714	0.042	0.084	1540	1280	UPM1V681MHD6
	820	12.5×25	0.12	861	0.032	0.064	1760	1490	UPM1V821MHD
	820	18×15	0.12	861	0.038	0.076	1620	1380	UPM1V821MHD6
	1000	12.5×30.5	0.12	1050	0.029	0.058	1980	1710	UPM1V102MHD
	1000	16×20	0.12	1050	0.034	0.068	1770	1530	UPM1V102MHD6
	1200	12.5×35.5	0.12	1260	0.026	0.052	2230	1960	UPM1V122MHD
	1200	16×25	0.12	1260	0.031	0.062	2190	1920	UPM1V122MHD6
	1500	12.5×40	0.12	1575	0.024	0.048	2460	2210	UPM1V152MHD
	1500	18×20	0.12	1575	0.028	0.056	2050	1840	UPM1V152MHD6
	1800	16×30.5	0.12	1890	0.022	0.044	2510	2250	UPM1V182MHD
	1800	18×25	0.12	1890	0.025	0.050	2350	2110	UPM1V182MHD6
	2200	16×35.5	0.14	2310	0.020	0.040	2770	2490	UPM1V222MHD
	2200	18×30.5	0.14	2310	0.023	0.046	2720	2440	UPM1V222MHD6
	2700	16×40	0.14	2835	0.018	0.036	3110	2790	UPM1V272MHD
	2700	18×35.5	0.14	2835	0.021	0.042	3050	2740	UPM1V272MHD6
3300	18×40	0.16	3465	0.017	0.034	3300	2970	UPM1V332MHD	
50 (1H)	68	8×11.5	0.10	102	0.20	0.40	415	260	UPM1H680MPD
	82	8×15	0.10	123	0.17	0.34	505	320	UPM1H820MPD
	82	10×12.5	0.10	123	0.18	0.36	530	340	UPM1H820MPD6
	100	8×20	0.10	150	0.14	0.28	620	410	UPM1H101MPD
	100	10×16	0.10	150	0.16	0.32	580	385	UPM1H101MPD6
	120	8×20	0.10	180	0.12	0.24	755	510	UPM1H121MPD
	120	10×16	0.10	180	0.13	0.26	755	510	UPM1H121MPD6
	150	10×20	0.10	225	0.10	0.20	820	570	UPM1H151MPD
	150	12.5×15	0.10	225	0.11	0.22	785	545	UPM1H151MHD6
	180	10×20	0.10	270	0.085	0.17	945	670	UPM1H181MPD
	180	12.5×15	0.10	270	0.095	0.19	845	605	UPM1H181MHD6
	220	10×25	0.10	330	0.075	0.15	1150	840	UPM1H221MPD
	220	12.5×15	0.10	330	0.080	0.16	920	670	UPM1H221MHD6
	270	10×30.5	0.10	405	0.065	0.13	1200	900	UPM1H271MPD
	270	16×15	0.10	405	0.070	0.14	1120	840	UPM1H271MHD6
	330	10×30.5	0.10	495	0.055	0.11	1300	995	UPM1H331MPD
	330	16×15	0.10	495	0.060	0.12	1210	925	UPM1H331MHD6
	390	12.5×25	0.10	585	0.048	0.096	1440	1120	UPM1H391MHD
390	16×15	0.10	585	0.055	0.11	1270	990	UPM1H391MHD6	
470	12.5×25	0.10	705	0.044	0.088	1500	1200	UPM1H471MHD	

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UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D×L (mm)	tan δ	Leakage Current (μ A) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
50 (1H)	470	18×15	0.10	705	0.046	0.092	1470	1170	UPM1H471MHD6
	560	12.5×30.5	0.10	840	0.040	0.080	1720	1410	UPM1H561MHD
