

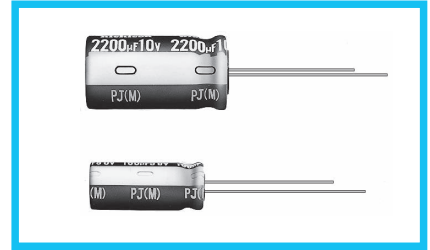
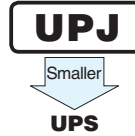
# ALUMINUM ELECTROLYTIC CAPACITORS

# UPJ

Low Impedance, For Switching Power Supplies



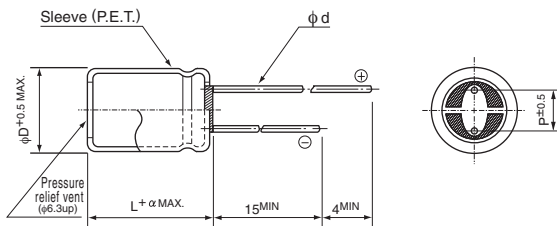
- Low impedance and high reliability withstanding 5000 hours load life at +105°C (3000 / 2000 hours for smaller case sizes as specified below).
- Capacitance ranges available based on the numerical values in E12 series under JIS.
- Ideally suited for use of switching power supplies.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).



## Specifications

Item		Performance Characteristics																														
Category Temperature Range	-55 to +105°C (6.3 to 100V), -40 to +105°C (160 to 400V), -25 to +105°C (450V)																															
Rated Voltage Range	6.3 to 450V																															
Rated Capacitance Range	1 to 15000µF																															
Capacitance Tolerance	±20% at 120Hz, 20°C																															
Leakage Current	Rated Voltage (V)	6.3 to 100	160 to 450																													
	Leakage current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (µA), whichever is greater. After 1 minute's application of rated voltage at 20°C, CV ≤ 1000 : I = 0.1CV+40 (µA) or less. CV > 1000 : I = 0.04CV+100 (µA) or less.																														
Tangent of loss angle (tan δ)	Rated Voltage (V)	6.3	10	16	25	35	50	63 to 100	160 to 350	400 · 450																						
	tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.20	0.25																						
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	50 to 100	160·200	250	315·350	400	450																						
	Impedance ratio (MAX.)	Z-25°C / Z+20°C	—	—	—	—	—	—	—	—	15																					
		Z-40°C / Z+20°C	—	—	—	—	4	6	8	10	—																					
Z-55°C / Z+20°C	4	3	3	2	—	—	—	—	—	—																						
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.						<table border="1"> <tr> <th>Rated Voltage</th> <th>φD(mm)</th> <th>φ5, φ6.3</th> <th>φ8</th> <th>≥ φ10</th> </tr> <tr> <td>6.3~450V</td> <td></td> <td>2000h</td> <td>3000h</td> <td>5000h</td> </tr> </table> <p style="text-align: right;">h = hours</p>					Rated Voltage	φD(mm)	φ5, φ6.3	φ8	≥ φ10	6.3~450V		2000h	3000h	5000h											
	Rated Voltage	φD(mm)	φ5, φ6.3	φ8	≥ φ10																											
	6.3~450V		2000h	3000h	5000h																											
	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 specified values for the endurance characteristics listed at right.						<table border="1"> <tr> <td>Capacitance change</td> <td colspan="6">Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td colspan="6">150% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> </table>					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					
	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.																															

## Radial Lead Type

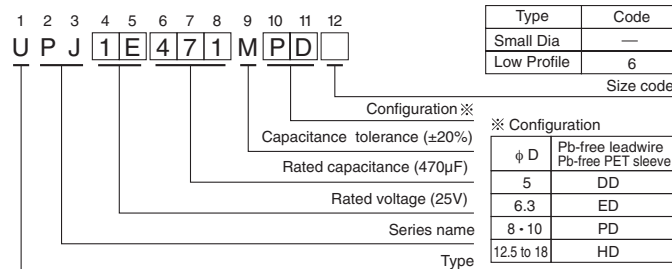


α		φD (mm)						
α	(φD < 8)	1.0						
	(φD ≥ 8)	1.5						
φD		5	6.3	8	10	12.5	16	18
P		2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd		0.5	0.5	0.6	0.6	0.6	0.8	0.8

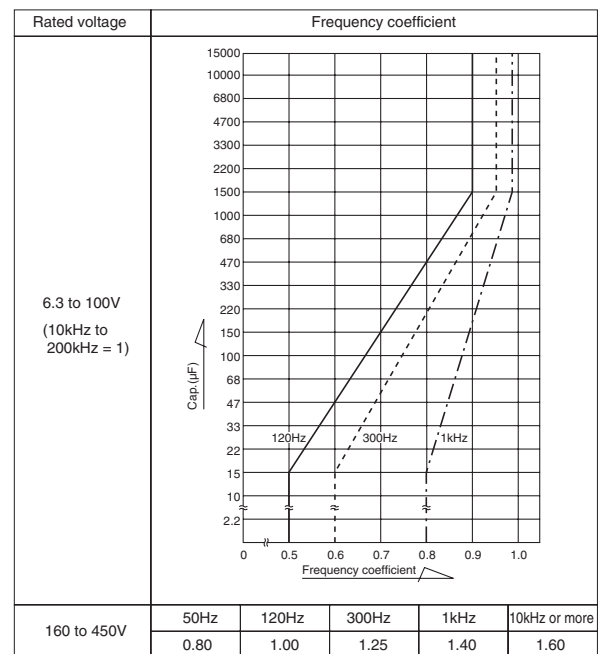
※ In case L > 25 for the φ12.5 dia. unit, lead dia. φ d = 0.8mm.

• Please refer to page 18 about the end seal configuration.

## Type numbering system (Example : 25V 470µF)



## Frequency coefficient of rated ripple current



• Dimension table in next page.



