Alchip™-MHL Series

Upgrade!

- Downsized and Longer life from current MVH series
- Endurance : 2,000 to 4,000 hours at 125℃
- Rated voltage range : 10 to 35V. Nominal capacitance range : 47 to 680µF
- For automobile modules and other high temperature applications
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



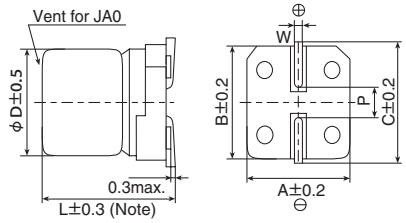
◆SPECIFICATIONS

Items	Characteristics					
Category Temperature Range	-40 to +125℃					
Rated Voltage Range	10 to 35Vdc					
Capacitance Tolerance	±20%(M)					(at 20℃, 120Hz)
Leakage Current	I=0.01CV 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(Vdc)	10V	16V	25V	35V	
	tan δ (Max.)	0.24	0.20	0.16	0.14	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. impedance Ratio)	Rated voltage(Vdc)	10V	16V	25V	35V	
	Z(-25℃)/Z(+20℃)	3	2	2	2	
	Z(-40℃)/Z(+20℃)	6	4	4	3	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for specified time at 125℃.					
	Time	F61 & F80 : 2,000 hours HA0 & JA0 : 4,000 hours				
	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

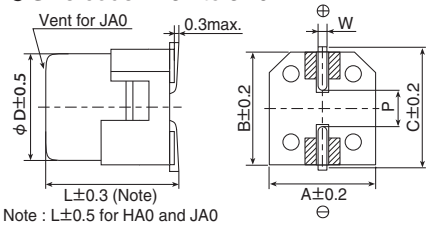
● Size code : F61 to JA0



Note : L±0.5 for HA0 and JA0

● Terminal Code : G(Vibration resistant structure)

● Size code : F61 to JA0

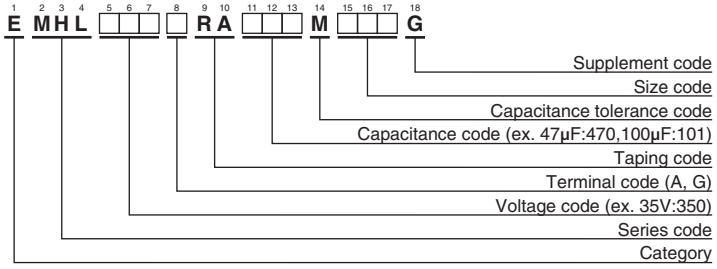


Note : L±0.5 for HA0 and JA0

▨ : Dummy terminals

Size code	ϕD	L	A	B	C	W	P
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9
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

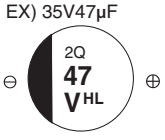
◆PART NUMBERING SYSTEM



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

◆MARKING

EX) 35V47µF



●Rated voltage symbol

Rated voltage (Vdc)	Symbol
10	A
16	C
25	E
35	V

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.

Alchip™-MHL Upgrade! Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	ESR (Ω max./100kHz)		Rated ripple current (mArms/125℃, 100kHz)	Part No.
			20℃	-40℃		
10	100	F61	1.2	22	110	EMHL100□RA101MF61G
	220	F80	0.60	12	220	EMHL100□RA221MF80G
	330	HA0	0.30	5.5	296	EMHL100□RA331MHA0G
	470	HA0	0.30	5.5	296	EMHL100□RA471MHA0G
	680	JA0	0.20	3.6	440	EMHL100□RA681MJA0G
16	47	F61	1.2	22	110	EMHL160□RA470MF61G
	100	F61	1.2	22	110	EMHL160□RA101MF61G
	220	F80	0.60	12	220	EMHL160□RA221MF80G
	330	HA0	0.30	5.5	296	EMHL160□RA331MHA0G
	470	JA0	0.20	3.6	440	EMHL160□RA471MJA0G
	680	JA0	0.20	3.6	440	EMHL160□RA681MJA0G
25	47	F61	1.2	22	110	EMHL250□RA470MF61G
	100	F80	0.60	12	220	EMHL250□RA101MF80G
	220	HA0	0.30	5.5	296	EMHL250□RA221MHA0G
	330	JA0	0.20	3.6	440	EMHL250□RA331MJA0G
35	47	F61	1.2	22	110	EMHL350□RA470MF61G
	100	F80	0.60	12	220	EMHL350□RA101MF80G
	220	HA0	0.30	5.5	296	EMHL350□RA221MHA0G
	330	JA0	0.20	3.6	440	EMHL350□RA331MJA0G

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

◎Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
47 to 680	0.93	0.97	1.00	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.

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Unikeyic Electronics

Global Electronic Components Distributor

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Nippon Chemi-Con:

EKY-101ELL101MK16S EKZE101ELL101MK16S EKZN350ELL471MJ20S EKY-101ETD221MK25S EKY-500ELL471MJ30S EKYB250ELL102MJ20S ESMQ401VSN181MP35S EMZA630ARA301MKG5S EGXF630ELL391MK20S EKMQ201VSN152MR40S EKMQ401VSN151MQ25S EKMR401VSN681MR50S EKXJ401ELL680ML25S HHXC500ARA470MHA0G EKMG101ELL470MJC5S APXA6R3ARA471MJ80G EMVE101ARA470MKE0S EKXG351ELL151MMP1S EKYA500ELL222MLP1S EMVY160ARA100MD55G EGPA350ELL122ML20S EGPD250ELL302MK25H EKMG251ELL101MLN3S EKMS161VSN332MA50S EKY-250ELL331MJC5S EKYA100ELL331MF11D EGXF500ELL751MK25S EKMG160ELL682MLN3S EKXJ401ELL121MMN3S ELXZ630ELL152MM35S