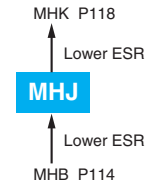


Alchip™-MHJ Series

- Endurance : 2,000 to 3,000 hours at 125°C
- Rated voltage range : 10 to 35V
- Nominal capacitance range : 47 to 470μF
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- Vibration resistant structure
- RoHS Compliant



◆SPECIFICATIONS

Items	Characteristics				
Category	-40 to +125°C				
Temperature Range	-40 to +125°C				
Rated Voltage Range	10 to 35V _{dc}				
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)				
Leakage Current	I=0.01CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)				
Dissipation Factor (tan δ)	Rated voltage(V _{dc})	10V	16V	25V	35V
	tan δ (Max.)	0.30	0.23	0.18	0.16
Low Temperature Characteristics (Max. impedance Ratio)	Rated voltage(V _{dc})	10V	16V	25V	35V
	Z(-25°C)/Z(+20°C)	3	2	2	2
	Z(-40°C)/Z(+20°C)	4	3	3	3
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 3,000 hours (2,000 hours for F80 size) at 125°C.				
	Capacitance change	≦ ±30% of the initial value			
	D.F. (tan δ)	≦300% of the initial specified value			
	Leakage current	≦The initial specified value			
	ESR after 2,000 hours (Ω max./100kHz)		F80	HA0	JA0
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C 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			

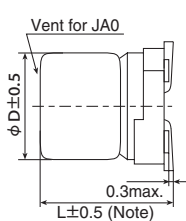
◆DIMENSIONS [mm]

● Terminal Code : A

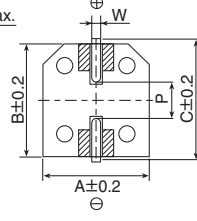
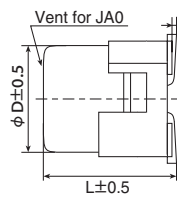
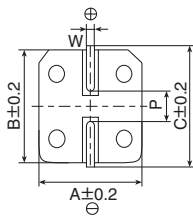
● Size code : F80 to JA0

● Terminal Code : G(Vibration resistant structure)

● Size code : HA0 to JA0



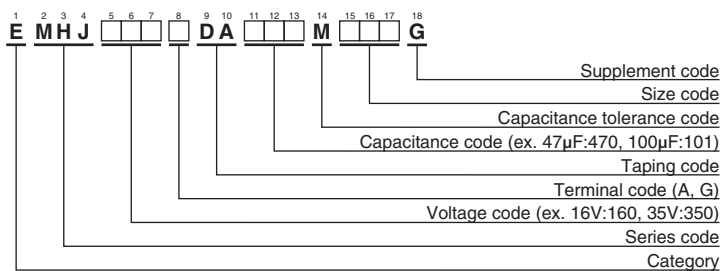
Note : L±0.3 for F80



▨ : Dummy terminals

Size code	φD	L	A	B	C	W	P
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) 16V100μF



● Rated voltage symbol

Rated voltage (V _{dc})	Symbol
10	A
16	C
25	E
35	V

Alchip™-MHJ Series

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Size code	ESR (Ω max./100kHz)		Rated ripple current (mA _{rms} /125°C, 100kHz)	Part No.
			20°C	-40°C		
10	220	HA0	0.15	3.0	350	EMHJ100□DA221MHA0G
	330	HA0	0.15	3.0	350	EMHJ100□DA331MHA0G
	330	JA0	0.12	2.0	550	EMHJ100□DA331MJA0G
	470	JA0	0.12	2.0	550	EMHJ100□DA471MJA0G
16	100	F80	0.45	5.0	220	EMHJ160ADA101MF80G
	100	HA0	0.15	3.0	350	EMHJ160□DA101MHA0G
	220	HA0	0.15	3.0	350	EMHJ160□DA221MHA0G
	330	JA0	0.12	2.0	550	EMHJ160□DA331MJA0G
	470	JA0	0.12	2.0	550	EMHJ160□DA471MJA0G
25	100	HA0	0.15	3.0	350	EMHJ250□DA101MHA0G
	220	JA0	0.12	2.0	550	EMHJ250□DA221MJA0G
	330	JA0	0.12	2.0	550	EMHJ250□DA331MJA0G
35	47	F80	0.45	5.0	220	EMHJ350ADA470MF80G
	47	HA0	0.15	3.0	350	EMHJ350□DA470MHA0G
	100	HA0	0.15	3.0	350	EMHJ350□DA101MHA0G
	220	JA0	0.12	2.0	550	EMHJ350□DA221MJA0G

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF)	Frequency(Hz)	120	1k	10k	100k
47 to 100		0.40	0.75	0.90	1.00
220 to 470		0.50	0.85	0.94	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.