

UVK1E221MED
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Arrow Electronics, Inc
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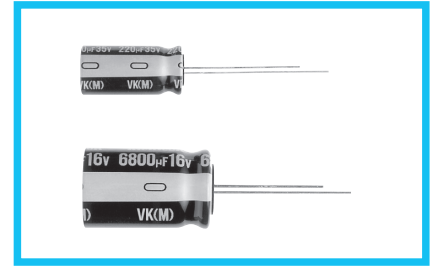
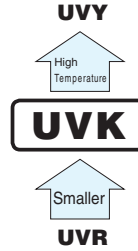
UVK

Miniature Sized



- One rank smaller case sizes than UVR.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).

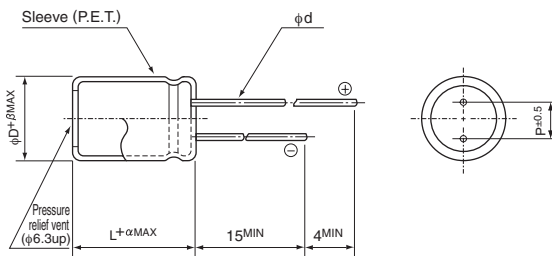
Valued marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.



Specifications

Item	Performance Characteristics	
Category Temperature Range	-40 to +85°C (6.3V to 400V), -25°C to +85°C (450V)	
Rated Voltage Range	6.3 to 450V	
Rated Capacitance Range	0.47 to 33000µF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current	Rated voltage (V)	6.3 to 100V
		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 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (µA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C	
	Rated voltage (V)	6.3 10 16 25 35 50 63 100 160 to 250 350 to 450
Stability at Low Temperature	Measurement frequency : 120Hz	
	Rated voltage (V)	6.3 10 16 25 35 50 to 100 160 to 200 250 to 350 400 450
	Impedance ratio (MAX.)	Z-25°C / Z+20°C: 5 4 3 2 2 2 3 4 6 15 Z-40°C / Z+20°C: 12 10 8 5 4 3 4 8 10 —
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C.	
Shelf Life	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
Marking	Printed with white color letter on black sleeve.	

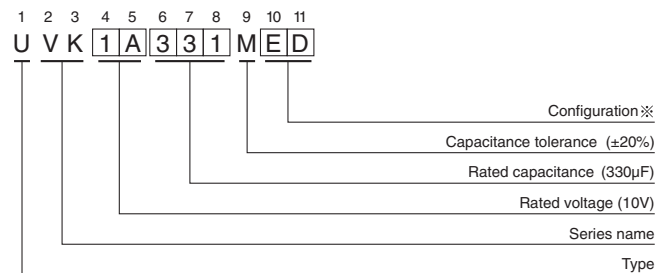
Radial Lead Type



	5	6.3	8	10	12.5	16	18	20	22	25
φD	5	6.3	8	10	12.5	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0	1.0
β	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0

α	(L < 20)	1.5
	(L ≥ 20)	2.0

Type numbering system (Example : 10V 330µF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 to 18	HD
20 to 25	RD

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

Frequency coefficient of rated ripple current

V	Frequency					
	Cap. (µF)	50Hz	120Hz	300Hz	1 kHz	10kHz or more
6.3 to 100	2.2 to 68	0.75	1.00	1.35	1.57	2.00
	100 to 470	0.80	1.00	1.23	1.34	1.50
	1000 to 33000	0.85	1.00	1.10	1.13	1.15
160 to 450	0.47 to 220	0.80	1.00	1.25	1.40	1.60
	330 to 1000	0.90	1.00	1.10	1.13	1.15

● Dimension table in next page.