## ■ 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)	100	5×11	0.22	18.9	1.40	3.50	150	99	UPJ0J101MDD
	120	5×11	0.22	22.68	1.10	2.80	175	115	UPJ0J121MDD
	150	6.3×11	0.22	28.35	0.78	2.10	225	155	UPJ0J151MED
	180	6.3×11	0.22	34.02	0.60	1.50	250	175	UPJ0J181MED
	220	6.3×11	0.22	41.58	0.48	1.20	285	205	UPJ0J221MED
	270	6.3×15	0.22	51.03	0.39	1.00	370	275	UPJ0J271MED
	330	6.3×15	0.22	62.37	0.32	0.80	405	310	UPJ0J331MED
	390	8×11.5	0.22	73.71	0.27	0.68	445	345	UPJ0J391MPD
	470	8×15	0.22	88.83	0.22	0.55	550	435	UPJ0J471MPD
	470	10×12.5	0.22	88.83	0.23	0.58	575	455	UPJ0J471MPD6
	560	8×15	0.22	105.84	0.19	0.48	595	480	UPJ0J561MPD
	560	10×12.5	0.22	105.84	0.21	0.53	600	485	UPJ0J561MPD6
	680	8×20	0.22	128.52	0.16	0.40	730	605	UPJ0J681MPD
	680	10×16	0.22	128.52	0.18	0.45	700	580	UPJ0J681MPD6
	820	8×20	0.22	154.98	0.13	0.33	795	670	UPJ0J821MPD
	820	10×16	0.22	154.98	0.15	0.38	750	635	UPJ0J821MPD6
	1000	10×20	0.22	189	0.12	0.30	950	820	UPJ0J102MPD
	1000	12.5×15	0.22	189	0.13	0.33	890	765	UPJ0J102MHD6
	1200	10×20	0.22	226.8	0.10	0.25	1020	895	UPJ0J122MPD
	1200	12.5×15	0.22	226.8	0.12	0.30	950	835	UPJ0J122MHD6
	1500	10×25	0.22	283.5	0.084	0.21	1220	1090	UPJ0J152MPD
	1500	12.5×15	0.22	283.5	0.10	0.25	1020	915	UPJ0J152MHD6
	1800	10×31.5	0.22	340.2	0.078	0.20	1370	1230	UPJ0J182MPD
	1800	16×15	0.22	340.2	0.084	0.21	1270	1140	UPJ0J182MHD6
	2200	10×31.5	0.24	415.8	0.066	0.17	1470	1320	UPJ0J222MPD
	2200	16×15	0.24	415.8	0.078	0.20	1340	1200	UPJ0J222MHD6
	2700	12.5×25	0.24	510.3	0.051	0.14	1590	1430	UPJ0J272MHD
	2700	18×15	0.24	510.3	0.072	0.18	1500	1350	UPJ0J272MHD6
	3300	12.5×25	0.26	623.7	0.045	0.11	1710	1530	UPJ0J332MHD
	3300	18×15	0.26	623.7	0.065	0.16	1600	1440	UPJ0J332MHD6
	3900	12.5×31.5	0.26	737.1	0.037	0.093	1910	1710	UPJ0J392MHD
	3900	16×20	0.26	737.1	0.056	0.14	1720	1540	UPJ0J392MHD6
	4700	12.5×35.5	0.28	888.3	0.034	0.085	2100	1890	UPJ0J472MHD
	4700	18×20	0.28	888.3	0.050	0.13	1920	1720	UPJ0J472MHD6
5600	12.5×40	0.30	1058.4	0.031	0.078	2270	2040	UPJ0J562MHD	
5600	18×20	0.30	1058.4	0.047	0.12	1980	1780	UPJ0J562MHD6	
6800	16×31.5	0.32	1285.2	0.029	0.073	2370	2130	UPJ0J682MHD	
6800	18×25	0.32	1285.2	0.039	0.098	2210	1980	UPJ0J682MHD6	
8200	16×35.5	0.36	1549.8	0.027	0.068	2550	2290	UPJ0J822MHD	
8200	18×31.5	0.36	1549.8	0.031	0.078	2390	2150	UPJ0J822MHD6	
10000	16×40	0.40	1890	0.025	0.063	2750	2470	UPJ0J103MHD	
10000	18×31.5	0.40	1890	0.028	0.070	2490	2240	UPJ0J103MHD6	
12000	18×35.5	0.44	2268	0.023	0.058	2820	2530	UPJ0J123MHD	
15000	18×40	0.50	2835	0.022	0.055	2960	2660	UPJ0J153MHD	

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.

UPJ

## ■Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D×L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Impedance ( $\Omega$ ) MAX.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
10 (1A)	68	5×11	0.19	20.4	1.30	3.30	155	97	UPJ1A680MDD
	82	5×11	0.19	24.6	1.10	2.80	175	110	UPJ1A820MDD
	100	6.3×11	0.19	30	0.84	2.10	210	135	UPJ1A101MED
	120	6.3×11	0.19	36	0.72	1.80	235	160	UPJ1A121MED
	150	6.3×11	0.19	45	0.55	1.40	265	185	UPJ1A151MED
	180	6.3×11	0.19	54	0.46	1.20	290	205	UPJ1A181MED
	220	6.3×15	0.19	66	0.38	0.95	370	270	UPJ1A221MED
	270	6.3×15	0.19	81	0.31	0.78	405	300	UPJ1A271MED
	330	8×11.5	0.19	99	0.26	0.65	460	350	UPJ1A331MPD
	390	8×15	0.19	117	0.22	0.55	550	430	UPJ1A391MPD
	390	10×12.5	0.19	117	0.24	0.60	555	430	UPJ1A391MPD6
	470	8×15	0.19	141	0.19	0.48	595	475	UPJ1A471MPD
	470	10×12.5	0.19	141	0.21	0.53	600	475	UPJ1A471MPD6
	560	8×20	0.19	168	0.16	0.40	730	590	UPJ1A561MPD
	560	10×16	0.19	168	0.18	0.45	700	565	UPJ1A561MPD6
	680	8×20	0.19	204	0.13	0.33	795	660	UPJ1A681MPD
	680	10×16	0.19	204	0.14	0.35	770	635	UPJ1A681MPD6
	820	10×20	0.19	246	0.11	0.28	985	835	UPJ1A821MPD
	820	12.5×15	0.19	246	0.13	0.33	920	780	UPJ1A821MHD6
	1000	10×20	0.19	300	0.096	0.24	1060	915	UPJ1A102MPD
	1000	12.5×15	0.19	300	0.10	0.25	1040	895	UPJ1A102MHD6
	1200	10×25	0.19	360	0.078	0.20	1280	1120	UPJ1A122MPD
	1200	12.5×15	0.19	360	0.096	0.24	1060	930	UPJ1A122MHD6
	1500	10×31.5	0.19	450	0.072	0.18	1440	1290	UPJ1A152MPD
	1500	16×15	0.19	450	0.078	0.20	1330	1190	UPJ1A152MHD6
	1800	12.5×20	0.19	540	0.057	0.14	1470	1320	UPJ1A182MHD
	1800	16×15	0.19	540	0.072	0.18	1420	1270	UPJ1A182MHD6
	2200	12.5×25	0.21	660	0.045	0.11	1710	1530	UPJ1A222MHD
	2200	18×15	0.21	660	0.060	0.15	1600	1440	UPJ1A222MHD6
	2700	12.5×31.5	0.21	810	0.036	0.09	1940	1740	UPJ1A272MHD
	2700	16×20	0.21	810	0.051	0.13	1740	1560	UPJ1A272MHD6
	3300	12.5×35.5	0.23	990	0.032	0.08	2180	1960	UPJ1A332MHD
	3300	16×20	0.23	990	0.045	0.11	1850	1660	UPJ1A332MHD6
	3900	12.5×40	0.23	1170	0.030	0.075	2360	2120	UPJ1A392MHD
	3900	18×20	0.23	1170	0.041	0.10	2050	1840	UPJ1A392MHD6
	4700	16×31.5	0.25	1410	0.028	0.070	2420	2170	UPJ1A472MHD
	4700	18×25	0.25	1410	0.035	0.088	2250	2020	UPJ1A472MHD6
	5600	16×35.5	0.27	1680	0.026	0.065	2610	2340	UPJ1A562MHD
	5600	18×25	0.27	1680	0.033	0.083	2340	2100	UPJ1A562MHD6
	6800	16×35.5	0.29	2040	0.024	0.060	2680	2410	UPJ1A682MHD
6800	18×31.5	0.29	2040	0.027	0.068	2540	2280	UPJ1A682MHD6	
8200	16×40	0.33	2460	0.023	0.058	2820	2530	UPJ1A822MHD	
8200	18×35.5	0.33	2460	0.025	0.063	2690	2420	UPJ1A822MHD6	
10000	18×40	0.37	3000	0.021	0.053	3040	2730	UPJ1A103MHD	

