UZQ series

Super Low ESR | High-Ripple current | RoHS compliant

- 105℃ 6,000~10,000Hrs assured.
- Low impedance, Long life
- For SMPS, IP-Board, Adaptor, Charger
- RoHS compliant
- Halogen-free capacitors are also available.

UZV ⇒ UZQ

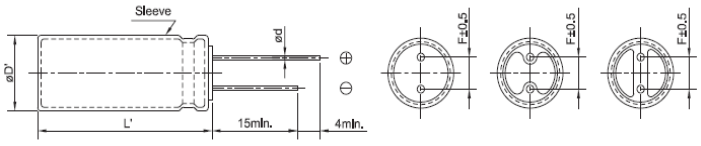
High ripple
Down size

■ Specifications

Item	Characteristics
Rated Voltage Range	6.3 ~ 100Vdc
Operating Temperature Range	-40 ~ +105℃
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current	I=0.01CV(μA)or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(VDC) (at 20℃, 2 minutes)
Dissipation Factor(Tanδ)	Rated voltage (Vdc): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 80 / 100 Tanδ (max.): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 / 0.09 / 0.09 / 0.08 If the capacitance exceeds 1,000uF, then Tanδ will be added 0.02 every 1000uF increase.(at 20℃, 120Hz)
Temperature characteristics (Max,impedance ratio)	Rated voltage (Vdc): 6.3 / 10 ~ 100 Z(-25℃)/Z(20℃): 3 / 2 Z(-40℃)/Z(20℃): 5 / 3 (at 120Hz)
Load life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for specified life times at 105℃. Capacitance change ≤±30%of the initial value Tan δ ≤200% of the initial specified value Leakage current ≤The initial specified value WV: 6.3~100V — 5~6.3Ø: 6,000hrs — 8Ø~: 8,000hrs — 10Ø~: 10,000hrs
Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≤±30% of the initial value Tanδ ≤200% of the initial specified value Leakage current ≤200%The initial specified value

■ Dimensions

Unit(mm)



ØD	5	6.3	8		10	12.5	16	18
Ød	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5		5.0	5.0	7.5	7.5
ØD'	ØD+0.5 max.							
L'	L+1.5 max				L+2.0 max			

- Printed black color letter on PET purple sleeve

■Code numbering system

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

U Z Q □ □ □ M □ □ □ □ □ □ □ □ □ □ □ □

- Taping, Cutting
- Terminal type
- Size (5X11: D11)
- Capacitance
- Capacitance tolerance(M:±20%, K:±10%, V :-10~20%)
- Working voltage(ex. 6.3V→6R3, 10V→010,63V→063)
- Series name

