

# KMM Series

- Longer life from KMQ series
- Endurance with ripple current : 2,000 to 3,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant



## SPECIFICATIONS

Items	Characteristics		
Category	-25 to +105°C		
Temperature Range	-25 to +105°C		
Rated Voltage Range	160 to 450V <sub>dc</sub>		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Leakage Current	I ≤ 3√CV Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 5 minutes)		
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	160 to 400V	420 & 450V
	tan δ (Max.)	0.15	0.20
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 400V	420 & 450V
	Z(-25°C)/Z(+20°C)	4	8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 3,000 hours at 105°C.		
	Capacitance change	≤ ±20% of the initial value	
	D.F. (tan δ)	≤ 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°C after exposing them for 1,000 hours at 105°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	≤ ±15% of the initial value	
	D.F. (tan δ)	≤ 150% of the initial specified value	
	Leakage current	≤ The initial specified value	

## DIMENSIONS [mm]

● Terminal Code : VS (φ22 to φ35) : Standard

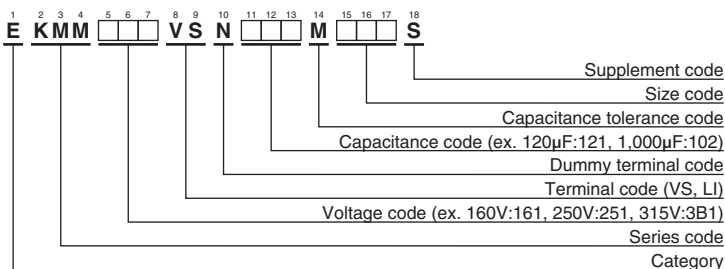
● Terminal Code : LI (φ35)



\* φD=35mm : 3.5±0.5mm

The standard design has no plastic disc.

## PART NUMBERING SYSTEM



Please refer to "Product code guide (snap-in type)"