	560	16×20	0.10	840	0.044	0.088	1550	1270	UPM1H561MHD6
	680	12.5×35.5	0.10	1020	0.036	0.072	1900	1580	UPM1H681MHD
	680	16×20	0.10	1020	0.040	0.080	1630	1350	UPM1H681MHD6
	820	12.5×40	0.10	1230	0.033	0.066	2120	1800	UPM1H821MHD
	820	18×20	0.10	1230	0.036	0.072	1810	1540	UPM1H821MHD6
	1000	16×30.5	0.10	1500	0.030	0.060	2150	1860	UPM1H102MHD
	1000	18×25	0.10	1500	0.033	0.066	2020	1750	UPM1H102MHD6
	1200	16×35.5	0.10	1800	0.028	0.056	2320	2040	UPM1H122MHD
	1200	18×30.5	0.10	1800	0.031	0.062	2140	1880	UPM1H122MHD6
	1500	16×40	0.10	2250	0.026	0.052	2650	2380	UPM1H152MHD
	1500	18×30.5	0.10	2250	0.029	0.058	2340	2100	UPM1H152MHD6
	1800	18×35.5	0.10	2700	0.025	0.050	2620	2350	UPM1H182MHD
2200	18×40	0.12	3300	0.024	0.048	2790	2510	UPM1H222MHD	
63 (1J)	47	8×11.5	0.08	88.83	0.25	0.50	365	215	UPM1J470MPD
	56	8×15	0.08	105.84	0.21	0.42	450	275	UPM1J560MPD
	56	10×12.5	0.08	105.84	0.23	0.46	450	275	UPM1J560MPD6
	68	8×15	0.08	128.52	0.17	0.34	500	315	UPM1J680MPD
	68	10×12.5	0.08	128.52	0.19	0.38	495	310	UPM1J680MPD6
	82	8×20	0.08	154.98	0.15	0.30	600	385	UPM1J820MPD
	82	10×16	0.08	154.98	0.16	0.32	580	375	UPM1J820MPD6
	100	10×20	0.08	189	0.12	0.24	750	495	UPM1J101MPD
	100	12.5×15	0.08	189	0.14	0.28	695	460	UPM1J101MHD6
	120	10×20	0.08	226.8	0.10	0.20	820	555	UPM1J121MPD
	120	12.5×15	0.08	226.8	0.12	0.24	750	510	UPM1J121MHD6
	150	10×25	0.08	283.5	0.090	0.18	950	665	UPM1J151MPD
	150	12.5×15	0.08	283.5	0.095	0.19	845	590	UPM1J151MHD6
	180	10×30.5	0.08	340.2	0.075	0.15	1110	790	UPM1J181MPD
	180	16×15	0.08	340.2	0.080	0.16	1050	750	UPM1J181MHD6
	220	12.5×20	0.08	415.8	0.065	0.13	1140	835	UPM1J221MHD
	220	16×15	0.08	415.8	0.070	0.14	1120	820	UPM1J221MHD6
	270	12.5×25	0.08	510.3	0.055	0.11	1340	1000	UPM1J271MHD
	270	18×15	0.08	510.3	0.060	0.12	1290	965	UPM1J271MHD6
	330	12.5×25	0.08	623.7	0.049	0.098	1420	1090	UPM1J331MHD
	330	18×15	0.08	623.7	0.050	0.10	1410	1080	UPM1J331MHD6
	390	12.5×30.5	0.08	737.1	0.043	0.086	1620	1260	UPM1J391MHD
	390	16×20	0.08	737.1	0.047	0.094	1500	1170	UPM1J391MHD6
	470	12.5×35.5	0.08	888.3	0.039	0.078	1780	1420	UPM1J471MHD
	470	16×25	0.08	888.3	0.042	0.084	1700	1360	UPM1J471MHD6
	560	12.5×40	0.08	1058.4	0.035	0.070	1950	1590	UPM1J561MHD
560	18×20	0.08	1058.4	0.039	0.078	1730	1410	UPM1J561MHD6	
