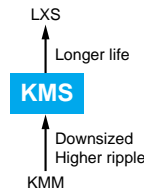


# KMS Series

- For solar power generation
- Endurance with ripple current : 105°C 3,000 hours
- Rated voltage range : 160 to 500V
- Capacitance range : 47 to 3,300μF
- Non solvent resistant type
- RoHS Compliant



**500V Lineup!**

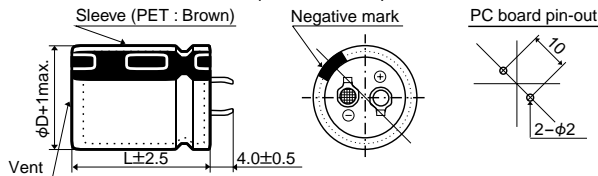


## ◆ SPECIFICATIONS

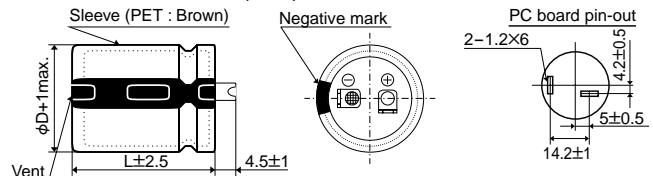
Items	Characteristics	
Category	-25 to +105°C	
Temperature Range		
Rated Voltage Range	160 to 500V <sub>dc</sub>	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I ≤ 3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)	
Dissipation Factor (tanδ)	Rated voltage (V <sub>dc</sub> )	160 to 400V 420 to 500V
	tanδ (Max.)	0.15 0.20 (at 20°C, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	160 to 400V 420 to 500V
	Z(-25°C)/Z(+20°C)	4 8 (at 120Hz)
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 for 3,000 hours at 105°C.	
	Capacitance change	≤ ±20% of the initial value
	D.F. (tanδ)	≤ 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. (tanδ)	≤ 150% of the initial specified value
	Leakage current	≤ The initial specified value

## ◆ DIMENSIONS [mm]

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

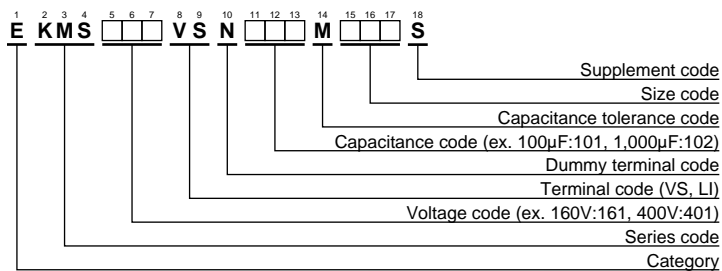


- Terminal Code : LI (φ35)



The standard design has no plastic disc.

