

# Surface Mount Aluminum Electrolytic

# CZ [ For Low Impedance ]

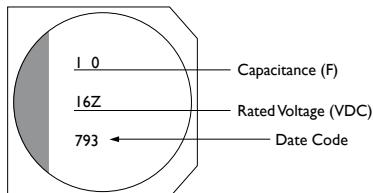


## FEATURE

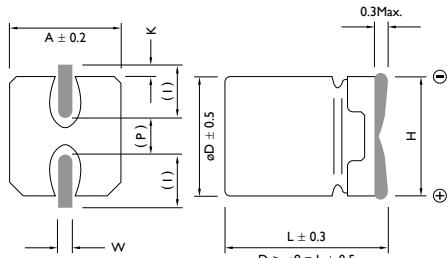
For Low ESR Series with 105°C 1000 Hours

Suitable for AV (TV, Video, Audio), Monitor / Computer, Battery Charger, DC / DC Converter, SMPS, Noise Filter

## MARKING



## DIMENSIONS



( ) Reference Size

## ELECTRICAL CHARACTERISTICS

Operation Temperature Range	-40 to +105°C							
Rated Voltage Range	4 to 50VDC							
Rated Capacitance Range	0.1 ~ 1000μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current (Max.20°C)	$I \leq 0.01CV$ (μA) or $3\mu A$ (After 2 Minutes Application of DC Rated Voltage at 20°C) $I$ = Leakage Current (μA), $C$ = Rated Capacitance (μF), $V$ = Rated Voltage (V)							
Low Temperature Stability	Impedance Ratio at 120Hz							
	WV (V)	4	6.3	10	16	25	35	50
	Z (-25°C) / Z (+20°C)	4	2	2	2	2	2	2
	Z (-40°C) / Z (+20°C)	8	4	4	3	3	3	3
Endurance	After 1000 hours application of WV at 105°C, the capacitors shall meet following requirements. (a) Capacitance Change: Within ±20% of the Initial Value (b) Dissipation Factor: Not Exceeding 200% of Specified Value (c) Leakage Current: Not Exceeding the Specified Value							
Shelf Life	After having been placed at 105°C without voltage applied for 1000 hours, the capacitors shall meet the same requirements as Endurance.							

Unit: mm

SIZE CODE	Dø	L	A	H	I	W	P	K
B	4.0	5.4	4.3	5.5 Max.	1.8	0.65 ± 0.1	1.0 ± 0.2	0.35 $^{+ 0.15}_{- 0.20}$
C	5.0	5.4	5.3	6.5 Max.	2.2	0.65 ± 0.1	1.5 ± 0.2	0.35 $^{+ 0.15}_{- 0.20}$
D	6.3	5.4	6.6	7.8 Max.	2.6	0.65 ± 0.1	1.8 ± 0.2	0.35 $^{+ 0.15}_{- 0.20}$
E	8.0	6.5	8.3	9.5 Max.	3.4	0.65 ± 0.1	2.2 ± 0.2	0.35 $^{+ 0.15}_{- 0.20}$
F	8.0	10.5	8.3	10.0 Max.	3.4	0.90 ± 0.2	3.1 ± 0.2	0.70 ± 0.20
G	10.0	10.5	10.3	12.0 Max.	3.5	0.90 ± 0.2	4.6 ± 0.2	0.70 ± 0.20
H	6.3	7.7	6.6	7.8 Max.	2.6	0.65 ± 0.1	1.8 ± 0.2	0.35 $^{+ 0.15}_{- 0.20}$

## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE W V (SURGE VOLTAGE W V)				6.3 (8)		
	4 (5) SIZE	RIPPLE CURRENT	DISSIPATION FACTOR	ESR	SIZE	RIPPLE CURRENT	DISSIPATION FACTOR
4.7	4 x 5.4	60	0.35	4.00			
6.8	4 x 5.4	60	0.35	4.00			
10	4 x 5.4	60	0.35	4.00			
22	4 x 5.4	60	0.35	4.00	4 x 5.4	60	0.26
33	4 x 5.4	60	0.35	4.00	5 x 5.4	95	0.26
47	4 x 5.4	60	0.35	4.00	5 x 5.4	95	0.26
68	4 x 5.4	60	0.35	4.00	6.3 x 5.4	140	0.26
100	5 x 5.4	95	0.35	3.00	6.3 x 5.4	140	0.26
150	6.3 x 5.4	140	0.35	2.60	8 x 6.5	230	0.35
220	6.3 x 5.4	140	0.35	2.60	8 x 6.5	230	0.35
330					8 x 10.5	450	0.35
470					10 x 10.5	670	0.35
1000					10 x 10.5	670	0.30

