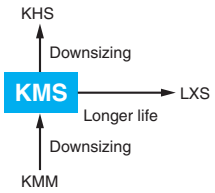
KMS Series Upgrade!

- The lower temperature range of the category temperature range has been expanded.
- For solar power generation
- Endurance with ripple current : 105℃ 3,000 hours
- Rated voltage range : 160 to 600V
- Capacitance range : 47 to 3,300μF
- Non solvent resistant type
- RoHS2 Compliant

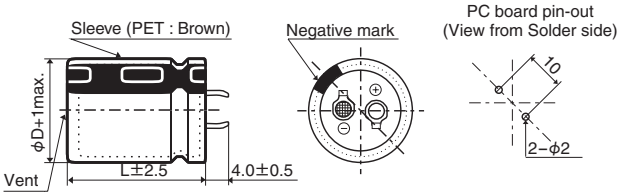


◆SPECIFICATIONS

Items	Characteristics			
Category Temperature Range	-40 to +105℃(160 to 500Vdc) -25 to +105℃(550 to 600Vdc)			
Rated Voltage Range	160 to 600Vdc			
Capacitance Tolerance	±20% (M)			(at 20℃, 120Hz)
Leakage Current	I≦3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)			(at 20℃ after 5 minutes)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	160 to 400V	420 to 600V	
	tan δ (Max.)	0.15	0.20	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	160 to 400V	420 to 600V	
	Z(-25℃)/Z(+20℃)	4	8	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ 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℃.			
	Capacitance change	≦±20% of the initial value		
	D.F. (tan δ)	≦200% of the initial specified value(600Vdc : ≦300%)		
	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 105℃ 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		

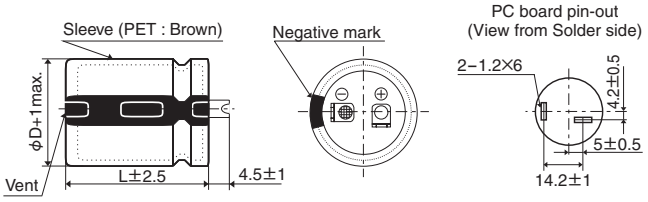
◆DIMENSIONS [mm]

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

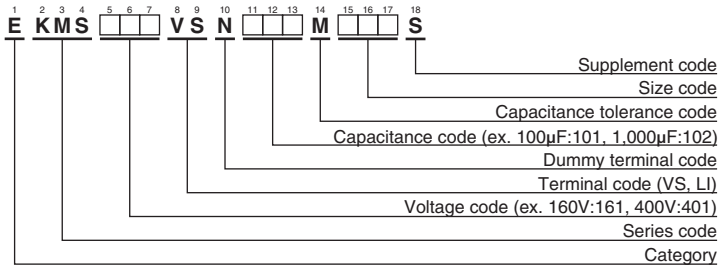


The standard design has no plastic disc.

●Terminal Code : LI (φ35)