## ◆ PART NUMBERING SYSTEM



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



◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (Arms/105°C,120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (Arms/105°C,120Hz)	Part No.
160	470	22 × 25	0.15	1.47	EKMS161VSN471MP25S	200	1,800	30 × 45	0.15	3.66	EKMS201VSN182MR45S
	680	22 × 30	0.15	1.86	EKMS161VSN681MP30S		1,800	30 × 50	0.15	3.72	EKMS201VSN182MR50S
	680	25.4 × 25	0.15	1.84	EKMS161VSN681MQ25S		1,800	35 × 40	0.15	3.81	EKMS201VSN182MA40S
	820	22 × 35	0.15	2.09	EKMS161VSN821MP35S		2,200	35 × 45	0.15	4.32	EKMS201VSN222MA45S
	820	25.4 × 30	0.15	2.08	EKMS161VSN821MQ30S		2,700	35 × 50	0.15	4.88	EKMS201VSN272MA50S
	1,000	22 × 40	0.15	2.35	EKMS161VSN102MP40S		270	22 × 25	0.15	1.11	EKMS251VSN271MP25S
	1,000	22 × 45	0.15	2.40	EKMS161VSN102MP45S		330	22 × 30	0.15	1.29	EKMS251VSN331MP30S
	1,000	25.4 × 35	0.15	2.40	EKMS161VSN102MQ35S		390	22 × 35	0.15	1.44	EKMS251VSN391MP35S
	1,000	30 × 25	0.15	2.50	EKMS161VSN102MR25S		390	25.4 × 25	0.15	1.40	EKMS251VSN391MQ25S
	1,200	22 × 50	0.15	2.69	EKMS161VSN122MP50S		470	22 × 40	0.15	1.61	EKMS251VSN471MP40S
	1,200	25.4 × 40	0.15	2.68	EKMS161VSN122MQ40S		470	25.4 × 30	0.15	1.57	EKMS251VSN471MQ30S
	1,200	30 × 30	0.15	2.77	EKMS161VSN122MR30S		560	22 × 45	0.15	1.79	EKMS251VSN561MP45S
	1,200	35 × 25	0.15	2.91	EKMS161VSN122MA25S		560	25.4 × 35	0.15	1.79	EKMS251VSN561MQ35S
	1,500	25.4 × 45	0.15	3.05	EKMS161VSN152MQ45S		560	30 × 25	0.15	1.87	EKMS251VSN561MR25S
	1,500	30 × 35	0.15	3.17	EKMS161VSN152MR35S		680	22 × 50	0.15	2.02	EKMS251VSN681MP50S
	1,800	25.4 × 50	0.15	3.40	EKMS161VSN182MQ50S		680	25.4 × 40	0.15	2.02	EKMS251VSN681MQ40S
	1,800	30 × 40	0.15	3.57	EKMS161VSN182MR40S		680	30 × 30	0.15	2.08	EKMS251VSN681MR30S
	1,800	35 × 30	0.15	3.62	EKMS161VSN182MA30S		680	35 × 25	0.15	2.19	EKMS251VSN681MA25S
	2,200	30 × 45	0.15	4.05	EKMS161VSN222MR45S		820	25.4 × 45	0.15	2.26	EKMS251VSN821MQ45S
	2,200	35 × 35	0.15	4.07	EKMS161VSN222MA35S		820	30 × 35	0.15	2.34	EKMS251VSN821MR35S
