

Aluminum Electrolytic Capacitors

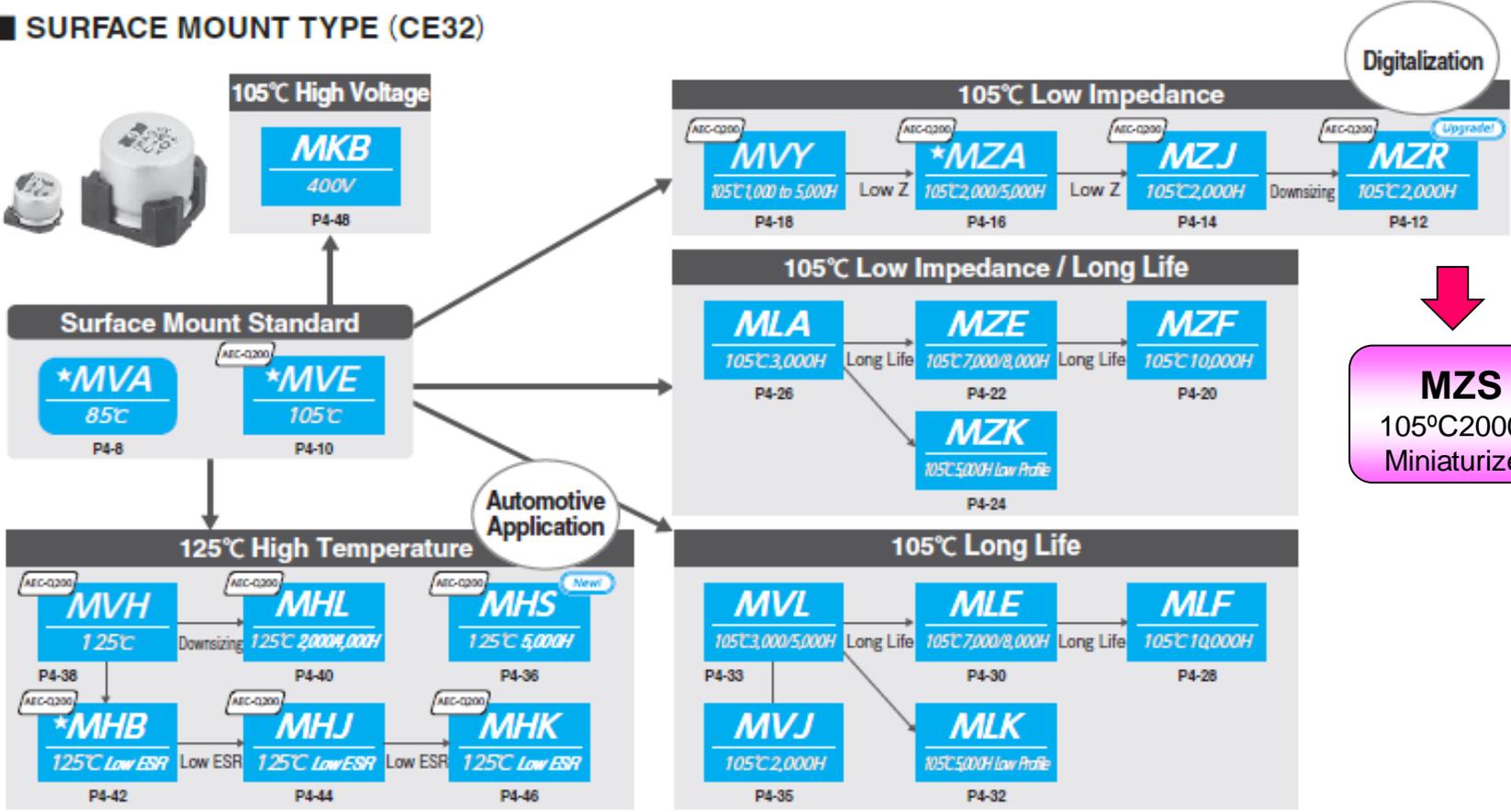
MZS Series



ALUMINUM ELECTROLYTIC CAPACITORS

■ SURFACE MOUNT TYPE (CE32)

3D
Click here!