KMM Series

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
160	220	22 × 20	0.15	0.81	EKMM161VSN221MP20S	180	1,200	25.4 × 50	0.15	2.55	EKMM181VSN122MQ50S
	270	25.4 × 20	0.15	0.98	EKMM161VSN271MQ20S		1,200	30 × 40	0.15	2.55	EKMM181VSN122MR40S
	330	22 × 25	0.15	1.20	EKMM161VSN331MP25S		1,200	35 × 30	0.15	2.55	EKMM181VSN122MA30S
	330	25.4 × 20	0.15	1.02	EKMM161VSN331MQ20S		1,500	30 × 45	0.15	2.90	EKMM181VSN152MR45S
	390	22 × 25	0.15	1.30	EKMM161VSN391MP25S		1,500	35 × 35	0.15	2.90	EKMM181VSN152MA35S
	390	25.4 × 25	0.15	1.26	EKMM161VSN391MQ25S		1,800	30 × 60	0.15	3.49	EKMM181VSN182MR60S
	390	30 × 20	0.15	1.25	EKMM161VSN391MR20S		1,800	35 × 40	0.15	3.30	EKMM181VSN182MA40S
	470	22 × 30	0.15	1.55	EKMM161VSN471MP30S		2,200	35 × 50	0.15	3.65	EKMM181VSN222MA50S
	470	25.4 × 25	0.15	1.55	EKMM161VSN471MQ25S		2,700	35 × 60	0.15	4.19	EKMM181VSN272MA60S
	470	30 × 20	0.15	1.30	EKMM161VSN471MR20S		150	22 × 20	0.15	0.73	EKMM201VSN151MP20S
	560	22 × 35	0.15	1.67	EKMM161VSN561MP35S		180	22 × 20	0.15	0.80	EKMM201VSN181MP20S
	560	25.4 × 30	0.15	1.67	EKMM161VSN561MQ30S		220	25.4 × 20	0.15	0.85	EKMM201VSN221MQ20S
	560	30 × 25	0.15	1.67	EKMM161VSN561MR25S		270	22 × 25	0.15	1.10	EKMM201VSN271MP25S
	560	35 × 20	0.15	1.46	EKMM161VSN561MA20S		270	30 × 20	0.15	1.05	EKMM201VSN271MR20S
	680	22 × 40	0.15	1.82	EKMM161VSN681MP40S	330	22 × 30	0.15	1.25	EKMM201VSN331MP30S	
	680	25.4 × 30	0.15	1.82	EKMM161VSN681MQ30S	330	25.4 × 25	0.15	1.25	EKMM201VSN331MQ25S	
	680	30 × 25	0.15	1.82	EKMM161VSN681MR25S	330	30 × 20	0.15	1.10	EKMM201VSN331MR20S	
	680	35 × 20	0.15	1.51	EKMM161VSN681MA20S	390	22 × 30	0.15	1.35	EKMM201VSN391MP30S	
	820	22 × 45	0.15	2.04	EKMM161VSN821MP45S	390	25.4 × 25	0.15	1.35	EKMM201VSN391MQ25S	
	820	25.4 × 35	0.15	2.04	EKMM161VSN821MQ35S	390	35 × 20	0.15	1.30	EKMM201VSN391MA20S	
	820	30 × 30	0.15	2.04	EKMM161VSN821MR30S	470	22 × 35	0.15	1.50	EKMM201VSN471MP35S	
	820	35 × 25	0.15	2.04	EKMM161VSN821MA25S	470	25.4 × 30	0.15	1.50	EKMM201VSN471MQ30S	
	1,000	22 × 50	0.15	2.25	EKMM161VSN102MP50S	470	30 × 25	0.15	1.50	EKMM201VSN471MR25S	
	1,000	25.4 × 40	0.15	2.25	EKMM161VSN102MQ40S	470	35 × 20	0.15	1.41	EKMM201VSN471MA20S	
	1,000	30 × 30	0.15	2.25	EKMM161VSN102MR30S	560	22 × 40	0.15	1.67	EKMM201VSN561MP40S	
	1,000	35 × 25	0.15	2.25	EKMM161VSN102MA25S	560	25.4 × 30	0.15	1.67	EKMM201VSN561MQ30S	
	1,200	25.4 × 45	0.15	2.49	EKMM161VSN122MQ45S	560	30 × 25	0.15	1.67	EKMM201VSN561MR25S	
	1,200	30 × 35	0.15	2.49	EKMM161VSN122MR35S	680	22 × 45	0.15	1.78	EKMM201VSN681MP45S	
	1,200	35 × 30	0.15	2.49	EKMM161VSN122MA30S	680	25.4 × 35	0.15	1.78	EKMM201VSN681MQ35S	
	1,500	25.4 × 60	0.15	2.97	EKMM161VSN152MQ60S	680	30 × 30	0.15	1.78	EKMM201VSN681MR30S	
	1,500	30 × 40	0.15	2.84	EKMM161VSN152MR40S	680	35 × 25	0.15	1.78	EKMM201VSN681MA25S	
	1,500	35 × 30	0.15	2.84	EKMM161VSN152MA30S	820	25.4 × 45	0.15	2.04	EKMM201VSN821MQ45S	
	1,800	30 × 45	0.15	3.32	EKMM161VSN182MR45S	820	30 × 30	0.15	2.04	EKMM201VSN821MR30S	