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.



■ 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)	47	5×11	0.16	22.56	1.30	3.30	155	92	UPJ1C470MDD
	56	5×11	0.16	26.88	1.10	2.80	175	105	UPJ1C560MDD
	68	6.3×11	0.16	32.64	0.78	2.00	220	135	UPJ1C680MED
	82	6.3×11	0.16	39.36	0.66	1.70	240	155	UPJ1C820MED
	100	6.3×11	0.16	48	0.55	1.40	265	175	UPJ1C101MED
	120	6.3×11	0.16	57.6	0.45	1.10	290	195	UPJ1C121MED
	150	6.3×15	0.16	72	0.37	0.93	375	260	UPJ1C151MED
	180	6.3×15	0.16	86.4	0.31	0.78	405	285	UPJ1C181MED
	220	8×11.5	0.16	105.6	0.26	0.65	460	335	UPJ1C221MPD
	270	8×15	0.16	129.6	0.22	0.55	550	410	UPJ1C271MPD
	270	10×12.5	0.16	129.6	0.22	0.55	575	430	UPJ1C271MPD6
	330	8×15	0.16	158.4	0.18	0.45	595	455	UPJ1C331MPD
	330	10×12.5	0.16	158.4	0.18	0.45	625	480	UPJ1C331MPD6
	390	8×20	0.16	187.2	0.16	0.40	730	570	UPJ1C391MPD
	390	10×16	0.16	187.2	0.16	0.40	730	570	UPJ1C391MPD6
	470	8×20	0.16	225.6	0.14	0.35	770	615	UPJ1C471MPD
	470	10×16	0.16	225.6	0.14	0.35	770	615	UPJ1C471MPD6
	560	10×20	0.16	268.8	0.12	0.30	950	770	UPJ1C561MPD
	560	12.5×15	0.16	268.8	0.13	0.33	920	745	UPJ1C561MHD6
	680	10×20	0.16	326.4	0.10	0.25	1020	845	UPJ1C681MPD
	680	12.5×15	0.16	326.4	0.11	0.28	985	815	UPJ1C681MHD6
	820	10×25	0.16	393.6	0.084	0.21	1220	1030	UPJ1C821MPD
	820	12.5×15	0.16	393.6	0.096	0.24	1060	895	UPJ1C821MHD6
	1000	10×31.5	0.16	480	0.072	0.18	1410	1210	UPJ1C102MPD
	1000	16×15	0.16	480	0.084	0.21	1270	1090	UPJ1C102MHD6
	1200	12.5×20	0.16	576	0.060	0.15	1430	1250	UPJ1C122MHD
	1200	16×15	0.16	576	0.072	0.18	1390	1220	UPJ1C122MHD6
	1500	12.5×25	0.16	720	0.048	0.12	1660	1490	UPJ1C152MHD
	1500	18×15	0.16	720	0.066	0.17	1560	1400	UPJ1C152MHD6
	1800	12.5×31.5	0.16	864	0.039	0.10	1880	1690	UPJ1C182MHD
	1800	16×20	0.16	864	0.054	0.14	1700	1530	UPJ1C182MHD6
	2200	12.5×31.5	0.18	1056	0.034	0.085	2010	1800	UPJ1C222MHD
	2200	16×20	0.18	1056	0.048	0.12	1800	1620	UPJ1C222MHD6
	2700	12.5×35.5	0.18	1296	0.031	0.078	2220	1990	UPJ1C272MHD
	2700	16×25	0.18	1296	0.040	0.10	2010	1800	UPJ1C272MHD6
	3300	12.5×40	0.20	1584	0.028	0.07	2410	2160	UPJ1C332MHD
	3300	18×20	0.20	1584	0.039	0.10	2090	1880	UPJ1C332MHD6
	3900	16×31.5	0.20	1872	0.027	0.068	2470	2220	UPJ1C392MHD
	3900	18×25	0.20	1872	0.034	0.085	2290	2060	UPJ1C392MHD6
	4700	16×35.5	0.22	2256	0.025	0.063	2680	2410	UPJ1C472MHD
4700	18×31.5	0.22	2256	0.028	0.070	2490	2240	UPJ1C472MHD6	
5600	16×40	0.24	2688	0.024	0.060	2820	2530	UPJ1C562MHD	
5600	18×35.5	0.24	2688	0.027	0.068	2620	2350	UPJ1C562MHD6	
6800	18×35.5	0.26	3264	0.022	0.055	2900	2610	UPJ1C682MHD	
8200	18×40	0.30	3936	0.021	0.053	3040	2730	UPJ1C822MHD	

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.

