RZS

+105°C High Frequency Radial Lead Aluminum Electrolytic Capacitors

For Switching Power Supplies

FEATURES

- *High Ripple Current*
- *Low Impedance*
- *Low ESL and ESR*
- *100 kHz Operating Frequency Range*
- *Capacitance Range 22 µF to 2,200 µF*
- *Voltage Range 6.3 WVDC to 63 WVDC*
- *Solvent Tolerant End Seals Standard*

SPECIFICATIONS

Capacitance Tolerance		**± 20% at 120Hz, 20°C**						
Operating Temperature Range		**-55°C to +105°C**						
Dissipation Factor 120Hz, 20°C	**WVDC**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**
	tan δ	.2	.15	.1	.08	.07	.06	.05
	Note: For above D.F. specifications, add .02 for every 1,000 µF above 1,000 µF							
Impedance Ratio (Max.) @120Hz	**WVDC**	**6.3**	**10**	**16**	**25**	**35**	**50**	**63**
	-55°C/20°C	2.0	1.5	1.5	1.5	1.5	1.5	1.5
Leakage Current	**WVDC**	**≤ 63 WVDC**						
	Time	**2 minutes**						
		.01 CV or 3 µA whichever is greater						
Load Life		**2,000 hours + 105°C with rated voltage**						
		Capacitance change Dissipation factor Leakage current			≤ 20% of initial measured value ≤ 200% of initial specified value ≤ initial specified value			
Shelf Life		1,000 hours at +105°C with no voltage applied.						
		Capacitance change Dissipation factor Leakage current			≤ 20% initial readings ≤ 250% of initial specified value ≤ 200% of initial specified value			

SPECIAL ORDER OPTIONS

(See pages 37 thru 41)

- *Special tolerances: ±10% (K), -10% + 30% (Q)*
- *Tape and Reel*
- *Tape Ammo Pack*
- *Cut, Formed, Cut and Formed and Snap In Leads*
- *Epoxy end seal*
- *Mylar® Polyester Sleeve*

ILLINOIS CAPACITOR, INC. *3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • www.illcap.com*

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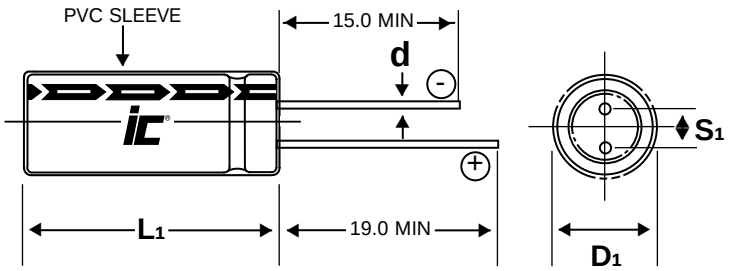
PHYSICAL DIMENSIONS

WVDC (SV) / (µF)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)
22	→	→	→	→	→	10x12.5	10x16
33	→	→	→	→	10x12.5	→	10x16
47	→	→	→	→	10x12.5	10x16	10x20
100	→	→	10x12.5	10x16	10x20	12.5x20	12.5x25
220	10x12.5	→	10x16	12.5x20	12.5x25	16x25	16x31.5
330	10x16	→	10x20	12.5x25	16x25	16x31.5	16x35.5
470	10x20	→	12.5x20	→	16x25	16x35.5	
1,000	→	12.5x25	16x25	16x31.5			
2,200	16x25	16x31.5	16x35.5				

Convert to inches, divide by 25.4

DxL(mm)



NOTE: Case Vent is standard on all diameter ≥8.0mm

LEAD INFORMATION VS. CASE DIAMETER

D	5.0	6.3	8.0	10.0	12.5	16.0
S	2.0	2.5	3.5	5.0	5.0	7.5
d	0.5	0.5	0.6	0.6	0.6	0.8
B	0.5	0.5	0.5	0.5	0.8	0.5

L≤16 L_1 = L + 1.5 mm Max.
L>16 L_1 = L + 2.0 mm Max.
D_1 = D + B Max.
D =12.5 and L>25, d=0.8
S_1 = S ± 0.5 mm

