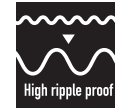


SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

NEW!

ZR2 Series Useful of 5,000 hours at 105°C



- Conform RoHS

Features

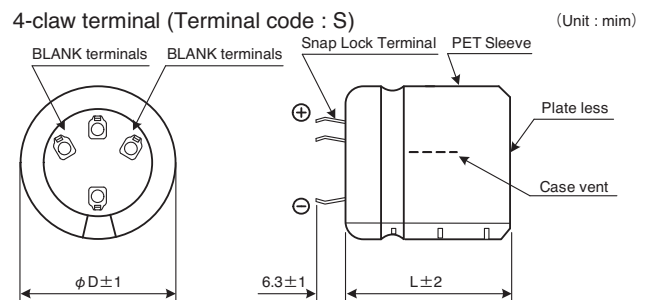
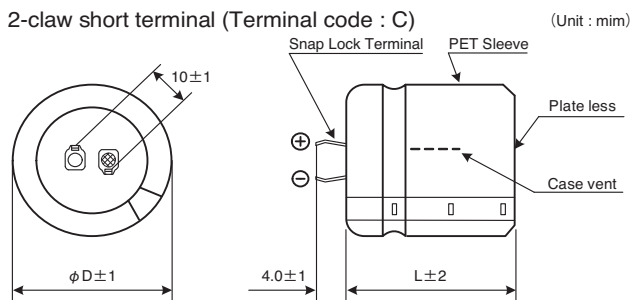
- ZR2 series has higher ripple current (ave 15%) compared with ZR series. These features are accomplished by new special anode foil and high reliability electrolyte.
- The vent is located in the side of the case.



Product Specifications

Items	Specifications
Temperature range	-25°C ~ +105°C
Rated voltage	400 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.02CV (µA) or 3mA, whichever is smaller or less (20°C, after 5 minutes) [C = nominal capacitance (µF), V = rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C, 120Hz)
Permissible ripple current	As specified in the standard product table. (105°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 105°C for 3,000 hours : Capacitance change : Within ±20% of the initial value measured Dissipation factor : 200% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Shelf life	The following specification shall be meet when the capacitor are restored to 20°C after storage of 500 hours at 105°C with no voltage applied. Before the measurement, the capacitor shall be preconditioned by applying the voltage treatment according to Item 4.1 of JIS C 5101-4. Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Others	JIS C 5101-4

Dimensions



Ripple current correction coefficient

Temperature (°C)	60	70	85	105
Correction coefficient	1.9	1.7	1.4	1.0
Frequency (Hz)	120	300	1K	≥10K
Correction coefficient	1.0	1.3	1.5	1.6

Terminal permissible current is limited to 10Arms. (Even if calculated the permissible ripple current with the correction coefficient exceeds 10Arms)

Please consult us when the ripple voltage exceeds 70Vp-p.

Product code

(Example) ZR2 Series 400V 680µF±20%

ZR2	2G	681	M	C	A	S7	WP	EC
Type of series	Case height code	Capacitance tolerance code	Capacitance code	Rated voltage code	Terminal code	Case dia code	Case height code	Environmental code

Refer to page 118-119 for other terminal shape available on request.

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
400	220	30×30	0.20	2.14	405	ZR22G221MCZS3WPEC
	270	30×35	0.20	2.46	330	ZR22G271MCZS4WPEC
	330	30×40	0.20	2.81	270	ZR22G331MCZS5WPEC
		35×31	0.20	2.79	270	ZR22G331MCAS3WPEC
	390	30×45	0.20	3.14	225	ZR22G391MCZS6WPEC
		35×36	0.20	3.16	225	ZR22G391MCAS4WPEC
	470	30×50	0.20	3.52	195	ZR22G471MCZS7WPEC
		35×41	0.20	3.57	195	ZR22G471MCAS5WPEC
		40×30	0.20	3.36	195	ZR22G471MSBS3WPEC
		30×55	0.20	3.91	165	ZR22G561MCZS8WPEC
	560	35×46	0.20	3.99	165	ZR22G561MCAS6WPEC
		40×40	0.20	3.89	165	ZR22G561MSBS5WPEC
	680	30×75	0.20	4.49	135	ZR22G681MCZS12WPEC
		35×51	0.20	4.49	135	ZR22G681MCAS7WPEC
		40×45	0.20	4.38	135	ZR22G681MSBS6WPEC
		30×80	0.20	4.94	110	ZR22G821MCZS13WPEC
	820	35×61	0.20	5.07	110	ZR22G821MCAS9WPEC
		40×50	0.20	4.89	110	ZR22G821MSBS7WPEC
	1,000	30×100	0.20	5.44	90	ZR22G102MCZS17WPEC
		35×75	0.20	5.69	90	ZR22G102MCAS12WPEC
40×61		0.20	5.56	90	ZR22G102MSBS9WPEC	
1,200	35×81	0.20	6.30	75	ZR22G122MCAS13WPEC	
1,500	35×100	0.20	6.96	60	ZR22G152MCAS17WPEC	

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
450	180	30×30	0.20	1.87	525	ZR22W181MCZS3WPEC
	220	30×35	0.20	2.15	435	ZR22W221MCZS4WPEC
	270	30×40	0.20	2.42	345	ZR22W271MCZS5WPEC
		35×31	0.20	2.38	345	ZR22W271MCAS3WPEC
	330	30×45	0.20	2.72	285	ZR22W331MCZS6WPEC
		35×36	0.20	2.74	285	ZR22W331MCAS4WPEC
	390	40×30	0.20	2.65	285	ZR22W331MSBS3WPEC
		30×50	0.20	3.02	255	ZR22W391MCZS7WPEC
	470	35×41	0.20	3.07	255	ZR22W391MCAS5WPEC
		30×60	0.20	3.42	210	ZR22W471MCZS9WPEC
	560	35×46	0.20	3.45	210	ZR22W471MCAS6WPEC
		40×40	0.20	3.36	210	ZR22W471MSBS5WPEC
	680	30×75	0.20	3.84	180	ZR22W561MCZS12WPEC
		35×51	0.20	3.84	180	ZR22W561MCAS7WPEC
		40×45	0.20	3.74	180	ZR22W561MSBS6WPEC
		30×80	0.20	4.25	150	ZR22W681MCZS13WPEC
	820	35×61	0.20	4.36	150	ZR22W681MCAS9WPEC
		30×100	0.20	4.64	125	ZR22W821MCZS17WPEC
	1,000	35×75	0.20	4.87	125	ZR22W821MCAS12WPEC
		40×61	0.20	4.75	125	ZR22W821MSBS9WPEC
1,200	35×100	0.20	5.36	100	ZR22W102MCAS17WPEC	

ALUMINUM ELECTROLYTIC CAPACITORS

Life time graph

Useful life depending on ambient temperature T_a and ripple current operating condition I versus rated ripple current at 105°C, 120Hz