2,700	30 × 50	0.15	4.56	EKMS161VSN272MR50S	1,000	25.4 × 50	0.15	2.53	EKMS251VSN102MQ50S		
2,700	35 × 40	0.15	4.67	EKMS161VSN272MA40S	1,000	30 × 40	0.15	2.66	EKMS251VSN102MR40S		
2,700	35 × 45	0.15	4.78	EKMS161VSN272MA45S	1,000	35 × 30	0.15	2.70	EKMS251VSN102MA30S		
3,300	35 × 50	0.15	5.40	EKMS161VSN332MA50S	1,200	30 × 45	0.15	2.99	EKMS251VSN122MR45S		
180	390	22 × 25	0.15	1.34	EKMS181VSN391MP25S	1,200	30 × 50	0.15	3.04	EKMS251VSN122MR50S	
	560	22 × 30	0.15	1.68	EKMS181VSN561MP30S	1,200	35 × 35	0.15	3.00	EKMS251VSN122MA35S	
	560	25.4 × 25	0.15	1.67	EKMS181VSN561MQ25S	1,500	35 × 40	0.15	3.48	EKMS251VSN152MA40S	
	680	22 × 35	0.15	1.90	EKMS181VSN681MP35S	1,500	35 × 45	0.15	3.56	EKMS251VSN152MA45S	
	820	22 × 40	0.15	2.13	EKMS181VSN821MP40S	1,800	35 × 50	0.15	3.98	EKMS251VSN182MA50S	
	820	25.4 × 30	0.15	2.08	EKMS181VSN821MQ30S	180	22 × 25	0.15	0.95	EKMS3B1VSN181MP25S	
	820	30 × 25	0.15	2.26	EKMS181VSN821MR25S	220	22 × 30	0.15	1.10	EKMS3B1VSN221MP30S	
	1,000	22 × 45	0.15	2.40	EKMS181VSN102MP45S	220	25.4 × 25	0.15	1.10	EKMS3B1VSN221MQ25S	
	1,000	22 × 50	0.15	2.45	EKMS181VSN102MP50S	270	22 × 35	0.15	1.24	EKMS3B1VSN271MP35S	
	1,000	25.4 × 35	0.15	2.40	EKMS181VSN102MQ35S	330	22 × 40	0.15	1.40	EKMS3B1VSN331MP40S	
	1,000	25.4 × 40	0.15	2.45	EKMS181VSN102MQ40S	330	25.4 × 30	0.15	1.38	EKMS3B1VSN331MQ30S	
	1,000	30 × 30	0.15	2.52	EKMS181VSN102MR30S	330	30 × 25	0.15	1.43	EKMS3B1VSN331MR25S	
	1,200	25.4 × 45	0.15	2.73	EKMS181VSN122MQ45S	390	22 × 45	0.15	1.56	EKMS3B1VSN391MP45S	
	1,200	30 × 35	0.15	2.83	EKMS181VSN122MR35S	390	22 × 50	0.15	1.59	EKMS3B1VSN391MP50S	
	1,200	35 × 25	0.15	2.91	EKMS181VSN122MA25S	390	25.4 × 35	0.15	1.57	EKMS3B1VSN391MQ35S	
	1,500	25.4 × 50	0.15	3.10	EKMS181VSN152MQ50S	470	25.4 × 40	0.15	1.76	EKMS3B1VSN471MQ40S	
	1,500	30 × 40	0.15	3.26	EKMS181VSN152MR40S	470	30 × 30	0.15	1.73	EKMS3B1VSN471MR30S	
	1,500	35 × 30	0.15	3.31	EKMS181VSN152MA30S	470	35 × 25	0.15	1.82	EKMS3B1VSN471MA25S	
	1,800	30 × 45	0.15	3.66	EKMS181VSN182MR45S	560	25.4 × 45	0.15	1.96	EKMS3B1VSN561MQ45S	
	1,800	35 × 35	0.15	3.68	EKMS181VSN182MA35S	560	25.4 × 50	0.15	1.99	EKMS3B1VSN561MQ50S	