	1,800	35 × 35	0.15	3.00	EKMM161VSN182MA35S	820	35 × 25	0.15	2.04	EKMM201VSN821MA25S	
	2,200	30 × 60	0.15	3.86	EKMM161VSN222MR60S	1,000	25.4 × 50	0.15	2.30	EKMM201VSN102MQ50S	
	2,200	35 × 45	0.15	3.50	EKMM161VSN222MA45S	1,000	30 × 35	0.15	2.30	EKMM201VSN102MR35S	
	2,700	35 × 50	0.15	4.00	EKMM161VSN272MA50S	1,000	35 × 30	0.15	2.30	EKMM201VSN102MA30S	
	3,300	35 × 60	0.15	4.63	EKMM161VSN332MA60S	1,200	25.4 × 60	0.15	2.66	EKMM201VSN122MQ60S	
	180	180	22 × 20	0.15	0.80	EKMM181VSN181MP20S	1,200	30 × 40	0.15	2.65	EKMM201VSN122MR40S
		220	25.4 × 20	0.15	0.90	EKMM181VSN221MQ20S	1,200	35 × 35	0.15	2.65	EKMM201VSN122MA35S
270		22 × 25	0.15	1.00	EKMM181VSN271MP25S	1,500	30 × 50	0.15	3.08	EKMM201VSN152MR50S	
270		25.4 × 20	0.15	0.95	EKMM181VSN271MQ20S	1,500	35 × 40	0.15	3.08	EKMM201VSN152MA40S	
330		22 × 25	0.15	1.20	EKMM181VSN331MP25S	1,800	30 × 60	0.15	3.49	EKMM201VSN182MR60S	
330		25.4 × 25	0.15	1.16	EKMM181VSN331MQ25S	1,800	35 × 45	0.15	3.48	EKMM201VSN182MA45S	
330		30 × 20	0.15	1.15	EKMM181VSN331MR20S	2,200	35 × 50	0.15	3.78	EKMM201VSN222MA50S	
390		22 × 30	0.15	1.35	EKMM181VSN391MP30S	150	22 × 20	0.15	0.67	EKMM221VSN151MP20S	
390		25.4 × 25	0.15	1.35	EKMM181VSN391MQ25S	180	25.4 × 20	0.15	0.76	EKMM221VSN181MP20S	
390		30 × 20	0.15	1.20	EKMM181VSN391MR20S	220	22 × 25	0.15	1.00	EKMM221VSN221MP25S	
470		22 × 35	0.15	1.50	EKMM181VSN471MP35S	220	25.4 × 20	0.15	0.84	EKMM221VSN221MQ20S	
470		25.4 × 30	0.15	1.50	EKMM181VSN471MQ30S	270	22 × 30	0.15	1.15	EKMM221VSN271MP30S	
470		30 × 25	0.15	1.50	EKMM181VSN471MR25S	270	25.4 × 25	0.15	1.08	EKMM221VSN271MQ25S	
470		35 × 20	0.15	1.36	EKMM181VSN471MA20S	270	30 × 20	0.15	0.98	EKMM221VSN271MR20S	
560		22 × 40	0.15	1.67	EKMM181VSN561MP40S	330	22 × 35	0.15	1.25	EKMM221VSN331MP35S	
560		25.4 × 30	0.15	1.67	EKMM181VSN561MQ30S	330	25.4 × 25	0.15	1.25	EKMM221VSN331MQ25S	
560		30 × 25	0.15	1.67	EKMM181VSN561MR25S	330	35 × 20	0.15	1.13	EKMM221VSN331MA20S	
560		35 × 20	0.15	1.43	EKMM181VSN561MA20S	390	22 × 35	0.15	1.40	EKMM221VSN391MP35S	
680		22 × 45	0.15	1.78	EKMM181VSN681MP45S	390	25.4 × 30	0.15	1.40	EKMM221VSN391MQ30S	
680		25.4 × 35	0.15	1.78	EKMM181VSN681MQ35S	390	30 × 25	0.15	1.36	EKMM221VSN391MR25S	
680		30 × 30	0.15	1.78	EKMM181VSN681MR30S	390	35 × 20	0.15	1.23	EKMM221VSN391MA20S	
680		35 × 25	0.15	1.83	EKMM181VSN681MA25S	470	22 × 40	0.15	1.51	EKMM221VSN471MP40S	
820		22 × 50	0.15	2.04	EKMM181VSN821MP50S	470	25.4 × 35	0.15	1.54	EKMM221VSN471MQ35S	
820		25.4 × 40	0.15	2.04	EKMM181VSN821MQ40S	470	30 × 25	0.15	1.50	EKMM221VSN471MR25S	
820		30 × 30	0.15	2.04	EKMM181VSN821MR30S	560	22 × 45	0.15	1.70	EKMM221VSN561MP45S	
820		35 × 25	0.15	2.04	EKMM181VSN821MA25S	560	25.4 × 40	0.15	1.72	EKMM221VSN561MQ40S	
1,000		25.4 × 45	0.15	2.30	EKMM181VSN102MQ45S	560	30 × 30	0.15	1.70	EKMM221VSN561MR30S	
1,000		30 × 35	0.15	2.30	EKMM181VSN102MR35S	560	35 × 25	0.15	1.71	EKMM221VSN561MA25S	
1,000		35 × 30	0.15	2.30	EKMM181VSN102MA30S	680	25.4 × 45	0.15	1.94	EKMM221VSN681MQ45S	

