

Downsized from current standard KMG series

 Solvent resistant type except 160 to 450Vdc (see PRECAUTIONS AND GUIDELINES)

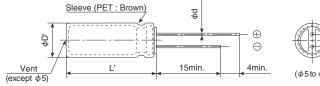
RoHS2 Compliant

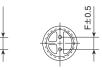
SPECIFICATIONS

Items	Characteristics															
Category Temperature Range	-55 to +105°C(6.3 to 100V _{dc}) -40 to +105°C(160 to 400V _{dc}) -25 to +105°C(450V _{dc})															
Rated Voltage Range	6.3 to 450V _{dc}															
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)															
Leakage Current	6.3 to 100V _{dc}			160 to 450V _{dc}												
	I=0.03CV or 4µA,	whiche	ver is g	er is greater.				CV≦1,000 I=0.1CV+40 max.								
							CV>1,000 I=0.04			04CV+100 max.						
	Where, I : Max. lea	akage c	current (μA), C : Nominal capacitar				nce (µF), V : Rated vol			oltage (V)		(at 20°C after 1 minute)				
Dissipation Factor	Rated voltage (Vdc)		6.3V	10V	16V	25V	35V	50V	63V	100V	160 to 250V	350 to	400V	450V		
(tan δ)	tan δ (Max.)	0.28		0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.	24	0.24		
	When nominal cap	acitano	ce exceeds 1,000µF, add 0.02 to th					he valu	alue above for each 1,000µF increas					(at 2	0℃, 120Hz)	
Low Temperature	Rated voltage (Vdc)	6.3V	10V	16V	25V	35V	50V	63 to	100V	160 to 200V	250V	350V	400V	450V	
Characteristics (Max. Impedance Ratio)	Z(-25°C)/Z(+20°C) Z(-40°C)/Z(+20°C)	≦¢8	5	4	3	2	2	2	2	2	3	3	4	4	6	
(Max. Impedance hallo)		$\geq \phi 10$	5	4	3	2	2	2	2	2	3	3	4	4	6	
		≦¢8	10	8	6	4	3	3	3	3	8	10	8	8		
		$\geq \phi 10$	10	8	6	4	3	3		3	4	4	6	6		(at 120Hz)
Endurance		specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated s applied (the peak voltage shall not exceed the rated voltage) for 1,000 hours (2,000 hours for ϕ 10 and more) at 105°C.														
	Capacitance change $\leq \pm 20\%$ of the initial value						le									
	D.F. (tan δ) $\leq 200\%$ of the second secon					of the initial specified value										
	Leakage current ≦The initial specified value															
Shelf Life	The following specifications shall be satisfied when the ca								restore	d to 20	°C after expos	ing the	m for 1,	000 ho	urs at 1	05°C without
	voltage applied. Before the measurement, the capacitor shall be							e preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.								
	Rated voltage		6.3 to 100V _{dc}						160 to 450V _{dc}							
	Capacitance chan	ge	$\leq \pm 20\%$ of the initial value						$\leq \pm 20\%$ of the initial value							
	D.F. (tan δ)		≦20	0% of t	he initi	al spec	ified va	alue	\leq 200% of the initial specified value							
	Leakage current		≦Th	e initia	l specif	ied val	ue		≦50	0% of t	he initial spec	cified va	alue			

DIMENSIONS [mm]

• Terminal Code : E



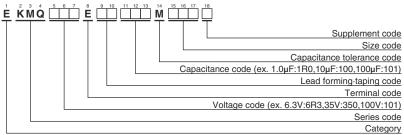


(φ5 to φ10) (φ12.5 to φ18) Gas escape end seal

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.

5	6.3	8	10	12.5	16	18					
0.5	0.5	0.6	0.6	0.6	0.8	0.8					
2.0	2.5	3.5	5.0	5.0	7.5	7.5					
φD+0.5max.											
L+1.5max.											
	0.5	0.5 0.5	0.5 0.5 0.6 2.0 2.5 3.5 φD	0.5 0.5 0.6 0.6 2.0 2.5 3.5 5.0 φD+0.5m	0.5 0.5 0.6 0.6 0.6 2.0 2.5 3.5 5.0 5.0 φD+0.5max.	0.5 0.5 0.6 0.6 0.6 0.8 2.0 2.5 3.5 5.0 5.0 7.5 ↓D+0.5max.					