2,200	30 × 50	0.15	4.11	EKMS181VSN222MR50S	560	30 × 35	0.15	1.93	EKMS3B1VSN561MR35S		
2,200	35 × 40	0.15	4.22	EKMS181VSN222MA40S	560	35 × 30	0.15	2.02	EKMS3B1VSN561MA30S		
2,700	35 × 45	0.15	4.78	EKMS181VSN272MA45S	680	30 × 40	0.15	2.19	EKMS3B1VSN681MR40S		
2,700	35 × 50	0.15	4.88	EKMS181VSN272MA50S	680	35 × 35	0.15	2.26	EKMS3B1VSN681MA35S		
200	390	22 × 25	0.15	1.34	EKMS201VSN391MP25S	820	30 × 45	0.15	2.47	EKMS3B1VSN821MR45S	
	470	22 × 30	0.15	1.54	EKMS201VSN471MP30S	820	30 × 50	0.15	2.51	EKMS3B1VSN821MR50S	
	560	22 × 35	0.15	1.72	EKMS201VSN561MP35S	820	35 × 40	0.15	2.57	EKMS3B1VSN821MA40S	
	560	25.4 × 25	0.15	1.67	EKMS201VSN561MQ25S	1,000	35 × 45	0.15	2.91	EKMS3B1VSN102MA45S	
	680	22 × 40	0.15	1.94	EKMS201VSN681MP40S	1,200	35 × 50	0.15	3.25	EKMS3B1VSN122MA50S	
	680	25.4 × 30	0.15	1.89	EKMS201VSN681MQ30S	120	22 × 25	0.15	0.77	EKMS401VSN121MP25S	
	820	22 × 45	0.15	2.17	EKMS201VSN821MP45S	150	22 × 30	0.15	0.90	EKMS401VSN151MP30S	
	820	25.4 × 35	0.15	2.17	EKMS201VSN821MQ35S	180	22 × 35	0.15	1.02	EKMS401VSN181MP35S	
	820	30 × 25	0.15	2.26	EKMS201VSN821MR25S	180	25.4 × 25	0.15	0.99	EKMS401VSN181MQ25S	
	1,000	22 × 50	0.15	2.45	EKMS201VSN102MP50S	220	22 × 40	0.15	1.15	EKMS401VSN221MP40S	
	1,000	25.4 × 40	0.15	2.45	EKMS201VSN102MQ40S	220	25.4 × 30	0.15	1.13	EKMS401VSN221MQ30S	
	1,000	30 × 30	0.15	2.52	EKMS201VSN102MR30S	270	22 × 45	0.15	1.29	EKMS401VSN271MP45S	
	1,000	35 × 25	0.15	2.66	EKMS201VSN102MA25S	270	25.4 × 35	0.15	1.30	EKMS401VSN271MQ35S	
	1,200	25.4 × 45	0.15	2.73	EKMS201VSN122MQ45S	270	30 × 25	0.15	1.29	EKMS401VSN271MR25S	
	1,200	25.4 × 50	0.15	2.78	EKMS201VSN122MQ50S	330	22 × 50	0.15	1.47	EKMS401VSN331MP50S	
	1,200	30 × 35	0.15	2.83	EKMS201VSN122MR35S	330	25.4 × 40	0.15	1.47	EKMS401VSN331MQ40S	
	1,200	35 × 30	0.15	2.96	EKMS201VSN122MA30S	330	30 × 30	0.15	1.45	EKMS401VSN331MR30S	
	1,500	30 × 40	0.15	3.26	EKMS201VSN152MR40S	330	35 × 25	0.15	1.52	EKMS401VSN331MA25S	
	1,500	35 × 35	0.15	3.36	EKMS201VSN152MA35S	390	25.4 × 45	0.15	1.63	EKMS401VSN391MQ45S	

### ◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (Arms/105°C,120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tanδ	Rated ripple current (Arms/105°C,120Hz)	Part No.
400	390	25.4 × 50	0.15	1.66	EKMS401VSN391MQ50S	450	180	25.4 × 35	0.20	1.06	EKMS451VSN181MQ35S
	390	30 × 35	0.15	1.61	EKMS401VSN391MR35S		180	30 × 25	0.20	1.06	EKMS451VSN181MR25S
	470	30 × 40	0.15	1.82	EKMS401VSN471MR40S		220	22 × 50	0.20	1.20	EKMS451VSN221MP50S
	470	35 × 30	0.15	1.85	EKMS401VSN471MA30S		220	25.4 × 40	0.20	1.20	EKMS451VSN221MQ40S
	560	30 × 45	0.15	2.04	EKMS401VSN561MR45S		220	30 × 30	0.20	1.18	EKMS451VSN221MR30S
	560	30 × 50	0.15	2.07	EKMS401VSN561MR50S		220	35 × 25	0.20	1.24	EKMS451VSN221MA25S
	560	35 × 35	0.15	2.05	EKMS401VSN561MA35S		270	25.4 × 45	0.20	1.36	EKMS451VSN331MQ45S
	680	35 × 40	0.15	2.34	EKMS401VSN681MA40S		270	25.4 × 50	0.20	1.38	EKMS451VSN271MQ50S
	680	35 × 45	0.15	2.40	EKMS401VSN681MA45S		270	30 × 35	0.20	1.34	EKMS451VSN271MR35S
420	820	35 × 50	0.15	2.69	EKMS401VSN821MA50S	270	35 × 30	0.20	1.40	EKMS451VSN271MA30S	
	100	22 × 25	0.20	0.70	EKMS421VSN101MP25S	330	30 × 40	0.20	1.52	EKMS451VSN331MQ40S	
	120	22 × 30	0.20	0.81	EKMS421VSN121MP30S	390	30 × 45	0.20	1.70	EKMS451VSN391MR45S	
	120	25.4 × 25	0.20	0.81	EKMS421VSN121MQ25S	390	30 × 50	0.20	1.73	EKMS451VSN391MR50S	
	150	22 × 35	0.20	0.93	EKMS421VSN151MP35S	390	35 × 35	0.20	1.71	EKMS451VSN391MA35S	
	180	22 × 40	0.20	1.04	EKMS421VSN181MP40S	470	35 × 40	0.20	1.95	EKMS451VSN471MA40S	
	180	25.4 × 30	0.20	1.02	EKMS421VSN181MQ30S	470	35 × 45	0.20	1.99	EKMS451VSN471MA45S	
	180	30 × 25	0.20	1.06	EKMS421VSN181MR25S	560	35 × 50	0.20	2.22	EKMS451VSN561MA50S	
	220	22 × 45	0.20	1.17	EKMS421VSN221MP45S	47	22×25	0.20	0.51	EKMS501VSN470MP25S	
	220	22 × 50	0.20	1.20	EKMS421VSN221MP50S	56	22×30	0.20	0.58	EKMS501VSN560MP30S	
	220	25.4 × 35	0.20	1.18	EKMS421VSN221MQ35S	68	25.4×25	0.20	0.65	EKMS501VSN680MQ25S	
	220	30 × 30	0.20	1.18	EKMS421VSN221MR30S	82	22×35	0.20	0.72	EKMS501VSN820MP35S	
	270	25.4 × 40	0.20	1.33	EKMS421VSN271MQ40S	82	25.4×30	0.20	0.74	EKMS501VSN820MQ30S	
	270	25.4 × 45	0.20	1.36	EKMS421VSN271MQ45S	100	22×45	0.20	0.83	EKMS501VSN101MP45S	
	270	35 × 25	0.20	1.38	EKMS421VSN271MA25S	100	30×25	0.20	0.82	EKMS501VSN101MR25S	
	330	25.4 × 50	0.20	1.52	EKMS421VSN331MQ50S	120	22×50	0.20	0.93	EKMS501VSN121MP50S	
	330	30 × 35	0.20	1.48	EKMS421VSN331MR35S	120	25.4×35	0.20	0.93	EKMS501VSN121MQ35S	
	330	30 × 40	0.20	1.52	EKMS421VSN331MR40S	120	30×30	0.20	0.91	EKMS501VSN121MR30S	
	330	35 × 30	0.20	1.55	EKMS421VSN331MA30S	150	25.4×45	0.20	1.08	EKMS501VSN151MQ45S	
	390	30 × 45	0.20	1.70	EKMS421VSN391MR45S	150	30×35	0.20	1.04	EKMS501VSN151MR35S	
	390	35 × 35	0.20	1.71	EKMS421VSN391MA35S	150	35×25	0.20	0.99	EKMS501VSN151MA25S	
470	30 × 50	0.20	1.90	EKMS421VSN471MR50S	180	25.4×50	0.20	1.20	EKMS501VSN181MQ50S		
470	35 × 40	0.20	1.95	EKMS421VSN471MA40S	180	30×40	0.20	1.17	EKMS501VSN181MR40S		
560	35 × 45	0.20	2.17	EKMS421VSN561MA45S	180	35×30	0.20	1.10	EKMS501VSN181MA30S		
680	35 × 50	0.20	2.45	EKMS421VSN681MA50S	220	30×45	0.20	1.33	EKMS501VSN221MR45S		
450	82	22 × 25	0.20	0.64	EKMS451VSN820MP25S	220	35×35	0.20	1.23	EKMS501VSN221MA35S	
	120	22 × 30	0.20	0.81	EKMS451VSN121MP30S	270	30×50	0.20	1.50	EKMS501VSN271MR50S	
	120	22 × 35	0.20	0.83	EKMS451VSN121MP35S	270	35×40	0.20	1.42	EKMS501VSN271MA40S	
	120	25.4 × 25	0.20	0.81	EKMS451VSN121MQ25S	330	35×45	0.20	1.60	EKMS501VSN331MA45S	
	150	22 × 40	0.20	0.94	EKMS451VSN151MP40S	390	35×50	0.20	1.78	EKMS501VSN391MA50S	
	150	25.4 × 30	0.20	0.93	EKMS451VSN151MQ30S	470	35×60	0.20	2.03	EKMS501VSN471MA60S	
	180	22 × 45	0.20	1.06	EKMS451VSN181MP45S						

### ◆RATED RIPPLE CURRENT MULTIPLIERS

#### ●Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
160 to 250Vdc	0.81	1.00	1.17	1.32	1.45	1.50
315 to 450Vdc	0.77	1.00	1.16	1.30	1.41	1.43
500Vdc	0.70	1.00	1.16	1.30	1.41	1.43

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.