

# Alchip™-MHK Series

- Endurance : 2,000 hours at 125°C
- Specified ESR after endurance
- For automobile modules and other high temperature applications
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

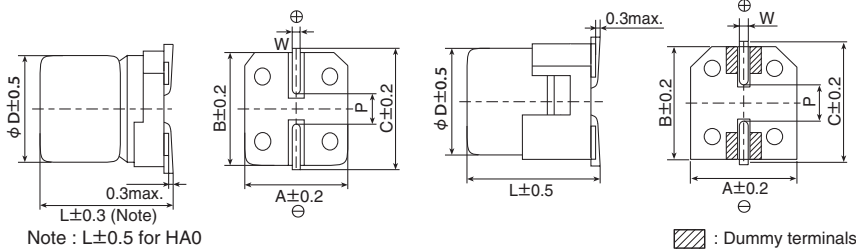


## ◆SPECIFICATIONS

Items	Characteristics	
<b>Category</b>	-40 to +125°C	
<b>Temperature Range</b>	-40 to +125°C	
<b>Rated Voltage Range</b>	35V <sub>dc</sub>	
<b>Capacitance Tolerance</b>	±20%(M) (at 20°C, 120Hz)	
<b>Leakage Current</b>	I=0.01CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minute)	
<b>Dissipation Factor (tan δ)</b>	Rated voltage(V <sub>dc</sub> )	35V
	tan δ (Max.)	0.14 (at 20°C, 120Hz)
<b>Low Temperature Characteristics (Max. impedance Ratio)</b>	Rated voltage(V <sub>dc</sub> )	35V
	Z(-25°C)/Z(+20°C)	2
	Z(-40°C)/Z(+20°C)	3 (at 120Hz)
<b>Endurance</b>	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 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(Ω max./-40°C, 400kHz)	F80 6.0 HA0 4.5
<b>Shelf life</b>	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

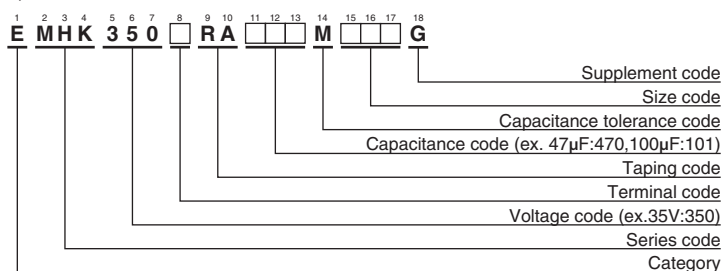
## ◆DIMENSIONS [mm]

- Terminal Code : A
- Size code : F80 to HA0
- Terminal Code : G(Vibration resistant structure)
- Size code : HA0

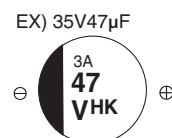


Size code	D	L	A	B	C	W	P
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1

## ◆PART NUMBERING SYSTEM



## ◆MARKING



## ●Rated voltage symbol

Rated voltage (V <sub>dc</sub> )	Symbol
35	V

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

Alchip™-**MHK** Series

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	ESR (Ω max./100k to 400kHz)		Rated ripple current (mA rms/125°C, 100k to 400kHz)	Part No.
			20°C	-40°C		
35	47	F80	0.30	3.0	240	EMHK350ARA470MF80G
	100	F80	0.30	3.0	240	EMHK350ARA101MF80G
	220	HA0	0.20	2.0	330	EMHK350□RA221MHA0G

◆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	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.

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