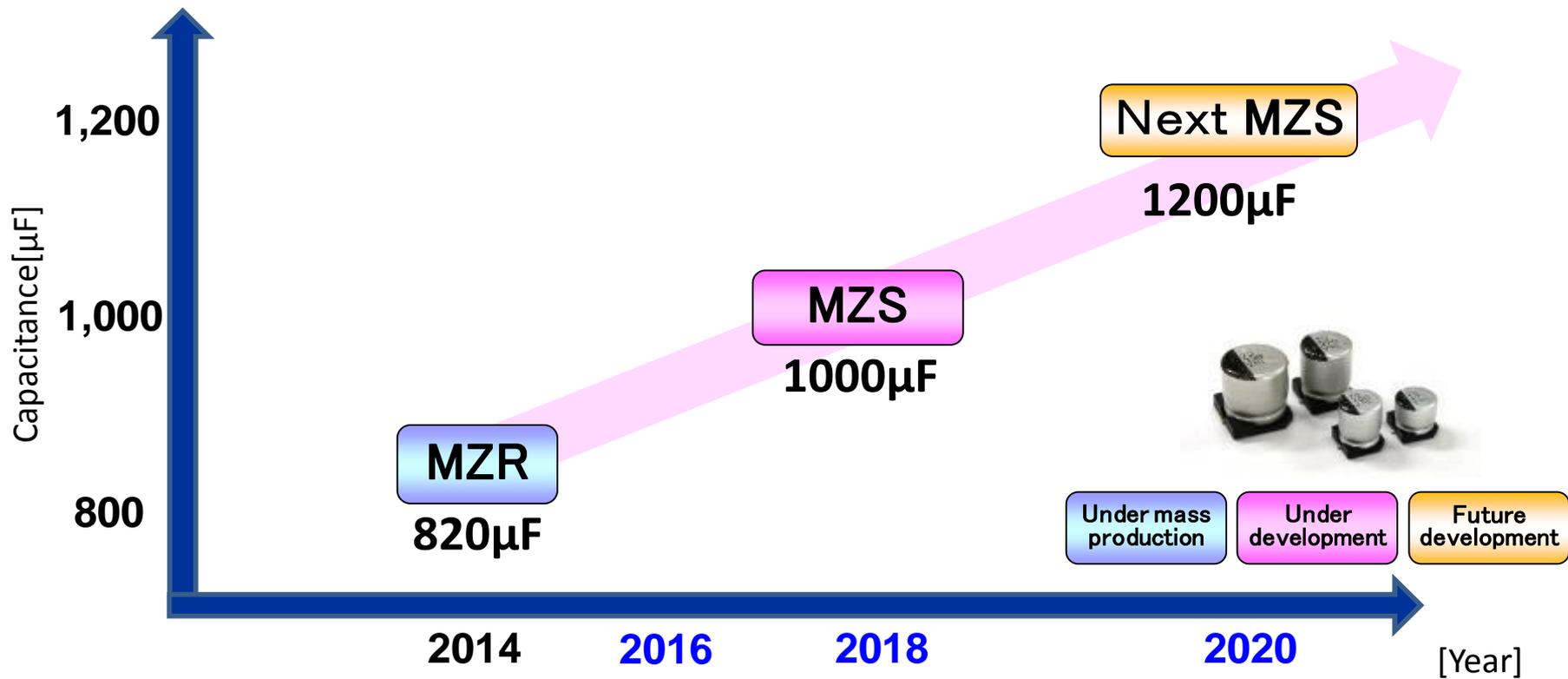


MZS
105°C 2000H
Miniaturized



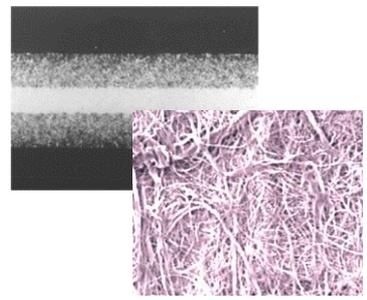
R&D Road Map

Ex.) 25WV($\phi 10 \times 10L$)



Technical point for Large Capacitance & Low ESR.

- Large Capacitance Anode foil
- Thin Cathode foil
- Thin Separator (Paper)



With the same case size, MZS is one rank higher in nominal capacitance than MZR

Case size : D x L (mm)

	25V		35V	
	MZR	<u>MZS</u>	MZR	<u>MZS</u>
330			8 x 10.5	
470	8x10.5			<u>8 x 10.5</u>
560		<u>8 x 10.5</u>	10 x 10.5	
680				<u>10 x 10.5</u>
820	10 x 10.5			
1000		<u>10 x 10.5</u>		

Alchip™-MZS Series

- Downstaging and Lower ESR, 2,000 hours at 105°C
- Rated voltage range : 25 & 35V, Nominal capacitance range : 330 to 1,000µF
- Solvent resistant type
- Vibration resistant structure
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information