◆PART NUMBERING SYSTEM



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

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KMS Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
160	470	22 × 25	0.15	1.47	EKMS161VSN471MP25S
	680	22 × 30	0.15	1.86	EKMS161VSN681MP30S
	680	25.4 × 25	0.15	1.84	EKMS161VSN681MQ25S
	820	22 × 35	0.15	2.09	EKMS161VSN821MP35S
	820	25.4 × 30	0.15	2.08	EKMS161VSN821MQ30S
	1,000	22 × 40	0.15	2.35	EKMS161VSN102MP40S
	1,000	22 × 45	0.15	2.40	EKMS161VSN102MP45S
	1,000	25.4 × 35	0.15	2.40	EKMS161VSN102MQ35S
	1,000	30 × 25	0.15	2.50	EKMS161VSN102MR25S
	1,200	22 × 50	0.15	2.69	EKMS161VSN122MP50S
	1,200	25.4 × 40	0.15	2.68	EKMS161VSN122MQ40S
	1,200	30 × 30	0.15	2.77	EKMS161VSN122MR30S
	1,200	35 × 25	0.15	2.91	EKMS161VSN122MA25S
	1,500	25.4 × 45	0.15	3.05	EKMS161VSN152MQ45S
	1,500	30 × 35	0.15	3.17	EKMS161VSN152MR35S
	1,800	25.4 × 50	0.15	3.40	EKMS161VSN182MQ50S
	1,800	30 × 40	0.15	3.57	EKMS161VSN182MR40S
	1,800	35 × 30	0.15	3.62	EKMS161VSN182MA30S
	2,200	30 × 45	0.15	4.05	EKMS161VSN222MR45S
	2,200	35 × 35	0.15	4.07	EKMS161VSN222MA35S
	2,700	30 × 50	0.15	4.56	EKMS161VSN272MR50S
	2,700	35 × 40	0.15	4.67	EKMS161VSN272MA40S
	2,700	35 × 45	0.15	4.78	EKMS161VSN272MA45S
	3,300	35 × 50	0.15	5.40	EKMS161VSN332MA50S
180	390	22 × 25	0.15	1.34	EKMS181VSN391MP25S
	560	22 × 30	0.15	1.68	EKMS181VSN561MP30S
	560	25.4 × 25	0.15	1.67	EKMS181VSN561MQ25S
	680	22 × 35	0.15	1.90	EKMS181VSN681MP35S
	820	22 × 40	0.15	2.13	EKMS181VSN821MP40S
	820	25.4 × 30	0.15	2.08	EKMS181VSN821MQ30S
	820	30 × 25	0.15	2.26	EKMS181VSN821MR25S
	1,000	22 × 45	0.15	2.40	EKMS181VSN102MP45S
	1,000	22 × 50	0.15	2.45	EKMS181VSN102MP50S
	1,000	25.4 × 35	0.15	2.40	EKMS181VSN102MQ35S
	1,000	25.4 × 40	0.15	2.45	EKMS181VSN102MQ40S
	1,000	30 × 30	0.15	2.52	EKMS181VSN102MR30S
	1,200	25.4 × 45	0.15	2.73	EKMS181VSN122MQ45S
	1,200	30 × 35	0.15	2.83	EKMS181VSN122MR35S
	1,200	35 × 25	0.15	2.91	EKMS181VSN122MA25S
	1,500	25.4 × 50	0.15	3.10	EKMS181VSN152MQ50S
	1,500	30 × 40	0.15	3.26	EKMS181VSN152MR40S