680	16×30.5	0.08	1285.2	0.032	0.064	2050	1700	UPM1J681MHD	

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UPM

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mArms)		Part Number
					20°C/100kHz	-10°C/100kHz	105°C/10 to 200kHz	105°C/120Hz	
63 (1J)	680	18×25	0.08	1285.2	0.035	0.070	1940	1610	UPM1J681MHD6
	820	16×35.5	0.08	1549.8	0.029	0.058	2220	1890	UPM1J821MHD
	820	18×30.5	0.08	1549.8	0.032	0.064	2110	1790	UPM1J821MHD6
	1000	16×40	0.08	1890	0.027	0.054	2370	2050	UPM1J102MHD
	1000	18×35.5	0.08	1890	0.029	0.058	2280	1970	UPM1J102MHD6
	1200	18×40	0.08	2268	0.025	0.050	2510	2210	UPM1J122MHD
80 (1K)	33	8×11.5	0.08	79.2	0.53	1.40	275	150	UPM1K330MPD
	39	8×15	0.08	93.6	0.46	1.20	300	170	UPM1K390MPD
	39	10×12.5	0.08	93.6	0.49	1.30	380	215	UPM1K390MPD6
	47	8×15	0.08	112.8	0.39	1.10	360	215	UPM1K470MPD
	47	10×12.5	0.08	112.8	0.42	1.10	410	245	UPM1K470MPD6
	56	8×20	0.08	134.4	0.34	0.92	490	295	UPM1K560MPD
	56	10×16	0.08	134.4	0.36	0.97	500	305	UPM1K560MPD6
	68	10×20	0.08	163.2	0.28	0.76	570	355	UPM1K680MPD
	68	12.5×15	0.08	163.2	0.31	0.84	520	325	UPM1K680MHD6
	82	10×20	0.08	196.8	0.25	0.68	620	395	UPM1K820MPD
	82	12.5×15	0.08	196.8	0.27	0.73	560	355	UPM1K820MHD6
	100	10×25	0.08	240	0.21	0.57	795	525	UPM1K101MPD
	100	12.5×15	0.08	240	0.23	0.62	605	400	UPM1K101MHD6
	120	10×30.5	0.08	288	0.18	0.49	870	585	UPM1K121MPD
	120	16×15	0.08	288	0.20	0.54	663	445	UPM1K121MHD6
	150	10×30.5	0.08	360	0.15	0.41	955	665	UPM1K151MPD
	150	16×15	0.08	360	0.18	0.47	699	470	UPM1K151MHD6
	180	12.5×25	0.08	432	0.13	0.35	1040	735	UPM1K181MHD
	180	16×15	0.08	432	0.15	0.41	766	545	UPM1K181MHD6
	220	12.5×30.5	0.08	528	0.12	0.32	1160	845	UPM1K221MHD
	220	18×15	0.08	528	0.13	0.35	881	645	UPM1K221MHD6
	270	12.5×30.5	0.08	648	0.10	0.27	1270	945	UPM1K271MHD
	270	16×20	0.08	648	0.11	0.30	1240	920	UPM1K271MHD6
	330	12.5×35.5	0.08	792	0.088	0.24	1450	1100	UPM1K331MHD
	330	16×25	0.08	792	0.099	0.27	1440	1100	UPM1K331MHD6
	390	12.5×40	0.08	936	0.078	0.21	1610	1250	UPM1K391MHD
	390	18×20	0.08	936	0.089	0.24	1450	1120	UPM1K391MHD6
	470	16×30.5	0.08	1128	0.069	0.19	1790	1430	UPM1K471MHD
	470	18×25	0.08	1128	0.080	0.22	1650	1320	UPM1K471MHD6
	560	16×35.5	0.08	1344	0.062	0.17	2000	1640	UPM1K561MHD
	560	18×30.5	0.08	1344	0.072	0.19	1750	1430	UPM1K561MHD6