Ø5	D
Ø6.3	E
Ø8	F
Ø10	G
Ø12.5	X
Ø16	J
Ø18	K

UZQ series

■Standard Ratings

Note1) Imp. = Ωmax./20℃,100kHz 2) Ripple current = mArms/105℃,100kHz

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Imp.[1)]	Ripple[2)]	Code No
6.3	150	5 x 11	0.48	350	UZQ6R3□151D11CS□□□
	330	6.3 x 11	0.18	440	UZQ6R3□331E11CS□□□
	470	6.3 x 15	0.095	580	UZQ6R3□471E15CS□□□
	680	8 x 11.5	0.072	640	UZQ6R3□681F12CS□□□
	820	10 x 12.5	0.057	965	UZQ6R3□821G13CS□□□
	1,000	8 x 16	0.087	840	UZQ6R3□102F16CS□□□
	1,200	8 x 16	0.045	1,280	UZQ6R3□122F16CS□□□
		10 x 12.5	0.039	1,340	UZQ6R3□122G13CS□□□
	1,500	8 x 20	0.029	1,520	UZQ6R3□152F20CS□□□
	2,200	10 x 20	0.020	1,980	UZQ6R3□222G20CS□□□
	2,700	10 x 25	0.018	2,260	UZQ6R3□272G25CS□□□
	3,300	10 x 33	0.015	2,560	UZQ6R3□332G33CS□□□
	3,900	12.5 x 20	0.016	2,490	UZQ6R3□392X20CS□□□
	4,700	12.5 x 25	0.015	2,910	UZQ6R3□472X25CS□□□
	5,600	12.5 x 30	0.013	3,460	UZQ6R3□562X30CS□□□
		16 x 20	0.014	3,250	UZQ6R3□562J20CS□□□
	6,800	12.5 x 35	0.012	3,580	UZQ6R3□682X35CS□□□
		16 x 20	0.014	3,280	UZQ6R3□682J20CS□□□
	8,200	16 x 25	0.013	3,640	UZQ6R3□822J25CS□□□
	10,000	16 x 35.5	0.013	3,670	UZQ6R3□103J36CS□□□
		18 x 25	0.014	3,660	UZQ6R3□103K25CS□□□
	12,000	18 x 31.5	0.013	4,270	UZQ6R3□123K32CS□□□
	15,000	18 x 35.5	0.013	4,320	UZQ6R3□153K36CS□□□
	18,000	18 x 40	0.012	4,480	UZQ6R3□183K40CS□□□
10	100	5 x 11	0.38	210	UZQ010□101D11CS□□□
	220	6.3 x 11	0.22	340	UZQ010□221E11CS□□□
	330	6.3 x 11	0.094	550	UZQ010□331E11CS□□□
	470	6.3 x 15	0.084	630	UZQ010□471E15CS□□□
	680	8 x 11.5	0.056	950	UZQ010□681F12CS□□□
		10 x 12.5	0.058	985	UZQ010□681G13CS□□□
	1,000	8 x 16	0.045	1,250	UZQ010□102F16CS□□□
		10 x 12.5	0.039	1,340	UZQ010□102G13CS□□□
	1,200	10 x 16	0.034	1,380	UZQ010□122G16CS□□□
	1,500	8 x 20	0.029	1,650	UZQ010□152F20CS□□□
		10 x 16	0.028	1,450	UZQ010□152G16CS□□□
	2,200	10 x 25	0.018	2,260	UZQ010□222G25CS□□□
		16 x 15	0.020	2,140	UZQ010□222J15CS□□□
	3,300	12.5 x 20	0.017	2,490	UZQ010□332X20CS□□□
	3,900	12.5 x 25	0.015	2,930	UZQ010□392X25CS□□□
		16 x 20	0.016	2,930	UZQ010□392J20CS□□□
	5,600	12.5 x 35	0.012	3,590	UZQ010□562X35CS□□□
		16 x 25	0.014	3,340	UZQ010□562J25CS□□□
	6,800	16 x 25	0.013	3,650	UZQ010□682J25CS□□□
		18 x 20	0.015	3,480	UZQ010□682K20CS□□□
	8,200	16 x 31.5	0.011	3,810	UZQ010□822J32CS□□□
		18 x 25	0.012	3,670	UZQ010□822K25CS□□□
	10,000	18 x 35.5	0.011	4,420	UZQ010□103K36CS□□□
	12,000	18 x 40	0.011	4,580	UZQ010□123K40CS□□□
16	56	5 x 11	0.38	280	UZQ016□560D11CS□□□
	120	6.3 x 11	0.15	385	UZQ016□121E11CS□□□
	330	8 x 11.5	0.086	640	UZQ016□331F12CS□□□
	470	8 x 11.5	0.056	940	UZQ016□471F12CS□□□
		8 x 16	0.054	965	UZQ016□471F16CS□□□
	680	8 x 16	0.045	1,260	UZQ016□681F160CS□□□
		10 x 12.5	0.039	1,350	UZQ016□681G13CS□□□
	1,000	8 x 20	0.029	1,500	UZQ016□102F20CS□□□
		10 x 16	0.028	1,770	UZQ016□102G16CS□□□
	1,200	10 x 20	0.026	1,850	UZQ016□122G20CS□□□