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.
220	680	30 × 35	0.15	1.93	EKMM221VSN681MR35S	315	220	25.4 × 30	0.15	1.04	EKMM3B1VSN221MQ30S
	680	35 × 25	0.15	1.89	EKMM221VSN681MA25S		220	30 × 25	0.15	1.04	EKMM3B1VSN221MR25S
	820	25.4 × 50	0.15	2.18	EKMM221VSN821MQ50S		220	35 × 20	0.15	0.90	EKMM3B1VSN221MA20S
	820	30 × 40	0.15	2.19	EKMM221VSN821MR40S		270	22 × 45	0.15	1.16	EKMM3B1VSN271MP45S
	820	35 × 30	0.15	2.16	EKMM221VSN821MA30S		270	25.4 × 35	0.15	1.16	EKMM3B1VSN271MQ35S
	1,000	25.4 × 60	0.15	2.54	EKMM221VSN102MQ60S		270	30 × 25	0.15	1.16	EKMM3B1VSN271MR25S
	1,000	30 × 45	0.15	2.50	EKMM221VSN102MR45S		270	35 × 25	0.15	1.15	EKMM3B1VSN271MA25S
	1,000	35 × 35	0.15	2.44	EKMM221VSN102MA35S		330	22 × 50	0.15	1.33	EKMM3B1VSN331MP50S
	1,200	30 × 50	0.15	2.81	EKMM221VSN122MR50S		330	25.4 × 40	0.15	1.33	EKMM3B1VSN331MQ40S
	1,200	35 × 40	0.15	2.79	EKMM221VSN122MA40S		330	30 × 30	0.15	1.33	EKMM3B1VSN331MR30S
	1,500	30 × 60	0.15	3.30	EKMM221VSN152MR60S		330	35 × 25	0.15	1.33	EKMM3B1VSN331MA25S
	1,500	35 × 45	0.15	3.22	EKMM221VSN152MA45S		390	25.4 × 45	0.15	1.47	EKMM3B1VSN391MQ45S
	1,800	35 × 50	0.15	3.63	EKMM221VSN182MA50S		390	30 × 35	0.15	1.47	EKMM3B1VSN391MR35S
	2,200	35 × 60	0.15	4.23	EKMM221VSN222MA60S		390	35 × 30	0.15	1.47	EKMM3B1VSN391MA30S
250	120	22 × 20	0.15	0.60	EKMM251VSN121MP20S	470	25.4 × 50	0.15	1.70	EKMM3B1VSN471MA25S	
	150	25.4 × 20	0.15	0.74	EKMM251VSN151MQ20S	470	30 × 40	0.15	1.70	EKMM3B1VSN471MR40S	
	180	22 × 25	0.15	0.78	EKMM251VSN181MP25S	470	35 × 30	0.15	1.70	EKMM3B1VSN471MA30S	
	180	25.4 × 20	0.15	0.75	EKMM251VSN181MQ20S	560	30 × 45	0.15	2.05	EKMM3B1VSN561MR45S	
	220	22 × 25	0.15	1.00	EKMM251VSN221MP25S	560	35 × 35	0.15	2.05	EKMM3B1VSN561MA35S	
	220	25.4 × 25	0.15	0.95	EKMM251VSN221MQ25S	680	30 × 50	0.15	2.17	EKMM3B1VSN681MR50S	
	220	30 × 20	0.15	0.95	EKMM251VSN221MR20S	680	35 × 40	0.15	2.17	EKMM3B1VSN681MA40S	
	270	22 × 30	0.15	1.18	EKMM251VSN271MP30S	820	35 × 45	0.15	2.20	EKMM3B1VSN821MA45S	
	270	25.4 × 25	0.15	1.18	EKMM251VSN271MQ25S	1,000	35 × 60	0.15	2.55	EKMM3B1VSN102MA60S	
	270	30 × 20	0.15	1.00	EKMM251VSN271MR20S	56	22 × 20	0.15	0.41	EKMM351VSN560MP20S	
	330	22 × 35	0.15	1.30	EKMM251VSN331MP35S	68	25.4 × 20	0.15	0.46	EKMM351VSN680MQ20S	
	330	25.4 × 30	0.15	1.30	EKMM251VSN331MQ30S	82	22 × 25	0.15	0.55	EKMM351VSN820MP25S	
	330	30 × 25	0.15	1.30	EKMM251VSN331MR25S	82	25.4 × 20	0.15	0.51	EKMM351VSN820MQ20S	
	330	35 × 20	0.15	1.16	EKMM251VSN331MA20S	100	22 × 25	0.15	0.69	EKMM351VSN101MP25S	
	390	22 × 40	0.15	1.49	EKMM251VSN391MP40S	100	30 × 20	0.15	0.60	EKMM351VSN101MR20S	
	390	25.4 × 35	0.15	1.49	EKMM251VSN391MQ35S	120	22 × 30	0.15	0.75	EKMM351VSN121MP30S	
	390	30 × 25	0.15	1.49	EKMM251VSN391MR25S	120	25.4 × 25	0.15	0.75	EKMM351VSN121MQ25S	
	470	22 × 45	0.15	1.65	EKMM251VSN471MP45S	120	30 × 20	0.15	0.65	EKMM351VSN121MR20S	
	470	25.4 × 35	0.15	1.65	EKMM251VSN471MQ35S	150	22 × 35	0.15	0.82	EKMM351VSN151MP35S	