UPJ

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Impedance ( $\Omega$ ) MAX.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
25 (1E)	33	5 $\times$ 11	0.14	24.75	1.30	3.30	155	88	UPJ1E330MDD
	39	5 $\times$ 11	0.14	29.25	1.10	2.80	175	100	UPJ1E390MDD
	47	6.3 $\times$ 11	0.14	35.25	0.84	2.10	210	125	UPJ1E470MED
	56	6.3 $\times$ 11	0.14	42	0.72	1.80	235	140	UPJ1E560MED
	68	6.3 $\times$ 11	0.14	51	0.57	1.40	260	160	UPJ1E680MED
	82	6.3 $\times$ 11	0.14	61.5	0.47	1.20	285	180	UPJ1E820MED
	100	6.3 $\times$ 15	0.14	75	0.39	0.98	370	245	UPJ1E101MED
	120	6.3 $\times$ 15	0.14	90	0.32	0.80	405	275	UPJ1E121MED
	150	8 $\times$ 11.5	0.14	112.5	0.26	0.65	460	320	UPJ1E151MPD
	180	8 $\times$ 15	0.14	135	0.22	0.55	550	390	UPJ1E181MPD
	180	10 $\times$ 12.5	0.14	135	0.24	0.60	555	395	UPJ1E181MPD6
	220	8 $\times$ 15	0.14	165	0.18	0.45	625	455	UPJ1E221MPD
	220	10 $\times$ 12.5	0.14	165	0.21	0.53	600	435	UPJ1E221MPD6
	270	8 $\times$ 20	0.14	202.5	0.15	0.38	750	560	UPJ1E271MPD
	270	10 $\times$ 16	0.14	202.5	0.18	0.45	700	525	UPJ1E271MPD6
	330	8 $\times$ 20	0.14	247.5	0.13	0.33	795	610	UPJ1E331MPD
	330	10 $\times$ 16	0.14	247.5	0.15	0.38	750	575	UPJ1E331MPD6
	390	10 $\times$ 20	0.14	292.5	0.11	0.28	985	770	UPJ1E391MPD
	390	12.5 $\times$ 15	0.14	292.5	0.13	0.33	920	720	UPJ1E391MHD6
	470	10 $\times$ 20	0.14	352.5	0.10	0.25	1020	810	UPJ1E471MPD
	470	12.5 $\times$ 15	0.14	352.5	0.11	0.28	985	785	UPJ1E471MHD6
	560	10 $\times$ 25	0.14	420	0.084	0.21	1220	990	UPJ1E561MPD
	560	12.5 $\times$ 15	0.14	420	0.10	0.25	1060	860	UPJ1E561MHD6
	680	10 $\times$ 31.5	0.14	510	0.072	0.18	1420	1180	UPJ1E681MPD
	680	16 $\times$ 15	0.14	510	0.084	0.21	1270	1050	UPJ1E681MHD6
	820	12.5 $\times$ 20	0.14	615	0.059	0.15	1430	1210	UPJ1E821MHD
	820	16 $\times$ 15	0.14	615	0.079	0.20	1340	1130	UPJ1E821MHD6
	1000	12.5 $\times$ 25	0.14	750	0.048	0.12	1660	1430	UPJ1E102MHD
	1000	18 $\times$ 15	0.14	750	0.066	0.17	1520	1310	UPJ1E102MHD6
	1200	12.5 $\times$ 25	0.14	900	0.043	0.11	1760	1550	UPJ1E122MHD
	1200	18 $\times$ 15	0.14	900	0.061	0.15	1600	1400	UPJ1E122MHD6
	1500	12.5 $\times$ 31.5	0.14	1125	0.035	0.088	1980	1780	UPJ1E152MHD
	1500	16 $\times$ 20	0.14	1125	0.050	0.13	1770	1590	UPJ1E152MHD6
	1800	12.5 $\times$ 35.5	0.14	1350	0.032	0.08	2180	1960	UPJ1E182MHD
	1800	16 $\times$ 25	0.14	1350	0.041	0.10	1980	1780	UPJ1E182MHD6
	2200	12.5 $\times$ 40	0.16	1650	0.029	0.073	2360	2120	UPJ1E222MHD
2200	18 $\times$ 20	0.16	1650	0.040	0.10	2050	1840	UPJ1E222MHD6	
2700	16 $\times$ 31.5	0.16	2025	0.027	0.068	2470	2220	UPJ1E272MHD	
2700	18 $\times$ 25	0.16	2025	0.034	0.085	2290	2060	UPJ1E272MHD6	
3300	16 $\times$ 35.5	0.18	2475	0.025	0.063	2680	2410	UPJ1E332MHD	
3300	18 $\times$ 31.5	0.18	2475	0.029	0.073	2490	2240	UPJ1E332MHD6	
3900	16 $\times$ 40	0.18	2925	0.023	0.058	2820	2530	UPJ1E392MHD	
3900	18 $\times$ 35.5	0.18	2925	0.026	0.065	2690	2420	UPJ1E392MHD6	
4700	18 $\times$ 40	0.20	3525	0.022	0.055	2960	2660	UPJ1E472MHD	

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.