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Imp.[1)]	Ripple[2)]	Code No
16	1,500	10 x 20	0.020	1,980	UZQ016□152G20CS□□□
		12.5 x 16	0.020	1,990	UZQ016□152X16CS□□□
	2,200	10 x 33	0.015	2,560	UZQ016□222G33CS□□□
		12.5 x 20	0.017	2,490	UZQ016□222X20CS□□□
	2,700	12.5 x 25	0.015	2,920	UZQ016□272X25CS□□□
		16 x 20	0.015	2,980	UZQ016□272J20CS□□□
	3,300	12.5 x 30	0.013	3,460	UZQ016□332X30CS□□□
	3,900	12.5 x 35	0.012	3,580	UZQ016□392X35CS□□□
		18 x 20	0.012	3,460	UZQ016□392K20CS□□□
	4,700	16 x 25	0.013	3,650	UZQ016□472J25CS□□□
		18 x 25	0.013	3,640	UZQ016□472K25CS□□□
	5,600	16 x 31.5	0.012	3,660	UZQ016□562J32CS□□□
		18 x 25	0.012	3,670	UZQ016□562K25CS□□□
	8,200	18 x 35.5	0.012	4,320	UZQ016□822K36CS□□□
	10,000	18 x 40	0.011	4,380	UZQ016□103K40CS□□□
25	47	5 x 11	0.38	260	UZQ025□470D11CS□□□
	100	6.3 x 11	0.18	385	UZQ025□101E11CS□□□
	220	6.3 x 15	0.084	640	UZQ025□221E15CS□□□
	330	8 x 11.5	0.056	950	UZQ025□331F12CS□□□
	390	8 x 16	0.047	1,250	UZQ025□391F16CS□□□
	470	8 x 16	0.045	1,280	UZQ025□471F16CS□□□
		10 x 12.5	0.039	1,340	UZQ025□471G13CS□□□
	680	10 x 16	0.028	1,780	UZQ025□681G16CS□□□
		12.5 x 16	0.026	1,860	UZQ025□681X16CS□□□
	820	10 x 20	0.020	1,960	UZQ025□821G20CS□□□
	1,000	10 x 25	0.018	2,270	UZQ025□102G25CS□□□
		12.5 x 20	0.018	2,520	UZQ025□102X20CS□□□
	1,500	12.5 x 20	0.017	2,560	UZQ025□152X20CS□□□
	1,800	12.5 x 25	0.015	2,930	UZQ025□182X25CS□□□
		16 x 20	0.015	2,930	UZQ025□182J20CS□□□
	2,200	12.5 x 30	0.013	3,460	UZQ025□222X30CS□□□
		16 x 20	0.015	3,260	UZQ025□222J20CS□□□
	2,700	16 x 20	0.015	3,280	UZQ025□272J20CS□□□
	3,300	16 x 25	0.013	3,650	UZQ025□332J25CS□□□
		18 x 20	0.014	3,440	UZQ025□332K20CS□□□
	3,900	16 x 31.5	0.012	3,810	UZQ025□392J32CS□□□
		18 x 25	0.012	3,670	UZQ025□392K25CS□□□
	4,700	16 x 35.5	0.011	4,180	UZQ025□472J36CS□□□
		18 x 31.5	0.014	4,320	UZQ025□472K32CS□□□
	5,600	18 x 40	0.012	4,380	UZQ025□562K40CS□□□
35	33	5 x 11	0.38	280	UZQ035□330D11CS□□□
	56	6.3 x 11	0.18	440	UZQ035□560E11CS□□□
	150	6.3 x 15	0.084	640	UZQ035□151E15CS□□□
	220	8 x 11.5	0.056	950	UZQ035□221F12CS□□□
	270	8 x 15	0.045	1,250	UZQ035□271F2015CS□□□
	330	10 x 12.5	0.039	1,340	UZQ035□331G13CS□□□
	470	8 x 15	0.045	1,250	UZQ035□471F15CS□□□
		10 x 16	0.028	1,770	UZQ035□471G16CS□□□
	560	10 x 20	0.020	1,970	UZQ035□561G20CS□□□
	680	10 x 25	0.018	2,260	UZQ035□681G25CS□□□
		12.5 x 20	0.018	2,160	UZQ035□681X20CS□□□
	1,000	10 x 33	0.015	2,560	UZQ035□102G33CS□□□
		12.5 x 20	0.017	2,480	UZQ035□681X20CS□□□
	1,200	12.5 x 25	0.015	2,920	UZQ035□122X25CS□□□
		16 x 20	0.015	2,830	UZQ035□122J20CS□□□
	1,500	12.5 x 31.5	0.013	3,460	UZQ035□152X32CS□□□
		16 x 20	0.015	3,270	UZQ035□122J20CS□□□
	1,800	12.5 x 35	0.012	3,580	UZQ035□182X35CS□□□
		18 x 20	0.013	3,350	UZQ035□182K20CS□□□

