

USR Series

+105°C, Higher Ripple Current, Lower ESR than ULG

Features

- Higher Ripple Current, Lower ESR than ULG
- Wide Temperature Range
- RoHS Compliant



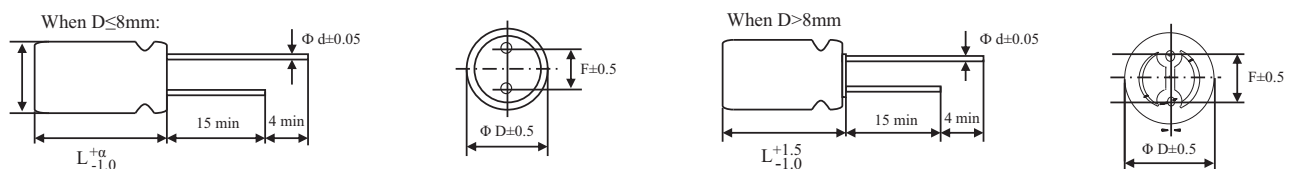
Applications

- Suitable for DC-DC Converters, Voltage Regulators, Decoupling Applications for Computer Motherboards, etc.

Specifications

Item	Performance Characteristics				
Operating Temperature Range	-55 to +105°C				
Rated Working Voltage Range	2.5VDC to 16VDC				
Surge Voltage, SV	SV=WVx1.15VDC (Normal temperature)				
Nominal Capacitance Range	100 to 2700µF (120Hz, +20°C)				
Capacitance Tolerance	±20% (120Hz, +20°C)				
tan δ	0.10 (120Hz, +20°C)				
Leakage Current, Lc	I≤0.2CV or 280 (µA) whichever is greater measured, after 2 minutes application of rated working voltage at +20°C				
Temperature Characteristics, Impedance Ratio	At -55°C 100kHz (Low temperature)			Z/Z20°C≤1.25	
	At +105°C 100kHz (High temperature)			Z/Z20°C≤1.25	
Frequency Coefficient for Allowable Ripple Current	Frequency	120Hz≤f<1kHz	1kHz≤f<10kHz	10kHz≤f<100kHz	100kHz≤f<500kHz
	Coefficient	0.05	0.30	0.70	1.00
Endurance	Test conditions +105°C, 2,000 hours Rated voltage applied	ΔC/C	Within ±20% of the initial measured value		
		tan δ	≤150% of the initial specified value		
		ESR	≤150% of the initial specified value		
		Lc	≤The initial specified value		
Damp Heat Test (Steady State)	Test conditions +60°C, 90% to 95% RH 1,000 hours No applied voltage	ΔC/C	Within ±20% of the initial measured value		
		tan δ	≤150% of the initial specified value		
		ESR	≤150% of the initial specified value		
		Lc	≤The initial specified value		
Surge Voltage Test	At normal temperature, charge at surge voltage for 30 sec. and discharge via a 1kΩ protective resistor for 330 sec. Repeat for 1,000 cycles.	ΔC/C	Within ±20% of the initial measured value		
		tan δ	≤150% of the initial specified value		
		ESR	≤150% of the initial specified value		
		Lc	≤The initial specified value		
Others	JIS-C-5101-4				

Dimensions



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Size List

RV: Rated Voltage

RV μF	Code	2.5 (0E)	4 (0G)	6.3 (0J)	10 (1A)	16 (1C)
100	107					E11
180	187					F1A
220	227					E11, F08, F1A
270	277		E08	D07	F1A	F08, F1A
330	337			E08, F08		F08, G1B
390	397			F08	F1A	
470	477	D09		F08, F1A	G1B	F1A, G1B
560	567	D08, D09, F08	E08, F08, F1A	F08	F08	
680	687		F08, F1A	G1B	G1B	G1B
820	827	E08, F08, F1A	F08, F1A	F08, F1A, G1B	F1A	G1B
1000	108	F1A	F08, G1B			G1B
1200	128		F08	F1A	G1B	
1500	158	F1A		G1B		
2700	278	G1B	G1B			

(Unit: mm)

Size Code	D07	D08	D09	E08	E11	F08	F1A	G1B
ΦDxL	5 x 7	5 x 8	5 x 9	6.3 x 8	6.3 x 11	8 x 8	8 x 11.5	10 x 12.5
F±0.5	2.0	2.0	2.0	2.5	2.5	3.5	3.5	5.0
Φd	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
α	1.0				1.5	1.0	1.5	