UPJ

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Impedance ( $\Omega$ ) MAX.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
35 (1V)	22	5 $\times$ 11	0.12	23.1	1.30	3.30	160	85	UPJ1V220MDD
	27	5 $\times$ 11	0.12	28.35	1.00	2.50	180	99	UPJ1V270MDD
	33	6.3 $\times$ 11	0.12	34.65	0.78	2.00	225	125	UPJ1V330MED
	39	6.3 $\times$ 11	0.12	40.95	0.66	1.70	245	140	UPJ1V390MED
	47	6.3 $\times$ 11	0.12	49.35	0.54	1.40	270	160	UPJ1V470MED
	56	6.3 $\times$ 11	0.12	58.8	0.45	1.10	295	180	UPJ1V560MED
	68	6.3 $\times$ 15	0.12	71.4	0.37	0.93	370	230	UPJ1V680MED
	82	6.3 $\times$ 15	0.12	86.1	0.31	0.78	415	265	UPJ1V820MED
	100	8 $\times$ 11.5	0.12	105	0.26	0.65	460	305	UPJ1V101MPD
	120	8 $\times$ 15	0.12	126	0.22	0.55	550	370	UPJ1V121MPD
	120	10 $\times$ 12.5	0.12	126	0.24	0.60	555	375	UPJ1V121MPD6
	150	8 $\times$ 15	0.12	157.5	0.18	0.45	595	415	UPJ1V151MPD
	150	10 $\times$ 12.5	0.12	157.5	0.20	0.50	625	435	UPJ1V151MPD6
	180	8 $\times$ 20	0.12	189	0.16	0.40	730	520	UPJ1V181MPD
	180	10 $\times$ 16	0.12	189	0.18	0.45	700	500	UPJ1V181MPD6
	220	8 $\times$ 20	0.12	231	0.13	0.33	795	580	UPJ1V221MPD
	220	10 $\times$ 16	0.12	231	0.14	0.35	770	560	UPJ1V221MPD6
	270	10 $\times$ 20	0.12	283.5	0.11	0.28	985	735	UPJ1V271MPD
	270	12.5 $\times$ 15	0.12	283.5	0.13	0.33	920	690	UPJ1V271MHD6
	330	10 $\times$ 20	0.12	346.5	0.096	0.24	1060	810	UPJ1V331MPD
	330	12.5 $\times$ 15	0.12	346.5	0.10	0.25	1020	780	UPJ1V331MHD6
	390	10 $\times$ 25	0.12	409.5	0.084	0.21	1220	955	UPJ1V391MPD
	390	12.5 $\times$ 15	0.12	409.5	0.096	0.24	1060	825	UPJ1V391MHD6
	470	10 $\times$ 31.5	0.12	493.5	0.072	0.18	1420	1130	UPJ1V471MPD
	470	16 $\times$ 15	0.12	493.5	0.084	0.21	1270	1010	UPJ1V471MHD6
	560	12.5 $\times$ 20	0.12	588	0.059	0.15	1430	1160	UPJ1V561MHD
	560	16 $\times$ 15	0.12	588	0.075	0.19	1360	1100	UPJ1V561MHD6
	680	12.5 $\times$ 25	0.12	714	0.048	0.12	1660	1370	UPJ1V681MHD
	680	18 $\times$ 15	0.12	714	0.066	0.17	1540	1270	UPJ1V681MHD6
	820	12.5 $\times$ 25	0.12	861	0.042	0.11	1760	1490	UPJ1V821MHD
	820	18 $\times$ 15	0.12	861	0.060	0.15	1620	1370	UPJ1V821MHD6
	1000	12.5 $\times$ 31.5	0.12	1050	0.035	0.088	1980	1710	UPJ1V102MHD
	1000	16 $\times$ 20	0.12	1050	0.050	0.13	1770	1530	UPJ1V102MHD6
	1200	12.5 $\times$ 35.5	0.12	1260	0.031	0.078	2180	1920	UPJ1V122MHD
	1200	16 $\times$ 25	0.12	1260	0.041	0.10	1980	1740	UPJ1V122MHD6
1500	12.5 $\times$ 40	0.12	1575	0.029	0.073	2360	2120	UPJ1V152MHD	
1500	18 $\times$ 20	0.12	1575	0.040	0.10	2050	1840	UPJ1V152MHD6	
1800	16 $\times$ 31.5	0.12	1890	0.027	0.068	2470	2220	UPJ1V182MHD	
1800	18 $\times$ 25	0.12	1890	0.034	0.085	2290	2060	UPJ1V182MHD6	
2200	16 $\times$ 35.5	0.14	2310	0.024	0.060	2680	2410	UPJ1V222MHD	
2200	18 $\times$ 31.5	0.14	2310	0.028	0.070	2490	2240	UPJ1V222MHD6	
2700	16 $\times$ 40	0.14	2835	0.022	0.055	2900	2610	UPJ1V272MHD	
2700	18 $\times$ 35.5	0.14	2835	0.026	0.065	2690	2420	UPJ1V272MHD6	
3300	18 $\times$ 40	0.16	3465	0.021	0.053	3040	2730	UPJ1V332MHD	

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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 (mArms)		Part Number
					20°C/100kHz	-10°C/100kHz	105°C/10 to 200kHz	105°C/120Hz	
50 (1H)	2.2	5×11	0.10	4	6.50	18.00	54	27	UPJ1H2R2MDD
	3.3	5×11	0.10	4.95	4.60	12.00	66	33	UPJ1H3R3MDD
	4.7	5×11	0.10	7.05	3.10	7.80	81	40	UPJ1H4R7MDD
	6.8	5×11	0.10	10.2	2.50	6.30	91	45	UPJ1H6R8MDD
	10	5×11	0.10	15	2.00	5.00	115	57	UPJ1H100MDD
	12	5×11	0.10	18	1.70	4.30	125	62	UPJ1H120MDD
	15	5×11	0.10	22.5	1.30	3.30	145	72	UPJ1H150MDD
	18	5×11	0.10	27	1.10	2.80	155	79	UPJ1H180MDD
	22	6.3×11	0.10	33	0.91	2.30	195	100	UPJ1H220MED
	27	6.3×11	0.10	40.5	0.74	1.90	215	115	UPJ1H270MED
	33	6.3×11	0.10	49.5	0.60	1.50	240	135	UPJ1H330MED
	39	6.3×11	0.10	58.5	0.50	1.30	260	150	UPJ1H390MED
	47	6.3×15	0.10	70.5	0.42	1.10	330	195	UPJ1H470MED
	56	6.3×15	0.10	84	0.35	0.88	360	220	UPJ1H560MED
	68	8×11.5	0.10	102	0.28	0.70	410	255	UPJ1H680MPD
	82	8×15	0.10	123	0.22	0.55	500	320	UPJ1H820MPD
	82	10×12.5	0.10	123	0.23	0.58	510	330	UPJ1H820MPD6
	100	8×20	0.10	150	0.18	0.45	620	410	UPJ1H101MPD
	100	10×16	0.10	150	0.21	0.53	580	385	UPJ1H101MPD6
	120	8×20	0.10	180	0.16	0.40	670	455	UPJ1H121MPD
	120	10×16	0.10	180	0.17	0.43	640	435	UPJ1H121MPD6
	150	10×20	0.10	225	0.13	0.33	820	570	UPJ1H151MPD
	150	12.5×15	0.10	225	0.14	0.35	785	545	UPJ1H151MHD6
	180	10×20	0.10	270	0.11	0.28	890	635	UPJ1H181MPD
	180	12.5×15	0.10	270	0.12	0.31	845	605	UPJ1H181MHD6
	220	10×25	0.10	330	0.098	0.25	1040	760	UPJ1H221MPD
	220	12.5×15	0.10	330	0.10	0.25	920	670	UPJ1H221MHD6
	270	10×31.5	0.10	405	0.085	0.21	1200	900	UPJ1H271MPD
	270	16×15	0.10	405	0.091	0.23	1120	840	UPJ1H271MHD6
	330	10×31.5	0.10	495	0.072	0.18	1300	995	UPJ1H331MPD
	330	16×15	0.10	495	0.078	0.20	1210	925	UPJ1H331MHD6
	390	12.5×25	0.10	585	0.053	0.13	1440	1120	UPJ1H391MHD
	390	16×15	0.10	585	0.072	0.18	1270	990	UPJ1H391MHD6
	470	12.5×25	0.10	705	0.048	0.12	1500	1190	UPJ1H471MHD
	470	18×15	0.10	705	0.060	0.15	1470	1170	UPJ1H471MHD6
	560	12.5×31.5	0.10	840	0.040	0.10	1680	1360	UPJ1H561MHD
	560	16×20	0.10	840	0.053	0.13	1550	1260	UPJ1H561MHD6
	680	12.5×35.5	0.10	1020	0.036	0.09	1850	1530	UPJ1H681MHD
	680	16×20	0.10	1020	0.048	0.12	1630	1350	UPJ1H681MHD6
	820	12.5×40	0.10	1230	0.033	0.083	2010	1700	UPJ1H821MHD
820	18×20	0.10	1230	0.043	0.11	1810	1530	UPJ1H821MHD6	
1000	16×31.5	0.10	1500	0.030	0.075	2120	1830	UPJ1H102MHD	
1000	18×25	0.10	1500	0.036	0.090	2000	1730	UPJ1H102MHD6	
1200	16×35.5	0.10	1800	0.028	0.070	2260	1990	UPJ1H122MHD	
1200	18×31.5	0.10	1800	0.031	0.078	2140	1880	UPJ1H122MHD6	
1500	16×40	0.10	2250	0.026	0.065	2410	2170	UPJ1H152MHD	
1500	18×31.5	0.10	2250	0.029	0.073	2220	1990	UPJ1H152MHD6	
1800	18×35.5	0.10	2700	0.025	0.063	2460	2210	UPJ1H182MHD	
2200	18×40	0.12	3300	0.024	0.060	2560	2300	UPJ1H222MHD	