UVK

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D×L (mm)	tan δ	Leakage Current (μ A)		Rated Ripple (mArms) (85°C/120Hz)	Part Number
				at 20°C after 1 minute	at 20°C after 2 minutes		
6.3 (0J)	1000	8×11.5	0.28	189	63	540	UVK0J102MPD
	2200	10×16	0.30	415.8	138.6	890	UVK0J222MPD
	3300	10×20	0.32	623.7	207.9	1190	UVK0J332MPD
	4700	12.5×20	0.34	888.3	296.1	1550	UVK0J472MHD
	6800	12.5×25	0.38	1285.2	428.4	1920	UVK0J682MHD
	10000	16×25	0.46	1890	630	2350	UVK0J103MHD
	15000	16×31.5	0.56	2835	945	2550	UVK0J153MHD
	22000	18×35.5	0.70	4158	1386	3200	UVK0J223MHD
	33000	20×40	0.92	6237	2079	3500	※UVK0J333MRD
10 (1A)	220	5×11	0.24	66	22	220	※UVK1A221MDD
	330	6.3×11	0.24	99	33	290	※UVK1A331MED
	470	6.3×11	0.24	141	47	350	※UVK1A471MED
	1000	10×12.5	0.24	300	100	650	UVK1A102MPD
	2200	10×16	0.26	660	220	990	UVK1A222MPD
	3300	12.5×20	0.28	990	330	1450	UVK1A332MHD
	4700	12.5×25	0.30	1410	470	1800	UVK1A472MHD
	6800	16×25	0.34	2040	680	2250	UVK1A682MHD
	10000	16×31.5	0.42	3000	1000	2550	UVK1A103MHD
	15000	16×35.5	0.52	4500	1500	2880	UVK1A153MHD
	22000	18×40	0.66	6600	2200	3400	UVK1A223MHD
	33000	22×50	0.88	9900	3300	4500	※UVK1A333MRD
16 (1C)	220	6.3×11	0.20	105.6	35.2	260	※UVK1C221MED
	330	6.3×11	0.20	158.4	52.8	320	※UVK1C331MED
	470	8×11.5	0.20	225.6	75.2	440	UVK1C471MPD
	1000	10×12.5	0.20	480	160	700	UVK1C102MPD
	2200	10×20	0.22	1056	352	1000	UVK1C222MPD
	3300	12.5×25	0.24	1584	528	1700	UVK1C332MHD
	4700	16×25	0.26	2256	752	2100	UVK1C472MHD
	6800	16×25	0.30	3264	1088	2250	UVK1C682MHD
	10000	16×35.5	0.38	4800	1600	2710	UVK1C103MHD
	15000	18×40	0.48	7200	2400	3100	UVK1C153MHD
	22000	22×40	0.62	10560	3520	3800	※UVK1C223MRD
	33000	25×50	0.84	15840	5280	4800	※UVK1C333MRD
25 (1E)	100	5×11	0.16	75	25	180	※UVK1E101MDD
	220	6.3×11	0.16	165	55	280	※UVK1E221MED
	330	8×11.5	0.16	247.5	82.5	390	UVK1E331MPD
	470	10×12.5	0.16	352.5	117.5	550	UVK1E471MPD
	1000	10×16	0.16	750	250	860	UVK1E102MPD
	2200	12.5×25	0.18	1650	550	1550	UVK1E222MHD
	3300	16×25	0.20	2475	825	1980	UVK1E332MHD
	4700	16×25	0.22	3525	1175	2200	UVK1E472MHD
	6800	16×35.5	0.26	5100	1700	2600	UVK1E682MHD
	10000	18×40	0.34	7500	2500	2800	UVK1E103MHD
	15000	22×50	0.44	11250	3750	3800	※UVK1E153MRD
	22000	25×50	0.58	16500	5500	4500	※UVK1E223MRD
35 (1V)	47	5×11	0.14	49.35	16.45	130	※UVK1V470MDD
	68	6.3×11	0.14	71.4	23.8	160	※UVK1V680MED
	100	6.3×11	0.14	105	35	210	※UVK1V101MED