	470	30 × 30	0.15	1.65	EKMM251VSN471MR30S	150	25.4 × 30	0.15	0.83	EKMM351VSN151MQ30S	
	470	35 × 25	0.15	1.65	EKMM251VSN471MA25S	150	30 × 25	0.15	0.82	EKMM351VSN151MR25S	
	560	22 × 50	0.15	1.67	EKMM251VSN561MP50S	150	35 × 20	0.15	0.76	EKMM351VSN151MA20S	
	560	25.4 × 40	0.15	1.80	EKMM251VSN561MQ40S	180	22 × 40	0.15	0.92	EKMM351VSN181MP40S	
	560	30 × 30	0.15	1.80	EKMM251VSN561MR30S	180	25.4 × 30	0.15	0.92	EKMM351VSN181MQ30S	
	560	35 × 25	0.15	1.80	EKMM251VSN561MA25S	180	30 × 25	0.15	0.90	EKMM351VSN181MR25S	
	680	25.4 × 50	0.15	2.00	EKMM251VSN681MQ50S	220	22 × 45	0.15	1.05	EKMM351VSN221MP45S	
	680	30 × 35	0.15	2.00	EKMM251VSN681MR35S	220	25.4 × 35	0.15	1.04	EKMM351VSN221MQ35S	
	680	35 × 30	0.15	2.00	EKMM251VSN681MA30S	220	30 × 30	0.15	1.02	EKMM351VSN221MR30S	
	820	25.4 × 60	0.15	2.20	EKMM251VSN821MQ60S	220	35 × 25	0.15	1.04	EKMM351VSN221MA25S	
	820	30 × 40	0.15	2.30	EKMM251VSN821MR40S	270	22 × 50	0.15	1.16	EKMM351VSN271MP50S	
	820	35 × 35	0.15	2.30	EKMM251VSN821MA35S	270	25.4 × 40	0.15	1.18	EKMM351VSN271MQ40S	
1,000	30 × 50	0.15	2.47	EKMM251VSN102MR50S	270	30 × 30	0.15	1.17	EKMM351VSN271MR30S		
1,000	35 × 40	0.15	2.47	EKMM251VSN102MA40S	270	35 × 25	0.15	1.20	EKMM351VSN271MA25S		
1,200	30 × 60	0.15	2.85	EKMM251VSN122MR60S	330	25.4 × 45	0.15	1.29	EKMM351VSN331MQ45S		
1,200	35 × 45	0.15	2.60	EKMM251VSN122MA45S	330	30 × 35	0.15	1.34	EKMM351VSN331MR35S		
1,500	35 × 50	0.15	3.00	EKMM251VSN152MA50S	330	35 × 30	0.15	1.22	EKMM351VSN331MA30S		
1,800	35 × 60	0.15	3.42	EKMM251VSN182MA60S	390	25.4 × 50	0.15	1.51	EKMM351VSN391MQ50S		
315	68	22 × 20	0.15	0.45	EKMM3B1VSN680MP20S	390	30 × 40	0.15	1.51	EKMM351VSN391MR40S	
	82	22 × 20	0.15	0.47	EKMM3B1VSN820MP20S	390	35 × 35	0.15	1.47	EKMM351VSN391MA35S	
	100	22 × 25	0.15	0.61	EKMM3B1VSN101MP25S	470	25.4 × 60	0.15	1.66	EKMM351VSN471MQ60S	
	100	25.4 × 20	0.15	0.56	EKMM3B1VSN101MQ20S	470	30 × 45	0.15	1.65	EKMM351VSN471MR45S	
	120	22 × 25	0.15	0.75	EKMM3B1VSN121MP25S	470	35 × 35	0.15	1.69	EKMM351VSN471MA35S	
	120	25.4 × 20	0.15	0.62	EKMM3B1VSN121MQ20S	560	30 × 50	0.15	1.85	EKMM351VSN561MR50S	
	120	30 × 20	0.15	0.65	EKMM3B1VSN121MR20S	560	35 × 40	0.15	1.90	EKMM351VSN561MA40S	
	150	22 × 30	0.15	0.82	EKMM3B1VSN151MP30S	680	30 × 60	0.15	2.15	EKMM351VSN681MR60S	
	150	25.4 × 25	0.15	0.82	EKMM3B1VSN151MQ25S	680	35 × 50	0.15	1.99	EKMM351VSN681MA50S	
	150	30 × 20	0.15	0.70	EKMM3B1VSN151MR20S	820	35 × 60	0.15	2.31	EKMM351VSN821MA60S	
	150	35 × 20	0.15	0.76	EKMM3B1VSN151MA20S	47	22 × 20	0.15	0.37	EKMM401VSN470MP20S	
	180	22 × 35	0.15	0.92	EKMM3B1VSN181MP35S	56	25.4 × 20	0.15	0.42	EKMM401VSN560MQ20S	
	180	25.4 × 25	0.15	0.92	EKMM3B1VSN181MQ25S	68	22 × 25	0.15	0.50	EKMM401VSN680MP25S	
	180	30 × 25	0.15	0.90	EKMM3B1VSN181MR25S	68	25.4 × 20	0.15	0.46	EKMM401VSN680MQ20S	
180	35 × 20	0.15	0.85	EKMM3B1VSN181MA20S	82	22 × 25	0.15	0.64	EKMM401VSN820MP25S		
220	22 × 40	0.15	1.04	EKMM3B1VSN221MP40S	82	30 × 20	0.15	0.55	EKMM401VSN820MR20S		