UZQ series

■Standard Ratings

Note1) Imp. = Ωmax./20℃,100kHz 2) Ripple current = mArms/105℃,100kHz

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Imp.[1)]	Ripple[2)]	Code No
35	2,200	16 x 25	0.013	3,650	UZQ035□222J25CS□□□
		18 x 20	0.013	3,340	UZQ035□222K20CS□□□
	2,700	16 x 31.5	0.012	3,810	UZQ035□272J32CS□□□
		18 x 25	0.012	4,270	UZQ035□272K25CS□□□
	3,300	16 x 35.5	0.011	4,180	UZQ035□332J36CS□□□
		18 x 31.5	0.011	4,320	UZQ035□332K32CS□□□
	3,900	18 x 40	0.011	4,380	UZQ035□392K40CS□□□
50	1.0	5 X 11	4.0	80	UZQ050□1R0D11CS□□□
	2.2	5 X 11	2.5	120	UZQ050□2R2D11CS□□□
	3.3	5 X 11	2.2	128	UZQ050□3R3D11CS□□□
	4.7	5 x 11	2.0	140	UZQ050□4R7D11CS□□□
	10	5 x 11	1.0	150	UZQ050□100D11CS□□□
	22	5 x 11	0.40	196	UZQ050□220D11CS□□□
		6.3 x 11	0.38	295	UZQ050□220E11CS□□□
	47	6.3 x 11	0.14	455	UZQ050□470E11CS□□□
	100	8 x 11.5	0.074	728	UZQ050□101F12CS□□□
	120	8 x 15	0.061	960	UZQ050□121F15CS□□□
	150	10 x 12.5	0.060	982	UZQ050□151G13CS□□□
	180	8 x 20	0.046	1,190	UZQ050□181F20CS□□□
	220	10 x 16	0.042	1,390	UZQ050□221G16CS□□□
	270	10 x 20	0.030	1,590	UZQ050□271G20CS□□□
		12.5 x 16	0.030	1,460	UZQ050□271X16CS□□□
	330	10 x 25	0.028	1,880	UZQ050□331G25CS□□□
	470	10 x 33	0.025	2,120	UZQ050□471G33CS□□□
		12.5 x 20	0.027	2,060	UZQ050□471X20CS□□□
	560	12.5 x 25	0.023	2,410	UZQ050□561X25CS□□□
	680	12.5 x 30	0.021	2,870	UZQ050□681X30CS□□□
	820	12.5 x 35	0.019	2,970	UZQ050□821X35CS□□□
		16 x 20	0.023	2,740	UZQ050□821J20CS□□□
	1,000	16 x 25	0.021	3,020	UZQ050□102J25CS□□□
		18 x 20	0.022	2,990	UZQ050□102K20CS□□□
	1,200	16 x 31.5	0.020	3,310	UZQ050□122J32CS□□□
		18 x 25	0.022	3,140	UZQ050□122K25CS□□□
	1,500	16 x 35.5	0.019	3,410	UZQ050□152J36CS□□□
	1,800	16 x 40	0.013	3,910	UZQ050□182J40CS□□□
		18 x 31.5	0.015	3,760	UZQ050□182K32CS□□□
	2,200	18 x 35.5	0.013	3,880	UZQ050□222K36CS□□□
	2,700	18 x 40	0.012	4,100	UZQ050□272K40CS□□□
63	15	5 x 11	0.88	185	UZQ063□150D11CS□□□
	33	6.3 x 11.5	0.35	365	UZQ063□330E11CS□□□
	47	6.3 x 11.5	0.22	420	UZQ063□470E11CS□□□
	56	6.3 x 15	0.20	500	UZQ063□560E15CS□□□
	82	8 x 11.5	0.16	665	UZQ063□820F12CS□□□
	120	8 x 20	0.12	820	UZQ063□121F20CS□□□
		10 x 12.5	0.12	750	UZQ063□121G13CS□□□
	180	10 x 16	0.056	1,150	UZQ063□181G16CS□□□
	220	10 x 20	0.046	1,350	UZQ063□221G20CS□□□
	270	10 x 20	0.041	1,500	UZQ063□271G20CS□□□
	390	12.5 x 20	0.031	1,900	UZQ063□391X20CS□□□
	470	12.5 x 25	0.028	2,300	UZQ063□471X25CS□□□
	560	12.5 x 30	0.024	2,500	UZQ063□561X30CS□□□
	680	12.5 x 35	0.022	2,700	UZQ063□681X35CS□□□
		18 x 20	0.026	2,560	UZQ063□681K20CS□□□
	820	16 x 25	0.022	2,850	UZQ063□821J25CS□□□
		18 x 20	0.024	2,800	UZQ063□821K20CS□□□
	1,000	16 x 35.5	0.019	2,900	UZQ063□102J36CS□□□