	1,500	35 × 30	0.15	3.31	EKMS181VSN152MA30S
	1,800	30 × 45	0.15	3.66	EKMS181VSN182MR45S
	1,800	35 × 35	0.15	3.68	EKMS181VSN182MA35S
	2,200	30 × 50	0.15	4.11	EKMS181VSN222MR50S
	2,200	35 × 40	0.15	4.22	EKMS181VSN222MA40S
	2,700	35 × 45	0.15	4.78	EKMS181VSN272MA45S
	2,700	35 × 50	0.15	4.88	EKMS181VSN272MA50S
200	390	22 × 25	0.15	1.34	EKMS201VSN391MP25S
	470	22 × 30	0.15	1.54	EKMS201VSN471MP30S
	560	22 × 35	0.15	1.72	EKMS201VSN561MP35S
	560	25.4 × 25	0.15	1.67	EKMS201VSN561MQ25S
	680	22 × 40	0.15	1.94	EKMS201VSN681MP40S
	680	25.4 × 30	0.15	1.89	EKMS201VSN681MQ30S
	820	22 × 45	0.15	2.17	EKMS201VSN821MP45S
	820	25.4 × 35	0.15	2.17	EKMS201VSN821MQ35S
	820	30 × 25	0.15	2.26	EKMS201VSN821MR25S
	1,000	22 × 50	0.15	2.45	EKMS201VSN102MP50S
	1,000	25.4 × 40	0.15	2.45	EKMS201VSN102MQ40S
	1,000	30 × 30	0.15	2.52	EKMS201VSN102MR30S
	1,000	35 × 25	0.15	2.66	EKMS201VSN102MA25S
	1,200	25.4 × 45	0.15	2.73	EKMS201VSN122MQ45S
	1,200	25.4 × 50	0.15	2.78	EKMS201VSN122MQ50S
	1,200	30 × 35	0.15	2.83	EKMS201VSN122MR35S
	1,200	35 × 30	0.15	2.96	EKMS201VSN122MA30S
	1,500	30 × 40	0.15	3.26	EKMS201VSN152MR40S
	1,500	35 × 35	0.15	3.36	EKMS201VSN152MA35S
200	1,800	30 × 45	0.15	3.66	EKMS201VSN182MR45S
	1,800	30 × 50	0.15	3.72	EKMS201VSN182MR50S
	1,800	35 × 40	0.15	3.81	EKMS201VSN182MA40S
	2,200	35 × 45	0.15	4.32	EKMS201VSN222MA45S
	2,700	35 × 50	0.15	4.88	EKMS201VSN272MA50S
250	270	22 × 25	0.15	1.11	EKMS251VSN271MP25S
	330	22 × 30	0.15	1.29	EKMS251VSN331MP30S
	390	22 × 35	0.15	1.44	EKMS251VSN391MP35S
	390	25.4 × 25	0.15	1.40	EKMS251VSN391MQ25S
	470	22 × 40	0.15	1.61	EKMS251VSN471MP40S
	470	25.4 × 30	0.15	1.57	EKMS251VSN471MQ30S
	560	22 × 45	0.15	1.79	EKMS251VSN561MP45S
	560	25.4 × 35	0.15	1.79	EKMS251VSN561MQ35S
	560	30 × 25	0.15	1.87	EKMS251VSN561MR25S
	680	22 × 50	0.15	2.02	EKMS251VSN681MP50S
	680	25.4 × 40	0.15	2.02	EKMS251VSN681MQ40S
	680	30 × 30	0.15	2.08	EKMS251VSN681MR30S
	680	35 × 25	0.15	2.19	EKMS251VSN681MA25S
	820	25.4 × 45	0.15	2.26	EKMS251VSN821MQ45S
	820	30 × 35	0.15	2.34	EKMS251VSN821MR35S