KMM Series

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/105°C, 120Hz)	Part No.	
400	100	22 × 30	0.15	0.70	EKMM401VSN101MP30S	420	180	25.4 × 35	0.20	0.95	EKMM421VSN181MQ35S	
	100	25.4 × 25	0.15	0.70	EKMM401VSN101MQ25S		180	30 × 30	0.20	0.95	EKMM421VSN181MR30S	
	100	30 × 20	0.15	0.60	EKMM401VSN101MR20S		180	35 × 25	0.20	0.94	EKMM421VSN181MA25S	
	120	22 × 35	0.15	0.75	EKMM401VSN121MP35S		220	22 × 50	0.20	1.10	EKMM421VSN221MP50S	
	120	25.4 × 25	0.15	0.75	EKMM401VSN121MQ25S		220	25.4 × 45	0.20	1.10	EKMM421VSN221MQ45S	
	120	30 × 25	0.15	0.73	EKMM401VSN121MR25S		220	30 × 35	0.20	1.10	EKMM421VSN221MR35S	
	120	35 × 20	0.15	0.75	EKMM401VSN121MA20S		220	35 × 25	0.20	1.10	EKMM421VSN221MA25S	
	150	22 × 40	0.15	0.88	EKMM401VSN151MP40S		270	25.4 × 50	0.20	1.22	EKMM421VSN271MQ50S	
	150	25.4 × 30	0.15	0.88	EKMM401VSN151MQ30S		270	30 × 40	0.20	1.22	EKMM421VSN271MR40S	
	150	30 × 25	0.15	0.88	EKMM401VSN151MR25S		270	35 × 30	0.20	1.22	EKMM421VSN271MA30S	
	150	35 × 20	0.15	0.80	EKMM401VSN151MA20S		330	25.4 × 60	0.20	1.41	EKMM421VSN331MQ60S	
	180	22 × 45	0.15	0.98	EKMM401VSN181MP45S		330	30 × 45	0.20	1.45	EKMM421VSN331MR45S	
	180	25.4 × 35	0.15	0.98	EKMM401VSN181MQ35S		330	35 × 35	0.20	1.45	EKMM421VSN331MA35S	
	180	30 × 30	0.15	0.98	EKMM401VSN181MR30S		390	30 × 50	0.20	1.55	EKMM421VSN391MR50S	
	180	35 × 25	0.15	0.98	EKMM401VSN181MA25S		390	35 × 40	0.20	1.55	EKMM421VSN391MA40S	
	220	22 × 50	0.15	1.10	EKMM401VSN221MP50S		470	30 × 60	0.20	1.79	EKMM421VSN471MR60S	
	220	25.4 × 40	0.15	1.10	EKMM401VSN221MQ40S		470	35 × 45	0.20	1.90	EKMM421VSN471MA45S	
	220	30 × 30	0.15	1.10	EKMM401VSN221MR30S		560	35 × 50	0.20	2.15	EKMM421VSN561MA50S	
	220	35 × 25	0.15	1.10	EKMM401VSN221MA25S		680	35 × 60	0.20	2.27	EKMM421VSN681MA60S	
	270	25.4 × 45	0.15	1.22	EKMM401VSN271MQ45S		450	56	22 × 25	0.20	0.40	EKMM451VSN560MP25S
	270	30 × 35	0.15	1.22	EKMM401VSN271MR35S			68	22 × 30	0.20	0.53	EKMM451VSN680MP30S
	270	35 × 30	0.15	1.22	EKMM401VSN271MA30S			68	25.4 × 25	0.20	0.50	EKMM451VSN680MQ25S
	330	25.4 × 50	0.15	1.44	EKMM401VSN331MQ50S			82	22 × 30	0.20	0.64	EKMM451VSN820MP30S
	330	30 × 40	0.15	1.44	EKMM401VSN331MR40S			82	25.4 × 25	0.20	0.64	EKMM451VSN820MQ25S
	330	35 × 30	0.15	1.44	EKMM401VSN331MA30S			100	22 × 35	0.20	0.69	EKMM451VSN101MP35S
	390	25.4 × 60	0.15	1.51	EKMM401VSN391MQ60S			100	25.4 × 30	0.20	0.69	EKMM451VSN101MQ30S
	390	30 × 45	0.15	1.60	EKMM401VSN391MR45S			100	30 × 25	0.20	0.64	EKMM451VSN101MR25S
	390	35 × 35	0.15	1.60	EKMM401VSN391MA35S			120	22 × 40	0.20	0.80	EKMM451VSN121MP40S