	680	16×40	0.08	1632	0.055	0.15	2200	1830	UPM1K681MHD
680	18×30.5	0.08	1632	0.065	0.18	1850	1540	UPM1K681MHD6	
820	18×35.5	0.08	1968	0.049	0.13	2250	1910	UPM1K821MHD	
1000	18×40	0.08	2400	0.044	0.12	2370	2050	UPM1K102MHD	

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 1 minute)	Impedance (Ω) max.		Rated Ripple (mA _{rms})		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
100 (2A)	22	8×11.5	0.08	66	0.55	1.50	275	145	UPM2A220MPD
	27	8×15	0.08	81	0.47	1.30	300	160	UPM2A270MPD
	27	10×12.5	0.08	81	0.50	1.40	380	205	UPM2A270MPD6
	33	8×15	0.08	99	0.38	1.00	360	200	UPM2A330MPD
	33	10×12.5	0.08	99	0.42	1.10	410	230	UPM2A330MPD6
	39	8×20	0.08	117	0.33	0.89	490	280	UPM2A390MPD
	39	10×16	0.08	117	0.36	0.97	500	285	UPM2A390MPD6
	47	10×20	0.08	141	0.28	0.76	570	340	UPM2A470MPD
	47	12.5×15	0.08	141	0.31	0.84	520	310	UPM2A470MHD6
	56	10×20	0.08	168	0.24	0.65	620	375	UPM2A560MPD
	56	12.5×15	0.08	168	0.27	0.73	560	340	UPM2A560MHD6
	68	10×25	0.08	204	0.21	0.57	795	500	UPM2A680MPD
	68	12.5×15	0.08	204	0.23	0.62	605	380	UPM2A680MHD6
	82	10×30.5	0.08	246	0.18	0.49	870	555	UPM2A820MPD
	82	16×15	0.08	246	0.19	0.51	681	435	UPM2A820MHD6
	100	10×30.5	0.08	300	0.15	0.41	955	635	UPM2A101MPD
	100	16×15	0.08	300	0.17	0.46	719	475	UPM2A101MHD6
	120	12.5×25	0.08	360	0.13	0.35	1040	700	UPM2A121MHD
	120	16×15	0.08	360	0.14	0.38	793	535	UPM2A121MHD6
	150	12.5×25	0.08	450	0.11	0.30	1120	780	UPM2A151MHD
	150	18×15	0.08	450	0.12	0.32	917	640	UPM2A151MHD6
	180	12.5×30.5	0.08	540	0.098	0.26	1270	900	UPM2A181MHD
	180	16×20	0.08	540	0.11	0.30	1240	880	UPM2A181MHD6
	220	12.5×35.5	0.08	660	0.087	0.23	1450	1050	UPM2A221MHD
	220	16×25	0.08	660	0.093	0.25	1440	1050	UPM2A221MHD6
	270	12.5×40	0.08	810	0.072	0.19	1610	1200	UPM2A271MHD
	270	18×20	0.08	810	0.080	0.22	1450	1080	UPM2A271MHD6
	330	16×30.5	0.08	990	0.062	0.17	1790	1370	UPM2A331MHD
	330	18×25	0.08	990	0.070	0.19	1650	1260	UPM2A331MHD6
	390	16×35.5	0.08	1170	0.053	0.14	2000	1550	UPM2A391MHD
390	18×30.5	0.08	1170	0.062	0.17	1850	1430	UPM2A391MHD6	
470	16×40	0.08	1410	0.047	0.13	2200	1760	UPM2A471MHD	
470	18×35.5	0.08	1410	0.056	0.15	1970	1570	UPM2A471MHD6	
560	18×35.5	0.08	1680	0.041	0.11	2250	1840	UPM2A561MHD	
680	18×40	0.08	2040	0.036	0.097	2300	1910	UPM2A681MHD	

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