	1,000	25.4 × 50	0.15	2.53	EKMS251VSN102MQ50S
	1,000	30 × 40	0.15	2.66	EKMS251VSN102MR40S
	1,000	35 × 30	0.15	2.70	EKMS251VSN102MA30S
	1,200	30 × 45	0.15	2.99	EKMS251VSN122MR45S
	1,200	30 × 50	0.15	3.04	EKMS251VSN122MR50S
	1,200	35 × 35	0.15	3.00	EKMS251VSN122MA35S
	1,500	35 × 40	0.15	3.48	EKMS251VSN152MA40S
	1,500	35 × 45	0.15	3.56	EKMS251VSN152MA45S
	1,800	35 × 50	0.15	3.98	EKMS251VSN182MA50S
315	180	22 × 25	0.15	0.95	EKMS3B1VSN181MP25S
	220	22 × 30	0.15	1.10	EKMS3B1VSN221MP30S
	220	25.4 × 25	0.15	1.10	EKMS3B1VSN221MQ25S
	270	22 × 35	0.15	1.24	EKMS3B1VSN271MP35S
	330	22 × 40	0.15	1.40	EKMS3B1VSN331MP40S
	330	25.4 × 30	0.15	1.38	EKMS3B1VSN331MQ30S
	330	30 × 25	0.15	1.43	EKMS3B1VSN331MR25S
	390	22 × 45	0.15	1.56	EKMS3B1VSN391MP45S
	390	22 × 50	0.15	1.59	EKMS3B1VSN391MP50S
	390	25.4 × 35	0.15	1.57	EKMS3B1VSN391MQ35S
	470	25.4 × 40	0.15	1.76	EKMS3B1VSN471MQ40S
	470	30 × 30	0.15	1.73	EKMS3B1VSN471MR30S
	470	35 × 25	0.15	1.82	EKMS3B1VSN471MA25S
	560	25.4 × 45	0.15	1.96	EKMS3B1VSN561MQ45S
	560	25.4 × 50	0.15	1.99	EKMS3B1VSN561MQ50S
	560	30 × 35	0.15	1.93	EKMS3B1VSN561MR35S
	560	35 × 30	0.15	2.02	EKMS3B1VSN561MA30S
	680	30 × 40	0.15	2.19	EKMS3B1VSN681MR40S
	680	35 × 35	0.15	2.26	EKMS3B1VSN681MA35S
	820	30 × 45	0.15	2.47	EKMS3B1VSN821MR45S
	820	30 × 50	0.15	2.51	EKMS3B1VSN821MR50S
	820	35 × 40	0.15	2.57	EKMS3B1VSN821MA40S
	1,000	35 × 45	0.15	2.91	EKMS3B1VSN102MA45S
	1,200	35 × 50	0.15	3.25	EKMS3B1VSN122MA50S
400	120	22 × 25	0.15	0.77	EKMS401VSN121MP25S
	150	22 × 30	0.15	0.90	EKMS401VSN151MP30S
	180	22 × 35	0.15	1.02	EKMS401VSN181MP35S
	180	25.4 × 25	0.15	0.99	EKMS401VSN181MQ25S
	220	22 × 40	0.15	1.15	EKMS401VSN221MP40S
	220	25.4 × 30	0.15	1.13	EKMS401VSN221MQ30S
	270	22 × 45	0.15	1.29	EKMS401VSN271MP45S
	270	25.4 × 35	0.15	1.30	EKMS401VSN271MQ35S
	270	30 × 25	0.15	1.29	EKMS401VSN271MR25S
	330	22 × 50	0.15	1.47	EKMS401VSN331MP50S
	330	25.4 × 40	0.15	1.47	EKMS401VSN331MQ40S
	330	30 × 30	0.15	1.45	EKMS401VSN331MR30S
	330	35 × 25	0.15	1.52	EKMS401VSN331MA25S
	390	25.4 × 45	0.15	1.63	EKMS401VSN391MQ45S

