Alchip™-MKB Series



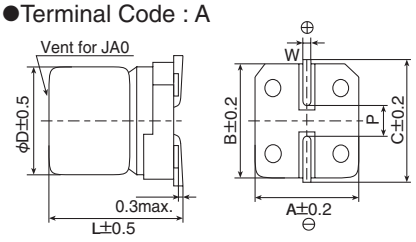
- Low ESR
- Endurance : 3,000 hours at 105℃
- Rated voltage 400V, Capacitance 2.2 to 4.7μF
- **RoHS Compliant**

◆SPECIFICATIONS

Items	Characteristics		
Category Temperature Range	-40 to +105℃		
Rated Voltage Range	400Vdc		
Capacitance Tolerance	±20%(M)		(at 20℃, 120Hz)
Leakage Current	I=0.04CV+100(max.) Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)		(at 20℃ after 1 minute)
Dissipation Factor (tanδ)	Rated voltage(Vdc)	400V	
	tanδ (Max.)	0.25	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. impedance Ratio)	Rated voltage(Vdc)	400V	
	Z(-25℃)/Z(+20℃)	6	
	Z(-40℃)/Z(+20℃)	10	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 3,000 hours at 105℃.		
	Capacitance change	≦±20% of the initial value	
	D.F. (tanδ)	≦200% of the initial specified value	
	Leakage current	≦The initial specified value	
Shelf life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 500 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.		
	Capacitance change	≦±20% of the initial value	
	D.F. (tanδ)	≦200% of the initial specified value	
	Leakage current	≦The initial specified value	

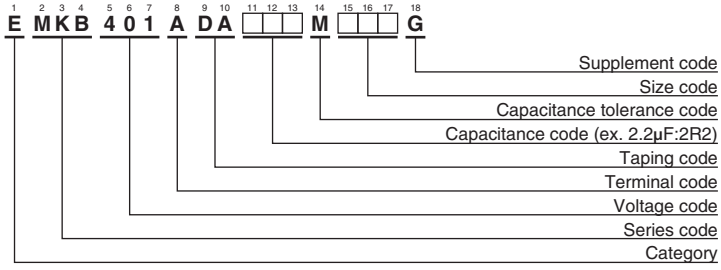
◆DIMENSIONS [mm]

●Terminal Code : A



Size code	D	L	A	B	C	W	P
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (surface mount type)"

◆MARKING

EX) 400V3.9μF



●Rated voltage symbol

Rated voltage (Vdc)	Symbol
400	2G

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	ESR (Ωmax/120Hz)		Rated ripple current (mArms/105℃,120Hz)	Part No.
			20℃	-40℃		
400	2.2	HA0	20	1,000	26	EMKB401ADA2R2MHA0G
	3.3	JA0	10	500	37	EMKB401ADA3R3MJA0G
	3.9	JA0	10	500	38	EMKB401ADA3R9MJA0G
	4.7	JA0	10	500	39	EMKB401ADA4R7MJA0G

◆RATED RIPPLE CURRENT MULTIPLIERS

- Frequency Multipliers

Frequency(Hz)	120	1k	10k	100k
400Vdc	1.00	1.30	1.40	1.50

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

Product specifications in this catalog 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 catalog and product specifications.