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UPJ

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Impedance ( $\Omega$ ) MAX.		Rated Ripple (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
63 (1J)	10	5 $\times$ 11	0.08	18.9	1.60	4.00	135	67	UPJ1J100MDD
	12	5 $\times$ 11	0.08	22.68	1.40	3.50	145	72	UPJ1J120MDD
	15	6.3 $\times$ 11	0.08	28.35	1.10	2.80	185	92	UPJ1J150MED
	18	6.3 $\times$ 11	0.08	34.02	0.95	2.40	195	100	UPJ1J180MED
	22	6.3 $\times$ 11	0.08	41.58	0.78	2.00	215	110	UPJ1J220MED
	27	6.3 $\times$ 11	0.08	51.03	0.64	1.60	240	130	UPJ1J270MED
	33	6.3 $\times$ 15	0.08	62.37	0.52	1.30	305	170	UPJ1J330MED
	39	6.3 $\times$ 15	0.08	73.71	0.45	1.10	330	190	UPJ1J390MED
	47	8 $\times$ 11.5	0.08	88.83	0.37	0.93	365	215	UPJ1J470MPD
	56	8 $\times$ 15	0.08	105.84	0.31	0.78	450	275	UPJ1J560MPD
	56	10 $\times$ 12.5	0.08	105.84	0.34	0.85	450	275	UPJ1J560MPD6
	68	8 $\times$ 15	0.08	128.52	0.26	0.65	500	315	UPJ1J680MPD
	68	10 $\times$ 12.5	0.08	128.52	0.28	0.70	495	310	UPJ1J680MPD6
	82	8 $\times$ 20	0.08	154.98	0.22	0.55	600	385	UPJ1J820MPD
	82	10 $\times$ 16	0.08	154.98	0.24	0.60	580	375	UPJ1J820MPD6
	100	10 $\times$ 20	0.08	189	0.18	0.45	750	495	UPJ1J101MPD
	100	12.5 $\times$ 15	0.08	189	0.20	0.50	695	460	UPJ1J101MHD6
	120	10 $\times$ 20	0.08	226.8	0.15	0.38	820	555	UPJ1J121MPD
	120	12.5 $\times$ 15	0.08	226.8	0.18	0.45	750	510	UPJ1J121MHD6
	150	10 $\times$ 25	0.08	283.5	0.13	0.33	950	665	UPJ1J151MPD
	150	12.5 $\times$ 15	0.08	283.5	0.14	0.35	845	590	UPJ1J151MHD6
	180	10 $\times$ 31.5	0.08	340.2	0.11	0.28	1110	790	UPJ1J181MPD
	180	16 $\times$ 15	0.08	340.2	0.12	0.30	1050	750	UPJ1J181MHD6
	220	12.5 $\times$ 20	0.08	415.8	0.094	0.24	1140	835	UPJ1J221MHD
	220	16 $\times$ 15	0.08	415.8	0.10	0.25	1120	820	UPJ1J221MHD6
	270	12.5 $\times$ 25	0.08	510.3	0.081	0.20	1340	1000	UPJ1J271MHD
	270	18 $\times$ 15	0.08	510.3	0.088	0.22	1290	965	UPJ1J271MHD6
	330	12.5 $\times$ 25	0.08	623.7	0.072	0.18	1420	1090	UPJ1J331MHD
	330	18 $\times$ 15	0.08	623.7	0.078	0.20	1410	1080	UPJ1J331MHD6
	390	12.5 $\times$ 31.5	0.08	737.1	0.059	0.15	1620	1260	UPJ1J391MHD
	390	16 $\times$ 20	0.08	737.1	0.070	0.18	1500	1170	UPJ1J391MHD6
	470	12.5 $\times$ 35.5	0.08	888.3	0.052	0.13	1780	1420	UPJ1J471MHD
	470	16 $\times$ 25	0.08	888.3	0.063	0.16	1700	1350	UPJ1J471MHD6
560	12.5 $\times$ 40	0.08	1058.4	0.047	0.12	1950	1580	UPJ1J561MHD	
560	18 $\times$ 20	0.08	1058.4	0.058	0.15	1730	1400	UPJ1J561MHD6	
680	16 $\times$ 31.5	0.08	1285.2	0.043	0.11	2050	1700	UPJ1J681MHD	
680	18 $\times$ 25	0.08	1285.2	0.051	0.13	1940	1610	UPJ1J681MHD6	
820	16 $\times$ 35.5	0.08	1549.8	0.040	0.10	2220	1880	UPJ1J821MHD	
820	18 $\times$ 31.5	0.08	1549.8	0.043	0.12	2110	1780	UPJ1J821MHD6	
1000	16 $\times$ 40	0.08	1890	0.037	0.093	2370	2050	UPJ1J102MHD	
1000	18 $\times$ 35.5	0.08	1890	0.040	0.10	2280	1970	UPJ1J102MHD6	
1200	18 $\times$ 40	0.08	2268	0.034	0.085	2510	2210	UPJ1J122MHD	