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KMS Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
400	390	25.4 × 50	0.15	1.66	EKMS401VSN391MQ50S
	390	30 × 35	0.15	1.61	EKMS401VSN391MR35S
	470	30 × 40	0.15	1.82	EKMS401VSN471MR40S
	470	35 × 30	0.15	1.85	EKMS401VSN471MA30S
	560	30 × 45	0.15	2.04	EKMS401VSN561MR45S
	560	30 × 50	0.15	2.07	EKMS401VSN561MR50S
	560	35 × 35	0.15	2.05	EKMS401VSN561MA35S
	680	35 × 40	0.15	2.34	EKMS401VSN681MA40S
	680	35 × 45	0.15	2.40	EKMS401VSN681MA45S
	820	35 × 50	0.15	2.69	EKMS401VSN821MA50S
420	100	22 × 25	0.20	0.70	EKMS421VSN101MP25S
	120	22 × 30	0.20	0.81	EKMS421VSN121MP30S
	120	25.4 × 25	0.20	0.81	EKMS421VSN121MQ25S
	150	22 × 35	0.20	0.93	EKMS421VSN151MP35S
	180	22 × 40	0.20	1.04	EKMS421VSN181MP40S
	180	25.4 × 30	0.20	1.02	EKMS421VSN181MQ30S
	180	30 × 25	0.20	1.06	EKMS421VSN181MR25S
	220	22 × 45	0.20	1.17	EKMS421VSN221MP45S
	220	22 × 50	0.20	1.20	EKMS421VSN221MP50S
	220	25.4 × 35	0.20	1.18	EKMS421VSN221MQ35S
	220	30 × 30	0.20	1.18	EKMS421VSN221MR30S
	270	25.4 × 40	0.20	1.33	EKMS421VSN271MQ40S
	270	25.4 × 45	0.20	1.36	EKMS421VSN271MQ45S
	270	35 × 25	0.20	1.38	EKMS421VSN271MA25S
	330	25.4 × 50	0.20	1.52	EKMS421VSN331MQ50S
	330	30 × 35	0.20	1.48	EKMS421VSN331MR35S
	330	30 × 40	0.20	1.52	EKMS421VSN331MR40S
	330	35 × 30	0.20	1.55	EKMS421VSN331MA30S
	390	30 × 45	0.20	1.70	EKMS421VSN391MR45S
	390	35 × 35	0.20	1.71	EKMS421VSN391MA35S
	470	30 × 50	0.20	1.90	EKMS421VSN471MR50S
	470	35 × 40	0.20	1.95	EKMS421VSN471MA40S
	560	35 × 45	0.20	2.17	EKMS421VSN561MA45S
	680	35 × 50	0.20	2.45	EKMS421VSN681MA50S
450	82	22 × 25	0.20	0.64	EKMS451VSN820MP25S
	120	22 × 30	0.20	0.81	EKMS451VSN121MP30S
	120	22 × 35	0.20	0.83	EKMS451VSN121MP35S
	120	25.4 × 25	0.20	0.81	EKMS451VSN121MQ25S
	150	22 × 40	0.20	0.94	EKMS451VSN151MP40S
	150	25.4 × 30	0.20	0.93	EKMS451VSN151MQ30S
	180	22 × 45	0.20	1.06	EKMS451VSN181MP45S
	180	25.4 × 35	0.20	1.06	EKMS451VSN181MQ35S
	180	30 × 25	0.20	1.06	EKMS451VSN181MR25S
	220	22 × 50	0.20	1.20	EKMS451VSN221MP50S
	220	25.4 × 40	0.20	1.20	EKMS451VSN221MQ40S
	220	30 × 30	0.20	1.18	EKMS451VSN221MR30S
	220	35 × 25	0.20	1.24	EKMS451VSN221MA25S
	270	25.4 × 45	0.20	1.36	EKMS451VSN271MQ45S
	270	25.4 × 50	0.20	1.38	EKMS451VSN271MQ50S
	270	30 × 35	0.20	1.34	EKMS451VSN271MR35S
	270	35 × 30	0.20	1.40	EKMS451VSN271MA30S
	330	30 × 40	0.20	1.52	EKMS451VSN331MR40S
	390	30 × 45	0.20	1.70	EKMS451VSN391MR45S
	390	30 × 50	0.20	1.73	EKMS451VSN391MR50S
	390	35 × 35	0.20	1.71	EKMS451VSN391MA35S
	470	35 × 40	0.20	1.95	EKMS451VSN471MA40S
	470	35 × 45	0.20	1.99	EKMS451VSN471MA45S
	560	35 × 50	0.20	2.22	EKMS451VSN561MA50S