470	30 × 50	0.15	1.90	EKMM401VSN471MR50S	120	25.4 × 30		0.20	0.80	EKMM451VSN121MQ30S		
470	35 × 40	0.15	1.90	EKMM401VSN471MA40S	120	30 × 25		0.20	0.80	EKMM451VSN121MR25S		
560	30 × 60	0.15	2.10	EKMM401VSN561MR60S	120	35 × 25		0.20	0.73	EKMM451VSN121MA25S		
560	35 × 45	0.15	2.12	EKMM401VSN561MA45S	150	22 × 45		0.20	0.88	EKMM451VSN151MP45S		
680	35 × 60	0.15	2.27	EKMM401VSN681MA60S	150	25.4 × 35		0.20	0.88	EKMM451VSN151MQ35S		
47	22 × 20	0.20	0.37	EKMM421VSN470MP20S	150	30 × 30		0.20	0.88	EKMM451VSN151MR30S		
56	25.4 × 20	0.20	0.42	EKMM421VSN560MQ20S	150	35 × 25		0.20	0.75	EKMM451VSN151MA25S		
68	22 × 25	0.20	0.50	EKMM421VSN680MP25S	180	22 × 50		0.20	1.00	EKMM451VSN181MP50S		
68	25.4 × 20	0.20	0.46	EKMM421VSN680MQ20S	180	25.4 × 40		0.20	1.00	EKMM451VSN181MQ40S		
82	22 × 25	0.20	0.64	EKMM421VSN820MP25S	180	30 × 30		0.20	1.00	EKMM451VSN181MR30S		
82	25.4 × 25	0.20	0.58	EKMM421VSN820MQ25S	220	25.4 × 45		0.20	1.12	EKMM451VSN221MQ45S		
82	30 × 20	0.20	0.53	EKMM421VSN820MR20S	220	30 × 35		0.20	1.12	EKMM451VSN221MR35S		
100	22 × 30	0.20	0.70	EKMM421VSN101MP30S	220	35 × 30		0.20	1.12	EKMM451VSN221MA30S		
100	25.4 × 25	0.20	0.70	EKMM421VSN101MQ25S	270	25.4 × 60		0.20	1.18	EKMM451VSN271MQ60S		
100	30 × 20	0.20	0.59	EKMM421VSN101MR20S	270	30 × 40		0.20	1.28	EKMM451VSN271MR40S		
120	22 × 35	0.20	0.75	EKMM421VSN121MP35S	270	35 × 35		0.20	1.28	EKMM451VSN271MA35S		
120	25.4 × 30	0.20	0.75	EKMM421VSN121MQ30S	330	30 × 50		0.20	1.45	EKMM451VSN331MR50S		
120	30 × 25	0.20	0.73	EKMM421VSN121MR25S	330	35 × 40		0.20	1.45	EKMM451VSN331MA40S		
120	35 × 20	0.20	0.67	EKMM421VSN121MA20S	390	30 × 60		0.20	1.51	EKMM451VSN391MR60S		
150	22 × 40	0.20	0.88	EKMM421VSN151MP40S	390	35 × 40	0.20	1.55	EKMM451VSN391MA40S			
150	25.4 × 35	0.20	0.88	EKMM421VSN151MQ35S	470	35 × 50	0.20	1.85	EKMM451VSN471MA50S			
150	30 × 25	0.20	0.88	EKMM421VSN151MR25S	560	35 × 60	0.20	1.91	EKMM451VSN561MA60S			
180	22 × 45	0.20	0.95	EKMM421VSN181MP45S								

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
160 to 250V <sub>dc</sub>	0.81	1.00	1.17	1.32	1.45	1.50
315 to 450V <sub>dc</sub>	0.77	1.00	1.16	1.30	1.41	1.43

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.  
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.  
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.  
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

[Available Items by Manufacturing Locations](#)

[Environmental Measures](#)

[Technical Note](#)

[Precautions and Guidelines](#)

[Recommended Soldering Conditions](#)

[Taping, Lead-preforming and Packaging](#)