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 (μ F)	Case Size ϕ D×L (mm)	tan δ	Leakage Current (μ A)		Rated Ripple (mArms) (85°C/120Hz)	Part Number
				at 20°C after 1 minute	at 20°C after 2 minutes		
35 (1V)	220	8×11.5	0.14	231	77	350	UVK1V221MPD
	330	10×12.5	0.14	346.5	115.5	490	UVK1V331MPD
	470	10×16	0.14	493.5	164.5	650	UVK1V471MPD
	1000	12.5×20	0.14	1050	350	1150	UVK1V102MHD
	2200	16×25	0.16	2310	770	1800	UVK1V222MHD
	3300	16×31.5	0.18	3465	1155	2100	UVK1V332MHD
	4700	16×35.5	0.20	4935	1645	2500	UVK1V472MHD
	6800	18×40	0.24	7140	2380	2800	UVK1V682MHD
	10000	22×50	0.32	10500	3500	3700	※UVK1V103MRD
15000	25×50	0.42	15750	5250	4300	※UVK1V153MRD	
50 (1H)	2.2	5×11	0.12	4	3	28	※UVK1H2R2MDD
	3.3	5×11	0.12	4.95	3	35	※UVK1H3R3MDD
	4.7	5×11	0.12	7.05	3	40	※UVK1H4R7MDD
	10	5×11	0.12	15	5	60	※UVK1H100MDD
	22	5×11	0.12	33	11	95	※UVK1H220MDD
	33	5×11	0.12	49.5	16.5	125	※UVK1H330MDD
	47	6.3×11	0.12	70.5	23.5	155	※UVK1H470MED
	68	6.3×11	0.12	102	34	210	※UVK1H680MED
	100	8×11.5	0.12	150	50	260	UVK1H101MPD
	220	10×12.5	0.12	330	110	430	UVK1H221MPD
	330	10×16	0.12	495	165	590	UVK1H331MPD
	470	10×20	0.12	705	235	760	UVK1H471MPD
	1000	12.5×25	0.12	1500	500	1350	UVK1H102MHD
	2200	16×31.5	0.14	3300	1100	1980	UVK1H222MHD
	3300	18×35.5	0.16	4950	1650	2500	UVK1H332MHD
	4700	20×40	0.18	7050	2350	2900	※UVK1H472MRD
6800	22×50	0.22	10200	3400	3500	※UVK1H682MRD	
10000	25×50	0.30	15000	5000	4000	※UVK1H103MRD	
63 (1J)	22	5×11	0.10	41.58	13.86	100	※UVK1J220MDD
	33	6.3×11	0.10	62.37	20.79	140	※UVK1J330MED
	47	6.3×11	0.10	88.83	29.61	170	※UVK1J470MED
	68	8×11.5	0.10	128.52	42.84	220	UVK1J680MPD
	100	8×11.5	0.10	189	63	280	UVK1J101MPD
	220	10×16	0.10	415.8	138.6	490	UVK1J221MPD
	330	10×20	0.10	623.7	207.9	710	UVK1J331MPD
	470	12.5×20	0.10	888.3	296.1	900	UVK1J471MHD
	1000	16×25	0.10	1890	630	1300	UVK1J102MHD
	2200	18×35.5	0.12	4158	1386	2300	UVK1J222MHD
	3300	20×40	0.14	6237	2079	2700	※UVK1J332MRD
	4700	22×50	0.16	8883	2961	3400	※UVK1J472MRD
6800	25×50	0.20	12852	4284	3900	※UVK1J682MRD	
100 (2A)	2.2	5×11	0.08	6.6	3	30	※UVK2A2R2MDD
	3.3	5×11	0.08	9.9	3.3	40	※UVK2A3R3MDD
	4.7	5×11	0.08	14.1	4.7	45	※UVK2A4R7MDD
	10	5×11	0.08	30	10	70	※UVK2A100MDD
	22	6.3×11	0.08	66	22	130	※UVK2A220MED
	33	8×11.5	0.08	99	33	180	UVK2A330MPD
	47	8×11.5	0.08	141	47	200	UVK2A470MPD