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 105℃, 120Hz)	Part No.
500	47	22 × 25	0.20	0.51	EKMS501VSN470MP25S
	56	22 × 30	0.20	0.58	EKMS501VSN560MP30S
	68	25.4 × 25	0.20	0.65	EKMS501VSN680MQ25S
	82	22 × 35	0.20	0.72	EKMS501VSN820MP35S
	82	25.4 × 30	0.20	0.74	EKMS501VSN820MQ30S
	100	22 × 45	0.20	0.83	EKMS501VSN101MP45S
	100	30 × 25	0.20	0.82	EKMS501VSN101MR25S
	120	22 × 50	0.20	0.93	EKMS501VSN121MP50S
	120	25.4 × 35	0.20	0.93	EKMS501VSN121MQ35S
	120	30 × 30	0.20	0.91	EKMS501VSN121MR30S
	150	25.4 × 45	0.20	1.08	EKMS501VSN151MQ45S
	150	30 × 35	0.20	1.04	EKMS501VSN151MR35S
	150	35 × 25	0.20	0.99	EKMS501VSN151MA25S
	180	25.4 × 50	0.20	1.20	EKMS501VSN181MQ50S
	180	30 × 40	0.20	1.17	EKMS501VSN181MR40S
	180	35 × 30	0.20	1.10	EKMS501VSN181MA30S
	220	30 × 45	0.20	1.33	EKMS501VSN221MR45S
	220	35 × 35	0.20	1.23	EKMS501VSN221MA35S
	270	30 × 50	0.20	1.50	EKMS501VSN271MR50S
	270	35 × 40	0.20	1.42	EKMS501VSN271MA40S
	330	35 × 45	0.20	1.60	EKMS501VSN331MA45S
	390	35 × 50	0.20	1.78	EKMS501VSN391MA50S
	470	35 × 60	0.20	2.03	EKMS501VSN471MA60S
550	82	22 × 35	0.20	0.72	EKMS551VSN820MP35S
	82	25.4 × 30	0.20	0.74	EKMS551VSN820MQ30S
	100	22 × 45	0.20	0.83	EKMS551VSN101MP45S
	100	25.4 × 35	0.20	0.85	EKMS551VSN101MQ35S
	100	30 × 25	0.20	0.82	EKMS551VSN101MR25S
	120	22 × 50	0.20	0.93	EKMS551VSN121MP50S
	120	25.4 × 40	0.20	0.95	EKMS551VSN121MQ40S
	120	30 × 30	0.20	0.91	EKMS551VSN121MR30S
	120	35 × 25	0.20	0.88	EKMS551VSN121MA25S
	150	25.4 × 45	0.20	1.08	EKMS551VSN151MQ45S
	150	30 × 35	0.20	1.04	EKMS551VSN151MR35S
	180	25.4 × 50	0.20	1.20	EKMS551VSN181MQ50S
	180	30 × 40	0.20	1.17	EKMS551VSN181MR40S
	180	35 × 30	0.20	1.10	EKMS551VSN181MA30S
	220	30 × 45	0.20	1.33	EKMS551VSN221MR45S
	220	35 × 35	0.20	1.23	EKMS551VSN221MA35S
	270	30 × 50	0.20	1.50	EKMS551VSN271MR50S
	270	35 × 40	0.20	1.42	EKMS551VSN271MA40S
	330	35 × 45	0.20	1.60	EKMS551VSN331MA45S
	330	35 × 50	0.20	1.64	EKMS551VSN331MA50S
	470	35 × 60	0.20	2.03	EKMS551VSN471MA60S
600	100	30 × 30	0.20	0.83	EKMS601VSN101MR30S
	100	35 × 25	0.20	0.85	EKMS601VSN101MA25S
	120	30 × 35	0.20	0.93	EKMS601VSN121MR35S
	150	30 × 40	0.20	1.07	EKMS601VSN151MR40S
	150	35 × 30	0.20	1.06	EKMS601VSN151MA30S
	180	30 × 45	0.20	1.20	EKMS601VSN181MR45S
	180	30 × 50	0.20	1.22	EKMS601VSN181MR50S
	180	35 × 35	0.20	1.18	EKMS601VSN181MA35S
	220	30 × 60	0.20	1.40	EKMS601VSN221MR60S
	220	35 × 40	0.20	1.35	EKMS601VSN221MA40S
	220	35 × 45	0.20	1.38	EKMS601VSN221MA45S
	270	35 × 50	0.20	1.56	EKMS601VSN271MA50S
	330	35 × 60	0.20	1.79	EKMS601VSN331MA60S

◆RATED RIPPLE CURRENT MULTIPLIERS

◎Frequency Multipliers

Frequency(Hz)	50	120	300	1k	10k	50k
160 to 250V_{dc}	0.81	1.00	1.17	1.32	1.45	1.50
315 to 450V_{dc}	0.77	1.00	1.16	1.30	1.41	1.43
500 to 600V_{dc}	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℃ rise.
When long life performance is required in actual use, the rms ripple current has to be reduced.

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.