NIPPON CHEMI-CON

SURFACE MOUNT ALUMINUM ELECTROLYTIC CAPACITORS

High heat resistance, 125℃

Alchip™-MHS New! Series

- Downsizing, High capacitance
- Endurance : 5,000 hours at 125℃
- For high temperature and high reliability applications (Base station equipment, etc)
- High temperature reflow soldering (3 times)
- Solvent resistant type(see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- RoHS Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

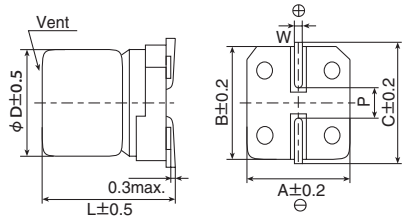
◆SPECIFICATIONS

Items	Characteristics								
Category Temperature Range	-40 to +125℃								
Rated Voltage Range	16 to 100V_{dc}								
Capacitance Tolerance	±20%(M)								(at 20℃, 120Hz)
Leakage Current	I=0.03CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)								(at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	Rated voltage(V_{dc})	16V	25V	35V	50V	63V	80V	100V	
	tan δ (Max.)	0.18	0.14	0.14	0.14	0.14	0.12	0.10	
	When nominal capacitance exceeds 1,000 μF, add 0.02 to the value above for each 1,000 μF increase.								(at 20℃, 120Hz)
Low Temperature Characteristics (Max. impedance Ratio)	Rated voltage(V_{dc})	16V	25V	35V	50V	63V	80V	100V	
	Z(-25℃)/Z(+20℃)	3	2	2	2	2	2	2	
	Z(-40℃)/Z(+20℃)	6	4	3	3	3	3	3	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 5,000 hours at 125℃.								
	Capacitance change	≦±30% of the initial value							
	D.F. (tan δ)	≦300% 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 1,000 hours at 125℃ 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	≦±30% of the initial value							
	D.F. (tan δ)	≦300% of the initial specified value							
	Leakage current	≦The initial specified value							

◆DIMENSIONS [mm]

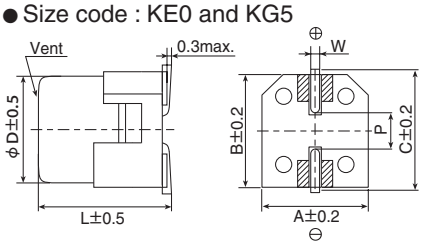
● Terminal Code : A

● Size code : KE0 and KG5



● Terminal Code : G(Vibration resistant structure)

● Size code : KE0 and KG5



: Dummy terminals

Size code	ϕD	L	A	B	C	W	P
KE0	12.5	13.5	13.0	13.0	13.7	1.0 to 1.3	4.2
KG5	12.5	16.0	13.0	13.0	13.7	1.0 to 1.3	4.2

◆PART NUMBERING SYSTEM

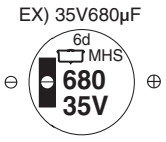
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
E	M	H	S					R	A				M				S

- 18 : Supplement code
- 15–17 : Size code
- 14 : Capacitance tolerance code
- 11–13 : Capacitance code (ex. 470μF:471, 1,000μF:102)
- 9–10 : Taping code
- 8 : Terminal code (A, G)
- 5–7 : Voltage code (ex. 16V:160, 35V:350)
- 3–4 : Series code
- 1–2 : Category

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

◆MARKING

EX) 35V680μF



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◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	ESR (Ω max./100kHz)		Rated ripple current (mArms/125℃, 100kHz)	Part No.
			20℃	−40℃		
16	1,500	KE0	0.087	1.1	1,060	EMHS160□RA152MKE0S
	2,000	KG5	0.070	0.84	1,160	EMHS160□RA202MKG5S
25	1,000	KE0	0.087	1.1	1,060	EMHS250□RA102MKE0S
	1,300	KG5	0.070	0.84	1,160	EMHS250□RA132MKG5S
35	680	KE0	0.087	1.1	1,060	EMHS350□RA681MKE0S
	820	KG5	0.070	0.84	1,160	EMHS350□RA821MKG5S
50	360	KE0	0.16	2.0	880	EMHS500□RA361MKE0S
	470	KG5	0.12	1.5	970	EMHS500□RA471MKG5S
63	240	KE0	0.17	2.5	920	EMHS630□RA241MKE0S
	330	KG5	0.13	1.8	1,030	EMHS630□RA331MKG5S
80	180	KE0	0.17	2.5	920	EMHS800□RA181MKE0S
	240	KG5	0.13	1.8	1,030	EMHS800□RA241MKG5S
100	110	KE0	0.17	2.5	920	EMHS101□RA111MKE0S
	150	KG5	0.13	1.8	1,030	EMHS101□RA151MKG5S

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
110 to 180	0.40	0.75	0.90	1.00
240 to 470	0.50	0.85	0.94	1.00
680 to 2,000	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℃ rise. When long life performance is required in actual use, the rms ripple current has to be reduced.