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Imp.[1)]	Ripple[2)]	Code No
63	1,200	16 x 40	0.018	3,400	UZQ063□122J40CS□□□
		18 x 31.5	0.020	3,300	UZQ063□122K32CS□□□
	1,500	18 x 35.5	0.018	3,400	UZQ063□152K36CS□□□
80	68	8 x 15	0.20	580	UZQ080□680F15CS□□□
	100	8 x 20	0.16	740	UZQ080□101F20CS□□□
	120	10 x 16	0.11	800	UZQ080□121G16CS□□□
	150	10 x 16	0.069	900	UZQ080□151G16CS□□□
	180	10 x 20	0.084	1,050	UZQ080□151G20CS□□□
	220	10 x 25	0.068	1,180	UZQ080□221G25CS□□□
	270	12.5 x 20	0.062	1,450	UZQ080□271X20CS□□□
	330	12.5 x 25	0.047	1,640	UZQ080□331X25CS□□□
	390	12.5 x 30	0.042	1,950	UZQ080□391X30CS□□□
		16 x 20	0.048	1,760	UZQ080□391J20CS□□□
	470	12.5 x 35	0.036	2,150	UZQ080□471X35CS□□□
		16 x 25	0.038	2,000	UZQ080□471J25CS□□□
		18 x 20	0.038	1,950	UZQ080□471K20CS□□□
	680	16 x 31.5	0.032	2,450	UZQ080□681J32CS□□□
		18 x 25	0.036	2,150	UZQ080□681K25CS□□□
	820	16 x 35.5	0.029	2,600	UZQ080□821J36CS□□□
		18 x 31.5	0.030	2,450	UZQ080□821K32CS□□□
	1,000	16 X 40	0.027	2,880	UZQ080□102J40CS□□□
		18 x 31.5	0.030	2,480	UZQ080□102K32CS□□□
	1,200	18 x 35.5	0.026	2,940	UZQ080□122K36CS□□□
100	4.7	5 x 11	1.5	135	UZQ100□4R7D11CS□□□
	6.8	5 x 11	1.4	165	UZQ100□6R8D11CS□□□
	15	6.3 x 11	0.57	225	UZQ100□150E11CS□□□
	22	8 x 11.5	0.50	320	UZQ100□220F12CS□□□
	27	8 x 11.5	0.36	365	UZQ100□270F12CS□□□
	39	8 x 15	0.25	490	UZQ100□390F15CS□□□
	47	8 x 15	0.17	628	UZQ100□470F15CS□□□
		10 x 12.5	0.17	628	UZQ100□470G13CS□□□
	68	8 x 20	0.16	745	UZQ100□680F20CS□□□
		10 x 16	0.11	786	UZQ100□680G16CS□□□
	82	10 x 20	0.084	910	UZQ100□820G20CS□□□
	100	10 x 20	0.084	1,050	UZQ100□101G20CS□□□
		12.5 x 16	0.11	980	UZQ100□101X16CS□□□
	120	10 x 25	0.069	1,210	UZQ100□121G25CS□□□
	150	12.5 x 20	0.062	1,450	UZQ100□151X20CS□□□
	220	12.5 x 25	0.047	1,640	UZQ100□221X25CS□□□
		16 x 20	0.048	1,550	UZQ100□221J20CS□□□
	270	12.5 x 30	0.042	1,960	UZQ100□271X30CS□□□
	330	12.5 x 35	0.036	2,150	UZQ100□331X35CS□□□
		16 x 25	0.036	1,950	UZQ100□331J25CS□□□
		18 x 20	0.045	1,880	UZQ100□331K20CS□□□
	390	12.5 x 40	0.032	2,350	UZQ100□391X40CS□□□
	470	16 x 31.5	0.032	2,450	UZQ100□471J32CS□□□
		18 x 25	0.036	2,250	UZQ100□471K25CS□□□
	560	16 x 35.5	0.029	2,620	UZQ100□561J36CS□□□
		18 x 31.5	0.030	2,360	UZQ100□561K32CS□□□
	680	16 x 40	0.027	2,880	UZQ100□681J40CS□□□
		18 x 35.5	0.027	2,600	UZQ100□681K36CS□□□
	820	18 x 40	0.025	2,960	UZQ100□821K40CS□□□

■ Rated ripple current multipliers

Capacitance (uF)	Frequency (Hz)				
	120	1K	10K	50K	100K
4.7~180	0.40	0.75	0.90	0.94	1.00
220~560	0.50	0.85	0.94	0.96	1.00
680~1,800	0.60	0.87	0.95	0.97	1.00
2,200~3,900	0.75	0.90	0.95	0.97	1.00
4,700~18,000	0.85	0.95	0.98	0.99	1.00