Note: 1. Ripple Current: (mA/rms) 105°C, 100KHz

2. Dissipation Factor: 20°C, 120Hz

3. ESR: 20°C, 100KHz (Ω)



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. (μF)	RATED VOLTAGE WV (SURGE VOLTAGE WV)				D x L: mm			
	10 (13) SIZE	RIPPLE CURRENT	DISSIPATION FACTOR		16 (20) SIZE	RIPPLE CURRENT	DISSIPATION FACTOR	
4.7					4 x 5.4	60	0.16	4.00
6.8					4 x 5.4	60	0.16	4.00
10	4 x 5.4	60	0.22	4.00	4 x 5.4	60	0.16	4.00
22	5 x 5.4	95	0.22	2.60	5 x 5.4	95	0.16	2.60
33	5 x 5.4	95	0.22	2.60	5 x 5.4	95	0.16	2.60
47	6.3 x 5.4	95	0.22	1.30	6.3 x 5.4	140	0.16	1.30
68	6.3 x 5.4	140	0.22	1.30	8 x 6.5	230	0.20	0.80
100	6.3 x 5.4	140	0.22	1.30	8 x 6.5	230	0.20	0.80
150	8 x 6.5	230	0.26	0.80	10 x 10.5	450	0.20	0.50
220	8 x 6.5	230	0.26	0.80	10 x 10.5	450	0.20	0.50
330	8 x 10.5	450	0.26	0.50	10 x 10.5	670	0.20	0.30
470	10 x 10.5	670	0.26	0.30	10 x 10.5	670	0.20	0.30
1000	10 x 10.5	670	0.26	0.30				

Note: 1. Ripple Current: (mA/rms) 105°C, 100KHz

2. Dissipation Factor: 20°C, 120Hz

3. ESR: 20°C, 100KHz (Ω)



## CASE SIZE & PERMISSIBLE RIPPLE CURRENT OF STANDARD PRODUCTS

D x L: mm

CAP. ( $\mu$ F)	RATED VOLTAGE W V (SURGE VOLTAGE W V)											
	25 (32)			35 (44)			50 (63)					
	SIZE	RIPPLE CURRENT	DISSIPATION ESR FACTOR	SIZE	RIPPLE CURRENT	DISSIPATION ESR FACTOR	SIZE	RIPPLE CURRENT	DISSIPATION ESR FACTOR			
0.10							4 x 5.4	60	0.12	5.00		
0.22							4 x 5.4	60	0.12	5.00		
0.33							4 x 5.4	60	0.12	5.00		
0.47							4 x 5.4	60	0.12	5.00		
1.0				4 x 5.4	60	0.12	4.00	4 x 5.4	60	0.12	5.00	
2.2				4 x 5.4	60	0.12	4.00	4 x 5.4	60	0.12	5.00	
3.3				4 x 5.4	60	0.12	4.00	4 x 5.4	60	0.12	5.00	
4.7	4 x 5.4	60	0.14	4.00	4 x 5.4	60	0.12	4.00	5 x 5.4	95	0.12	4.00
6.8	4 x 5.4	60	0.14	4.00	5 x 5.4	95	0.12	2.60	6.3 x 5.4	140	0.12	2.60
10	5 x 5.4	95	0.14	2.60	5 x 5.4	95	0.12	2.60	6.3 x 5.4	140	0.12	2.60
22	6.3 x 5.4	140	0.14	1.30	6.3 x 5.4	140	0.12	1.30	8 x 6.5	230	0.12	1.30
33	6.3 x 5.4	140	0.14	1.30	8 x 6.5	230	0.14	0.80	8 x 10.5	300	0.12	1.10
47	6.3 x 5.4	140	0.14	1.30	8 x 6.5	230	0.14	0.80	10 x 10.5	670	0.12	0.80
68	8 x 10.5	450	0.16	0.50	8 x 10.5	450	0.14	0.50	10 x 10.5	670	0.12	0.80
100	8 x 10.5	450	0.16	0.50	10 x 10.5	670	0.14	0.30	10 x 10.5	670	0.12	0.80
150	10 x 10.5	670	0.16	0.30	10 x 10.5	670	0.14	0.30				
220	10 x 10.5	670	0.16	0.30	10 x 10.5	670	0.14	0.30				

Note: 1. Ripple Current: (mA/rms) 105°C, 100KHz

2. Dissipation Factor: 20°C, 120Hz

3. ESR: 20°C, 100KHz ( $\Omega$ )