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UVK

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μ F)	Case Size ϕ D \times L (mm)	tan δ	Leakage Current (μ A)		Rated Ripple (mArms) (85°C/120Hz)	Part Number
				at 20°C after 1 minute	at 20°C after 2 minutes		
100 (2A)	68	10 \times 12.5	0.08	204	68	270	UVK2A680MPD
	100	10 \times 16	0.08	300	100	340	UVK2A101MPD
	220	12.5 \times 20	0.08	660	220	550	UVK2A221MHD
	330	12.5 \times 25	0.08	990	330	760	UVK2A331MHD
	470	16 \times 25	0.08	1410	470	1000	UVK2A471MHD
	1000	18 \times 35.5	0.08	3000	1000	1350	UVK2A102MHD
	2200	22 \times 50	0.10	6600	2200	2400	※UVK2A222MRD
	3300	25 \times 50	0.12	9900	3300	2900	※UVK2A332MRD
160 (2C)	10	8 \times 11.5	0.20	164	—	80	UVK2C100MPD
	22	10 \times 12.5	0.20	240.8	—	130	UVK2C220MPD
	33	10 \times 16	0.20	311.2	—	180	UVK2C330MPD
	47	10 \times 20	0.20	400.8	—	210	UVK2C470MPD
	68	12.5 \times 20	0.20	535.2	—	350	UVK2C680MHD
	100	12.5 \times 25	0.20	740	—	430	UVK2C101MHD
	220	16 \times 31.5	0.20	1508	—	580	UVK2C221MHD
	330	18 \times 35.5	0.20	2212	—	800	UVK2C331MHD
	470	18 \times 40	0.20	3108	—	1200	UVK2C471MHD
	1000	25 \times 50	0.20	6500	—	1900	※UVK2C102MRD
200 (2D)	0.47	6.3 \times 11	0.20	49.4	—	15	※UVK2DR47MED
	1	6.3 \times 11	0.20	60	—	22	※UVK2D010MED
	2.2	6.3 \times 11	0.20	84	—	33	※UVK2D2R2MED
	3.3	6.3 \times 11	0.20	106	—	40	※UVK2D3R3MED
	4.7	6.3 \times 11	0.20	134	—	50	※UVK2D4R7MED
	10	8 \times 11.5	0.20	180	—	80	UVK2D100MPD
	22	10 \times 16	0.20	276	—	150	UVK2D220MPD
	33	10 \times 20	0.20	364	—	200	UVK2D330MPD
	47	12.5 \times 20	0.20	476	—	270	UVK2D470MHD
	68	12.5 \times 25	0.20	644	—	350	UVK2D680MHD
	100	16 \times 25	0.20	900	—	450	UVK2D101MHD
	220	16 \times 35.5	0.20	1860	—	700	UVK2D221MHD
	330	18 \times 40	0.20	2740	—	950	UVK2D331MHD
	470	22 \times 40	0.20	3860	—	1300	※UVK2D471MRD
250 (2E)	3.3	6.3 \times 11	0.20	122.5	—	40	※UVK2E3R3MED
	4.7	6.3 \times 11	0.20	147	—	50	※UVK2E4R7MED
	10	10 \times 12.5	0.20	200	—	100	UVK2E100MPD
	22	10 \times 20	0.20	320	—	150	UVK2E220MPD
	33	10 \times 20	0.20	430	—	200	UVK2E330MPD
	47	12.5 \times 20	0.20	570	—	270	UVK2E470MHD
	68	16 \times 25	0.20	780	—	380	UVK2E680MHD
	100	16 \times 25	0.20	1100	—	440	UVK2E101MHD
	220	18 \times 35.5	0.20	2300	—	680	UVK2E221MHD
		330	20 \times 40	0.20	3400	—	1000
	470	22 \times 50	0.20	4800	—	1400	※UVK2E471MRD
350 (2V)	2.2	6.3 \times 11	0.25	117	—	30	※UVK2V2R2MED
	3.3	8 \times 11.5	0.25	146.2	—	43	UVK2V3R3MPD
	4.7	8 \times 11.5	0.25	165.8	—	55	UVK2V4R7MPD
	10	10 \times 12.5	0.25	240	—	90	UVK2V100MPD
	22	12.5 \times 20	0.25	408	—	150	UVK2V220MHD

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				at 20°C after 1 minute	at 20°C after 2 minutes		
350 (2V)	33	12.5 \times 25	0.25	562	—	240	UVK2V330MHD
	47	16 \times 25	0.25	758	—	300	UVK2V470MHD
	68	16 \times 25	0.25	1052	—	400	UVK2V680MHD
	100	18 \times 35.5	0.25	1500	—	520	UVK2V101MHD
	220	22 \times 50	0.25	3180	—	760	※UVK2V221MRD
	330	25 \times 50	0.25	4720	—	1000	※UVK2V331MRD
400 (2G)	0.47	6.3 \times 11	0.25	58.8	—	12	※UVK2GR47MED
	1	6.3 \times 11	0.25	80	—	20	※UVK2G010MED
	2.2	8 \times 11.5	0.25	128	—	38	UVK2G2R2MPD
	3.3	8 \times 11.5	0.25	152.8	—	48	UVK2G3R3MPD
	4.7	10 \times 12.5	0.25	175.2	—	60	UVK2G4R7MPD
	10	10 \times 16	0.25	260	—	90	UVK2G100MPD
	22	12.5 \times 25	0.25	452	—	200	UVK2G220MHD
	33	16 \times 25	0.25	628	—	240	UVK2G330MHD
	47	16 \times 25	0.25	852	—	280	UVK2G470MHD
	68	16 \times 31.5	0.25	1188	—	340	UVK2G680MHD
	100	18 \times 35.5	0.25	1700	—	440	UVK2G101MHD
	220	22 \times 50	0.25	3620	—	650	※UVK2G221MRD
450 (2W)	2.2	8 \times 11.5	0.25	139	—	28	UVK2W2R2MPD
	3.3	10 \times 12.5	0.25	159.4	—	40	UVK2W3R3MPD
	4.7	10 \times 12.5	0.25	184.6	—	46	UVK2W4R7MPD
	10	10 \times 20	0.25	280	—	80	UVK2W100MPD
	22	12.5 \times 25	0.25	496	—	140	UVK2W220MHD
	33	16 \times 25	0.25	694	—	180	UVK2W330MHD
	47	16 \times 31.5	0.25	946	—	220	UVK2W470MHD
	68	18 \times 35.5	0.25	1324	—	260	UVK2W680MHD
	100	18 \times 40	0.25	1900	—	280	UVK2W101MHD
220	25 \times 50	0.25	4060	—	350	※UVK2W221MRD	

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