[Available Terminals for Snap-in and Screw Mount Type](#)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## [United Chemi-Con \(UCC\):](#)

[EKMM201VSN122MR40T](#) [EKMM401LCN221MQ40N](#) [EKMM201VSN561MN50S](#) [EKMM401VSN101MN35S](#)  
[EKMM3B1VSN331MQ40S](#) [EKMM401VSN151MP40S](#) [EKMM401VNN121MQ30T](#) [EKMM401VNN470MP20T](#)  
[EKMM401VNN680MP25T](#) [EKMM401VNN561MA45T](#) [EKMM401VSN561MA45S](#) [EKMM251VSN471MQ35T](#)  
[EKMM451VNN221MA30T](#) [EKMM161VNN182MA35T](#) [EKMM161VNN182MR45T](#) [EKMM181VNN122MQ50T](#)  
[EKMM201VNN152MR50T](#) [EKMM201VNN561MQ35T](#) [EKMM201VNN681MQ35T](#) [EKMM201VSN122MR40S](#)  
[EKMM201VSN152MR50S](#) [EKMM201VSN561MN50T](#) [EKMM251VNN102MR50T](#) [EKMM251VNN122MA45T](#)  
[EKMM251VNN152MA50T](#) [EKMM251VNN331MR25T](#) [EKMM251VNN681MR35T](#) [EKMM251VNN821MA35M](#)  
[EKMM251VSN151MN25T](#) [EKMM251VSN182MA60T](#) [EKMM251VSN331MQ30S](#) [EKMM351VNN561MR50T](#)  
[EKMM351VNN681MR60T](#) [EKMM351VSN221MN50T](#) [EKMM3B1VNN271MP45T](#) [EKMM3B1VNN271MR25T](#)  
[EKMM3B1VNN331MR30T](#) [EKMM3B1VNN821MA45T](#) [EKMM3B1VSN271MP45T](#) [EKMM401VNN151MA20T](#)  
[EKMM401VNN151MQ30T](#) [EKMM401VNN181MQ35T](#) [EKMM401VNN181MR30T](#) [EKMM401VNN221MA25T](#)  
[EKMM401VNN221MQ40T](#) [EKMM401VNN221MR30T](#) [EKMM401VNN271MA30T](#) [EKMM401VNN271MQ45T](#)  
[EKMM401VNN271MR35T](#) [EKMM401VNN471MR45T](#) [EKMM401VSN391MR45S](#) [EKMM401VSN471MR50S](#)  
[EKMM421VNN121MA20T](#) [EKMM421VNN221MA25T](#) [EKMM421VNN471MR60T](#) [EKMM451VNN151MP45T](#)  
[EKMM451VNN221MQ45T](#) [EKMM451VNN271MA35T](#) [EKMM451VNN271MQ60T](#) [EKMM451VNN331MA40T](#)  
[EKMM451VNN471MA50T](#) [EKMM451VNN820MP30T](#) [EKMM451VSN271MA35T](#) [EKMM451VSN271MQ60T](#)  
[EKMM451VSN331MA40S](#) [EKMM201VNN122MR45W](#) [EKMM160VSN393MA40T](#) [EKMM251VNN102MA40T](#)  
[EKMM401VNN101MQ25T](#) [EKMM401VNN331MR40T](#) [EKMM201VSN681MR30S](#) [EKMM251VSN681MA30S](#)  
[EKMM161VSN182MA35S](#) [EKMM201VNN331MP30T](#) [EKMM201VNN391MP30T](#) [EKMM201VNN561MP40S](#)  
[EKMM201VND302MA65T](#) [EKMM161VSN102MQ40T](#) [EKMM101VSN392MR50S](#) [EKMM201VNN122MR45S](#)  
[EKMM160VND124MB80T](#) [EKMM251VNN181MP25S](#) [EKMM161VNN102MR30T](#) [EKMM161VSN681MP40S](#)  
[EKMM161VNN332MA60T](#) [EKMM161VSN102MR30T](#) [EKMM3B1VNN821MA50T](#) [EKMM101VSN222MQ45T](#)  
[EKMM251VSN561MA25S](#) [EKMM3B1VSN391MA30T](#) [EKMM3B1VSN681MA40T](#) [EKMM3B1VSS391MA30T](#)  
[EKMM201VNN182MA45S](#) [EKMM201VNN122MQ60S](#) [EKMM161VSN222MA45T](#) [EKMM161VSN681MQ30S](#)  
[EKMM181VSN122MQ50T](#) [EKMM181VSN152MR45T](#) [EKMM181VSN391MP30S](#) [EKMM181VSN821MR30S](#)