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STANDARD PART LISTING

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR Ω +20°C, 120Hz	Maximum RMS Ripple Current (mA) 100kHz,+105°C	Impedance Ω 20°C 10k/100kHz	Dimensions DxL (mm)
22	50	**226RZS050M**	4.52	150	1.35/.6	10x12.5
22	63	**226RZS063M**	3.768	200	1.35/.6	10x16
33	35	**336RZS035M**	3.517	180	.9/.53	10x12.5
33	63	**336RZS063M**	2.512	240	.9/.5	10x16
47	35	**476RZS035M**	2.469	210	.8/.53	10x12.5
47	50	**476RZS050M**	2.116	260	.8/.5	10x16
47	63	**476RZS063M**	1.764	310	.8/.5	10x20
100	16	**107RZS016M**	1.658	240	.54/.45	10x12.5
100	25	**107RZS025M**	1.326	310	.36/.27	10x16
100	35	**107RZS035M**	1.161	370	.35/.23	10x20
100	50	**107RZS050M**	0.995	450	.3/.1	12.5x20
100	63	**107RZS063M**	0.829	540	.3/.1	12.5x25
220	6.3	**227RZS6R3M**	1.507	250	.48/.45	10x12.5
220	16	**227RZS016M**	0.754	400	.29/.26	10x16
220	25	**227RZS025M**	0.603	540	.15/.14	12.5x20
220	35	**227RZS035M**	0.528	650	.15/.1	12.5x25
220	50	**227RZS050M**	0.452	820	.14/.08	16x25
220	63	**227RZS063M**	0.377	1080	.14/.08	16x31.5
330	6.3	**337RZS6R3M**	1.005	360	.35/.27	10x16
330	16	**337RZS016M**	0.502	520	.21/.18	10x20
330	25	**337RZS025M**	0.402	700	.12/.1	12.5x25
330	35	**337RZS035M**	0.352	840	.09/.07	16x25
330	50	**337RZS050M**	0.301	1030	.09/.05	16x31.5
330	63	**337RZS063M**	0.251	1270	.08/.06	16x35.5
470	6.3	**477RZS6R3M**	0.705	490	.26/.23	10x20
470	16	**477RZS016M**	0.353	700	.12/.11	12.5x20
470	35	**477RZS035M**	0.247	1090	.08/.05	16x25
470	50	**477RZS050M**	0.212	1350	.06/.05	16x35.5
1,000	10	**108RZS010M**	0.249	900	.11/.11	12.5x25
1,000	16	**108RZS016M**	0.166	1150	.09/.09	16x25
1,000	25	**108RZS025M**	0.133	1320	.06/.06	16x31.5
2,200	6.3	**228RZS6R3M**	0.151	1090	.07/.07	16x25
2,200	10	**228RZS010M**	0.113	1520	.05/.05	16x31.5
2,200	16	**228RZS016M**	0.075	1780	.05/.05	16x35.5

NOTE 1: WVDC: MAXIMUM RATED DC WORKING VOLTAGE AT +105°C.
NOTE 2: SVDC: MAXIMUM RATED DC SURGE VOLTAGE AT +105°C.
NOTE 3: DISSIPATION FACTOR (tan δ) MAXIMUM;120 Hz, +25°C.
NOTE 4: ESR: MAXIMUM EQUIVALENT SERIES RESISTANCE; 120 Hz, +25°C MINIMUM CAPACITANCE, MAXIMUM DISSIPATION FACTOR.
NOTE 5: MAXIMUM LEAKAGE CURRENT; RATED WVDC, 2 MINUTES, +25°C.
NOTE 6: RMS RIPPLE CURRENT; 10 kHz-100kHz.
NOTE 7: CAPACITANCE TOLERANCE IS MEASURED AT 120 Hz, +25°C.
NOTE 8: ALL MEASUREMENTS ARE PERFORMED USING THE BRIDGE METHOD.

Ripple Current Multiplier

NOTE: When operated at temperatures below +105°C or at frequencies below 10kHz-100kHz, RMS Ripple current may be varied according to the multiplier values listed below. Peak Voltage not to exceed rated DC voltage.

Ripple Current Multipliers

Frequency(Hz)							Temperature(°C)		
(WVDC)	60	120	400	1K	10K	100K	+105°C	+85°C	+70°C
6.3-16	.54	.70	85	.95	1.0	1.0	1.0	2.20	2.83
25-35	.43	.57	.73	.88	1.0	1.0	1.0	2.20	2.83
50-63	.39	.55	.71	.86	1.0	1.0	1.0	2.20	2.83

Caution: The surface temperature of the Capacitor shall not rise more than 10°C above the ambient temperature and shall never exceed +105°C.