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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 (mArms)		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
80 (1K)	4.7	5×11	0.08	11.28	4.20	11.00	53	26	UPJ1K4R7MDD
	6.8	5×11	0.08	16.32	2.60	7.00	68	34	UPJ1K6R8MDD
	10	6.3×11	0.08	24	1.70	4.60	87	43	UPJ1K100MED
	12	6.3×11	0.08	28.8	1.40	3.80	96	48	UPJ1K120MED
	15	6.3×11	0.08	36	1.20	3.20	104	52	UPJ1K150MED
	18	6.3×11	0.08	43.2	1.00	2.70	114	58	UPJ1K180MED
	22	6.3×15	0.08	52.8	0.77	2.10	135	71	UPJ1K220MED
	27	6.3×15	0.08	64.8	0.63	1.70	149	80	UPJ1K270MED
	33	8×11.5	0.08	79.2	0.53	1.40	234	132	UPJ1K330MPD
	39	8×15	0.08	93.6	0.46	1.20	272	156	UPJ1K390MPD
	39	10×12.5	0.08	93.6	0.49	1.30	271	155	UPJ1K390MPD6
	47	8×15	0.08	112.8	0.39	1.10	295	175	UPJ1K470MPD
	47	10×12.5	0.08	112.8	0.42	1.10	293	174	UPJ1K470MPD6
	56	8×20	0.08	134.4	0.34	0.92	347	208	UPJ1K560MPD
	56	10×16	0.08	134.4	0.36	0.97	337	202	UPJ1K560MPD6
	68	10×20	0.08	163.2	0.28	0.76	426	264	UPJ1K680MPD
	68	12.5×15	0.08	163.2	0.31	0.84	402	249	UPJ1K680MHD6
	82	10×20	0.08	196.8	0.25	0.68	447	284	UPJ1K820MPD
	82	12.5×15	0.08	196.8	0.27	0.73	430	273	UPJ1K820MHD6
	100	10×25	0.08	240	0.21	0.57	526	347	UPJ1K101MPD
	100	12.5×15	0.08	240	0.23	0.62	466	308	UPJ1K101MHD6
	120	10×31.5	0.08	288	0.18	0.49	606	406	UPJ1K121MPD
	120	16×15	0.08	288	0.20	0.54	663	444	UPJ1K121MHD6
	150	10×31.5	0.08	360	0.15	0.41	663	459	UPJ1K151MPD
	150	16×15	0.08	360	0.18	0.47	699	484	UPJ1K151MHD6
	180	12.5×25	0.08	432	0.13	0.35	734	520	UPJ1K181MHD
	180	16×15	0.08	432	0.15	0.41	766	543	UPJ1K181MHD6
	220	12.5×31.5	0.08	528	0.12	0.32	816	595	UPJ1K221MHD
	220	18×15	0.08	528	0.13	0.35	881	643	UPJ1K221MHD6
	270	12.5×31.5	0.08	648	0.10	0.27	894	667	UPJ1K271MHD
	270	16×20	0.08	648	0.11	0.30	995	742	UPJ1K271MHD6
	330	12.5×35.5	0.08	792	0.088	0.24	1000	767	UPJ1K331MHD
	330	16×25	0.08	792	0.099	0.27	1140	874	UPJ1K331MHD6
	390	12.5×40	0.08	936	0.078	0.21	1060	822	UPJ1K391MHD
390	18×20	0.08	936	0.089	0.24	1170	908	UPJ1K391MHD6	
470	16×31.5	0.08	1128	0.069	0.19	1450	1150	UPJ1K471MHD	
470	18×25	0.08	1128	0.080	0.22	1330	1060	UPJ1K471MHD6	
560	16×35.5	0.08	1344	0.062	0.17	1600	1300	UPJ1K561MHD	
560	18×31.5	0.08	1344	0.072	0.19	1490	1210	UPJ1K561MHD6	
680	16×40	0.08	1632	0.055	0.15	1770	1470	UPJ1K681MHD	
680	18×31.5	0.08	1632	0.065	0.18	1560	1300	UPJ1K681MHD6	
820	18×35.5	0.08	1968	0.049	0.13	1890	1590	UPJ1K821MHD	
1000	18×40	0.08	2400	0.044	0.12	2080	1790	UPJ1K102MHD	

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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 <sub>rms</sub> )		Part Number
					20°C/ 100kHz	-10°C/ 100kHz	105°C/ 10 to 200kHz	105°C/ 120Hz	
100 (2A)	2.2	5×11	0.08	6.6	6.60	18.00	43	21	UPJ2A2R2MDD
	3.3	5×11	0.08	9.9	4.10	11.00	54	27	UPJ2A3R3MDD
	4.7	6.3×11	0.08	14.1	2.80	7.60	68	34	UPJ2A4R7MED
	6.8	6.3×11	0.08	20.4	1.90	5.10	83	41	UPJ2A6R8MED
	10	6.3×11	0.08	30	1.20	3.20	104	52	UPJ2A100MED
	12	6.3×11	0.08	36	1.00	2.70	114	57	UPJ2A120MED
	15	6.3×15	0.08	45	0.81	2.20	131	65	UPJ2A150MED
	18	6.3×15	0.08	54	0.67	1.80	155	80	UPJ2A180MED
	22	8×11.5	0.08	66	0.55	1.50	230	122	UPJ2A220MPD
	27	8×15	0.08	81	0.47	1.30	269	146	UPJ2A270MPD
	27	10×12.5	0.08	81	0.50	1.40	268	145	UPJ2A270MPD6
	33	8×15	0.08	99	0.38	1.00	299	169	UPJ2A330MPD
	33	10×12.5	0.08	99	0.42	1.10	293	166	UPJ2A330MPD6
	39	8×20	0.08	117	0.33	0.89	352	202	UPJ2A390MPD
	39	10×16	0.08	117	0.36	0.97	337	193	UPJ2A390MPD6
	47	10×20	0.08	141	0.28	0.76	423	252	UPJ2A470MPD
	47	12.5×15	0.08	141	0.31	0.84	402	239	UPJ2A470MHD6
	56	10×20	0.08	168	0.24	0.65	456	274	UPJ2A560MPD
	56	12.5×15	0.08	168	0.27	0.73	430	258	UPJ2A560MHD6
	68	10×25	0.08	204	0.21	0.57	526	326	UPJ2A680MPD
	68	12.5×15	0.08	204	0.23	0.62	466	289	UPJ2A680MHD6
	82	10×31.5	0.08	246	0.18	0.49	606	386	UPJ2A820MPD
	82	16×15	0.08	246	0.19	0.51	681	433	UPJ2A820MHD6
	100	10×31.5	0.08	300	0.15	0.41	663	438	UPJ2A101MPD
	100	16×15	0.08	300	0.17	0.46	719	475	UPJ2A101MHD6
	120	12.5×25	0.08	360	0.13	0.35	774	519	UPJ2A121MHD
	120	16×15	0.08	360	0.14	0.38	793	531	UPJ2A121MHD6
	150	12.5×25	0.08	450	0.11	0.30	798	553	UPJ2A151MHD
	150	18×15	0.08	450	0.12	0.32	917	635	UPJ2A151MHD6
	180	12.5×31.5	0.08	540	0.098	0.26	904	641	UPJ2A181MHD
	180	16×20	0.08	540	0.11	0.30	995	706	UPJ2A181MHD6
	220	12.5×35.5	0.08	660	0.087	0.23	1000	730	UPJ2A221MHD
	220	16×25	0.08	660	0.093	0.25	1170	854	UPJ2A221MHD6
	270	12.5×40	0.08	810	0.072	0.19	1130	843	UPJ2A271MHD
270	18×20	0.08	810	0.080	0.22	1230	918	UPJ2A271MHD6	
330	16×31.5	0.08	990	0.062	0.17	1520	1160	UPJ2A331MHD	
330	18×25	0.08	990	0.070	0.19	1420	1080	UPJ2A331MHD6	
390	16×35.5	0.08	1170	0.053	0.14	1730	1340	UPJ2A391MHD	
390	18×31.5	0.08	1170	0.062	0.17	1600	1240	UPJ2A391MHD6	
470	16×40	0.08	1410	0.047	0.13	1920	1530	UPJ2A471MHD	
470	18×35.5	0.08	1410	0.056	0.15	1770	1410	UPJ2A471MHD6	
560	18×35.5	0.08	1680	0.041	0.11	2070	1680	UPJ2A561MHD	
680	18×40	0.08	2040	0.036	0.097	2300	1910	UPJ2A681MHD	