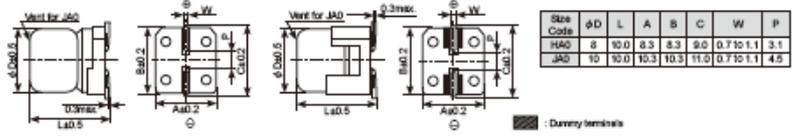


◆ SPECIFICATIONS

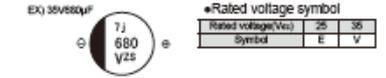
Items	Characteristic		
Category	-65 to +105°C		
Temperature Range	-65 to +105°C		
Rated Voltage Range	25 & 35Vdc		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Leakage Current	I=0.01CV or 5µA, which is greater. (at 20°C, after 2 minutes) Where, I: Max. leakage current (µA), C: Nominal capacitance (µF), V: Rated voltage (V)		
Dissipation Factor (tan δ)	Rated voltage (V _{rs}) 25V 35V		
	tan δ (Max.) 0.14 0.12 (at 20°C, 120Hz)		
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V _{rs}) 25V 35V		
	Z(-25°C)/Z(+20°C) 2 2		
	Z(-40°C)/Z(+20°C) 3 3		
Endurance	Z(-55°C)/Z(+20°C) 3 3 (at 120Hz)		
	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours at 105°C.		
	Capacitance change ≤ ±30% of the initial value		
Shelf Life	D.F. (tan δ) ≤ 200% of the initial specified value		
	Leakage current ≤ The initial specified value		
	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 510-4.		
Surge Voltage Test	Capacitance change ≤ ±30% of the initial value		
	D.F. (tan δ) ≤ 200% of the initial specified value		
	Leakage current ≤ The initial specified value		
Surge Voltage Test	The capacitors shall be subjected to 1,000 cycles each consisting of charging with the specified surge voltage for 30±5 seconds through a protective resistor (as required for RC=0.1±0.05sec) and open-circuiting for 5.5 minutes at a room temperature of 15 to 35°C.		
	Rated voltage (V _{rs})	25V 35V	
	Surge voltage (V _{rs})	29V 40V	
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 200% of the initial specified value	
	Leakage current	≤ The initial specified value	
	(Caution)	Surge Voltage Test intends to evaluate capacitors in durability of an exceptional excessive voltage under specific conditions. It does not imply long-term use at all.	

◆ DIMENSIONS [mm]

- Terminal Code : A
- Terminal Code : G (Vibration resistant structure)
- Size code : HA0 to JA0
- Size code : HA0 to JA0



◆ MARKING

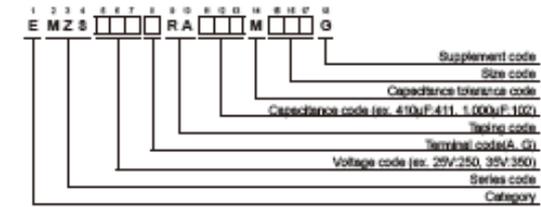


Applying voltage over the rated voltages causes the capacitors to have short lifetime. Besides, applying voltage over the specified surge voltages may cause to have short circuit failure. A protection circuit should be used if applied voltage will exceed the rated voltages.

Product specifications in this bulletin are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this bulletin and product specifications. Please contact us for mass production schedule.

Alchip™-MZS Series

◆ PART NUMBERING SYSTEM



◆ STANDARD RATINGS

V _{rs} (V _{dc})	Cap (µF)	Size code	tan δ	ESR (Ω max. /20°C, 100kHz)	Rated ripple current (mA rms/105°C, 100kHz)	Part No.
25	470	HA0	0.14	0.08	850	EMZS250□RA471MHADG
	560	HA0	0.14	0.08	850	EMZS250□RA561MHADG
	820	JA0	0.14	0.08	1,190	EMZS250□RA821MJADG
	1,000	JA0	0.14	0.08	1,190	EMZS250□RA1001MJADG
	330	HA0	0.12	0.08	850	EMZS350□RA331MHADG
35	470	HA0	0.12	0.08	850	EMZS350□RA471MHADG
	560	JA0	0.12	0.08	1,190	EMZS350□RA561MJADG
	680	JA0	0.12	0.08	1,190	EMZS350□RA681MJADG

□ : Enter the appropriate terminal code.

◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Capacitance (µF)	Frequency (Hz)	120	1k	10k	100k
330 to 560		0.50	0.85	0.94	1.00
680 to 1,000		0.60	0.87	0.95	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.



Production Schedule



- ✓ Sample : Available
- ✓ High volume : Apr. 2018