Characteristics List

Rated Vol. (V)	Rated Cap. (μF)	Case Size ΦD x L (mm)	Size Code	Part Number	ESR (mΩ, max/ 20°C, 100kHz)	Rated Ripple (mArms/ 105°C, 100kHz)	DF (%max)	Leakage Current (μA/2 mins)
2.5	470	5 x 9	D09	USR477M0ED09	7	4180	10	280
2.5	560	5 x 8	D08	USR567M0ED08	7	4180	10	280
2.5	560	5 x 9	D09	USR567M0ED09	7	4180	10	280
2.5	560	8 x 8	F08	USR567M0EF08	7	6100	10	280
2.5	820	6.3 x 8	E08	USR827M0EE08	7	5600	10	410
2.5	820	8 x 8	F08	USR827M0EF08	7	6100	10	410
2.5	820	8 x 11.5	F1A	USR827M0EF1A	7	6100	10	410
2.5	1000	8 x 11.5	F1A	USR108M0EF1A	7	6100	10	500
2.5	1500	8 x 11.5	F1A	USR158M0EF1A	7	6100	10	750
2.5	2700	10 x 12.5	G1B	USR278M0EG1B	8	5560	10	1350
4	270	6.3 x 8	E08	USR277M0GE08	12	3200	10	280
4	560	6.3 x 8	E08	USR567M0GE08	7	5600	10	448
4	560	8 x 8	F08	USR567M0GF08	7	6100	10	448
4	560	8 x 11.5	F1A	USR567M0GF1A	7	6100	10	448
4	680	8 x 8	F08	USR687M0GF08	7	6100	10	544

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Rated Vol. (V)	Rated Cap. (μF)	Case Size ΦD x L (mm)	Size Code	Part Number	ESR (mΩ, max/ 20°C, 100kHz)	Rated Ripple (mArms/ 105°C, 100kHz)	DF (%max)	Leakage Current (μA/2 mins)
4	680	8 x 11.5	F1A	USR687M0GF1A	7	6100	10	544
4	820	8 x 8	F08	USR827M0GF08	7	6100	10	656
4	820	8 x 11.5	F1A	USR827M0GF1A	7	6100	10	656
4	1000	8 x 8	F08	USR108M0GF08	7	6100	10	800
4	1000	10 x 12.5	G1B	USR108M0GG1B	7	6640	10	800
4	1200	8 x 8	F08	USR128M0GF08	7	6100	10	960
4	2700	10 x 12.5	G1B	USR278M0GG1B	8	6900	10	2160
6.3	270	5 x 7	D07	USR277M0JD07	11	3700	10	340
6.3	330	6.3 x 8	E08	USR337M0JE08	10	4500	10	416
6.3	330	8 x 8	F08	USR337M0JF08	8	5700	10	416
6.3	390	8 x 8	F08	USR397M0JF08	8	5700	10	491
6.3	470	8 x 8	F08	USR477M0JF08	8	5700	10	592
6.3	470	8 x 11.5	F1A	USR477M0JF1A	7	6100	10	592
6.3	560	8 x 8	F08	USR567M0JF08	8	5700	10	706
6.3	680	10 x 12.5	G1B	USR687M0JG1B	7	6640	10	857
6.3	820	8 x 8	F08	USR827M0JF08	7	6100	10	1033
6.3	820	8 x 11.5	F1A	USR827M0JF1A	7	6100	10	1033
6.3	820	10 x 12.5	G1B	USR827M0JG1B	7	6640	10	1033
6.3	1200	8 x 11.5	F1A	USR128M0JF1A	7	6100	10	1512
6.3	1500	10 x 12.5	G1B	USR158M0JG1B	10	5560	10	1890
10	270	8 x 11.5	F1A	USR277M1AF1A	11	5100	10	540
10	390	8 x 11.5	F1A	USR397M1AF1A	9	6100	10	780
10	470	10 x 12.5	G1B	USR477M1AG1B	8	6100	10	940
10	560	8 x 8	F08	USR567M1AF08	9	5600	10	1120
10	680	10 x 12.5	G1B	USR687M1AG1B	8	6100	10	1360
10	820	8 x 11.5	F1A	USR827M1AF1A	8	6100	10	1640
10	1200	10 x 12.5	G1B	USR128M1AG1B	8	6200	10	2400
16	100	6.3 x 11	E11	USR107M1CE11	24	2820	10	320
16	180	8 x 11.5	F1A	USR187M1CF1A	13	5000	10	576
16	220	6.3 x 11	E11	USR227M1CE11	20	3100	10	704
16	220	8 x 8	F08	USR227M1CF08	13	4300	10	704
16	220	8 x 11.5	F1A	USR227M1CF1A	13	5000	10	704
16	270	8 x 8	F08	USR277M1CF08	13	4300	10	864
16	270	8 x 11.5	F1A	USR277M1CF1A	13	5000	10	864
16	330	8 x 8	F08	USR337M1CF08	13	4300	10	1056
16	330	10 x 12.5	G1B	USR337M1CG1B	10	6100	10	1056
16	470	8 x 11.5	F1A	USR477M1CF1A	11	5100	10	1504
16	470	10 x 12.5	G1B	USR477M1CG1B	10	6100	10	1504
16	680	10 x 12.5	G1B	USR687M1CG1B	10	6100	10	2176
16	820	10 x 12.5	G1B	USR827M1CG1B	10	6100	10	2624
16	1000	10 x 12.5	G1B	USR108M1CG1B	10	6100	10	3200

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