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UPJ

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D×L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Rated Ripple (mArms)		Part Number
					105°C/ 10 to 200kHz	105°C/ 120Hz	
160 (2C)	1	8 × 11.5	0.20	56	—	19	UPJ2C010MPD
	2.2	8 × 11.5	0.20	75.2	—	30	UPJ2C2R2MPD
	3.3	10 × 12.5	0.20	92.8	—	50	UPJ2C3R3MPD
	4.7	10 × 12.5	0.20	115.2	—	57	UPJ2C4R7MPD
	10	10 × 16	0.20	164	—	90	UPJ2C100MPD
	22	12.5 × 20	0.20	240.8	—	140	UPJ2C220MHD
	33	12.5 × 25	0.20	311.2	—	175	UPJ2C330MHD
	47	16 × 25	0.20	400.8	—	220	UPJ2C470MHD
	100	16 × 35.5	0.20	740	—	330	UPJ2C101MHD
200 (2D)	1	8 × 11.5	0.20	60	—	19	UPJ2D010MPD
	2.2	8 × 11.5	0.20	84	—	30	UPJ2D2R2MPD
	3.3	10 × 12.5	0.20	106	—	50	UPJ2D3R3MPD
	4.7	10 × 16	0.20	134	—	60	UPJ2D4R7MPD
	10	10 × 20	0.20	180	—	95	UPJ2D100MPD
	22	12.5 × 25	0.20	276	—	145	UPJ2D220MHD
	33	16 × 25	0.20	364	—	180	UPJ2D330MHD
	47	16 × 25	0.20	476	—	220	UPJ2D470MHD
	100	18 × 40	0.20	900	—	345	UPJ2D101MHD
250 (2E)	1	8 × 11.5	0.20	65	—	19	UPJ2E010MPD
	2.2	10 × 12.5	0.20	95	—	32	UPJ2E2R2MPD
	3.3	10 × 16	0.20	122.5	—	52	UPJ2E3R3MPD
	4.7	10 × 16	0.20	147	—	60	UPJ2E4R7MPD
	10	12.5 × 20	0.20	200	—	98	UPJ2E100MHD
	22	16 × 25	0.20	320	—	150	UPJ2E220MHD
	33	16 × 25	0.20	430	—	180	UPJ2E330MHD
	47	16 × 31.5	0.20	570	—	225	UPJ2E470MHD
	100	18 × 40	0.20	1100	—	345	UPJ2E101MHD
315 (2F)	1	8 × 11.5	0.20	71.5	—	19	UPJ2F010MPD
	2.2	10 × 12.5	0.20	109.3	—	32	UPJ2F2R2MPD
	3.3	10 × 16	0.20	141.58	—	52	UPJ2F3R3MPD
	4.7	10 × 20	0.20	159.22	—	65	UPJ2F4R7MPD
	10	12.5 × 20	0.20	226	—	98	UPJ2F100MHD
	22	16 × 25	0.20	377.2	—	150	UPJ2F220MHD
	33	16 × 31.5	0.20	515.8	—	185	UPJ2F330MHD
	47	18 × 35.5	0.20	692.2	—	235	UPJ2F470MHD

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UPJ

## ■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 1 minute)	Rated Ripple (mArms)		Part Number
					105°C/ 10 to 200kHz	105°C/ 120Hz	
350 (2V)	1	10 $\times$ 12.5	0.20	75	—	21	UPJ2V010MPD
	2.2	10 $\times$ 16	0.20	117	—	34	UPJ2V2R2MPD
	3.3	10 $\times$ 20	0.20	146.2	—	54	UPJ2V3R3MPD
	4.7	10 $\times$ 20	0.20	165.8	—	65	UPJ2V4R7MPD
	10	12.5 $\times$ 25	0.20	240	—	100	UPJ2V100MHD
	22	16 $\times$ 25	0.20	408	—	150	UPJ2V220MHD
	33	16 $\times$ 35.5	0.20	562	—	190	UPJ2V330MHD
	47	18 $\times$ 40	0.20	758	—	240	UPJ2V470MHD
400 (2G)	1	10 $\times$ 12.5	0.25	80	—	17	UPJ2G010MPD
	2.2	10 $\times$ 16	0.25	128	—	28	UPJ2G2R2MPD
	3.3	10 $\times$ 20	0.25	152.8	—	47	UPJ2G3R3MPD
	4.7	12.5 $\times$ 20	0.25	175.2	—	55	UPJ2G4R7MHD
	10	12.5 $\times$ 25	0.25	260	—	85	UPJ2G100MHD
	22	16 $\times$ 31.5	0.25	452	—	130	UPJ2G220MHD
	33	18 $\times$ 35.5	0.25	628	—	170	UPJ2G330MHD
450 (2W)	1	10 $\times$ 16	0.25	85	—	17	UPJ2W010MPD
	2.2	10 $\times$ 20	0.25	139	—	28	UPJ2W2R2MPD
	3.3	12.5 $\times$ 20	0.25	159.4	—	48	UPJ2W3R3MHD
	4.7	12.5 $\times$ 25	0.25	184.6	—	55	UPJ2W4R7MHD
	10	16 $\times$ 25	0.25	280	—	90	UPJ2W100MHD
	22	16 $\times$ 35.5	0.25	496	—	135	UPJ2W220MHD
	33	18 $\times$ 40	0.25	694	—	170	UPJ2W330MHD

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Please refer to page 18, 19 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.