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

KMQSeries

♦STANDARD RATINGS

WV (V _{dc})	Cap (µF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/ 105°C, 120Hz)	Part No.	WV (V _{dc})	Cap (µF)	Case size ¢D×L(mm)	tan δ	Rated ripple current (mArms/ 105°C, 120Hz)	Part No.
	1,000	8×11.5	0.28	390	EKMQ6R3E 102MHB5D		220	10 × 12.5	0.12	300	EKMQ500E 221MJC5S
	2,200	10×16	0.30	635	EKMQ6R3E 222MJ16S	50	330	10×16	0.12	410	EKMQ500E 331MJ16S
	3,300	10×20	0.32	840	EKMQ6R3E 332MJ20S		470	10×20	0.12	540	EKMQ500E 471MJ20S
6.3	4,700	12.5×20	0.34	1,090	EKMQ6R3E 472MK20S	50	1,000	12.5×25	0.12	950	EKMQ500E 102MK25S
0.3	6,800	12.5×25	0.38	1,350	EKMQ6R3E 682MK25S		2,200	16×31.5	0.14	1,410	EKMQ500E 222MLN3S
	10,000	16×25	0.46	1,650	EKMQ6R3E 103ML25S		3,300	18×35.5	0.16	1,770	EKMQ500E 332MMP1S
	15,000	16×31.5	0.56	1,820	EKMQ6R3E 153MLN3S		22	5×11	0.10	71	EKMQ630E 220ME11D
	22,000	18 × 35.5	0.70	2,280	EKMQ6R3E 223MMP1S		33	6.3×11	0.10	100	EKMQ630E 330MF11D
	220	5×11	0.24	155	EKMQ100E 221ME11D		47	6.3×11	0.10	120	EKMQ630E 470MF11D
	330	6.3×11	0.24	210	EKMQ100E 331MF11D		68	8×11.5	0.10	155	EKMQ630E
	470	6.3×11	0.24	250	EKMQ100E 471MF11D	63	100	8×11.5	0.10	200	EKMQ630E 101MHB5D
	1,000	10 × 12.5	0.24	460	EKMQ100E		220	10×16	0.10	335	EKMQ630E 221MJ16S
	2,200	10×16	0.26	705	EKMQ100E		330	10×20	0.10	510	EKMQ630E 331MJ20S
10	3,300	12.5×20	0.28	1,000	EKMQ100E 332MK20S		470	12.5×20	0.10	640	EKMQ630E 471MK20S
	4,700	12.5×25	0.30	1,260	EKMQ100E		1,000	16×25	0.10	930	EKMQ630E
	6,800	16 × 25	0.34	1,570	EKMQ100E		2,200	18 × 35.5	0.12	1,650	EKMQ630E
	10,000	16 × 31.5	0.42	1,820	EKMQ100E		1.0	5×11	0.08	15	EKMQ101E
	15,000	16 × 35.5	0.52	2,050			2.2	5×11	0.08	21	EKMQ101E
	22,000	18×40	0.66	2,420	EKMQ100E		3.3	5×11 5×11	0.08	29	EKMQ101E
	220 330	6.3×11	0.20	190			4.7	-	0.08	32	
	470	6.3 × 11 8 × 11.5	0.20	225 315	EKMQ160E 331MF11D EKMQ160E 471MHB5D		10 22	5×11 6.3×11	0.08	50 93	EKMQ101E 100ME11D EKMQ101E 220MF11D
	1,000	10 × 12.5	0.20	500			33	8×11.5	0.08	130	EKMQ101E 330MHB5D
	2,200	10 × 12.5	0.20	710	EKMQ160E 222MJ20S	100	47	8×11.5	0.08	140	
16	3,300	10×20 12.5×25	0.22	1,170	EKMQ160E 332MK25S		68	10 × 12.5	0.08	140	
	4,700	16 × 25	0.24	1,170	EKMQ160E 472ML25S		100	10×12.5	0.08	240	EKMQ101E
	6,800	16×25	0.20	1,600	EKMQ160E 682ML25S		220	12.5 × 20	0.08	390	EKMQ101E
	10,000	16 × 35.5	0.38	1,930	EKMQ160E 103MLP1S		330	12.5 × 25	0.08	540	EKMQ101E 331MK25S
	15,000	18 × 40	0.48	2,210	EKMQ160E 153MM40S		470	16×25	0.08	715	EKMQ101E 471ML25S
	10,000	5×11	0.16	125	EKMQ250E 101ME11D	*1 160	1,000	18×35.5	0.08	960	EKMQ101E 102MMP1S
	220	6.3×11	0.16	200	EKMQ250E		68	12.5×20	0.20	250	EKMQ161E
	330	8×11.5	0.16	310	EKMQ250E		100	12.5×25	0.20	310	EKMQ161E 101MK25S
	470	10 × 12.5	0.16	380	EKMQ250E 471MJC5S		220	16×31.5	0.20	540	EKMQ161E 221MLN3S
	1,000	10×16	0.16	610	EKMQ250E 102MJ16S		330	18×35.5	0.20	705	EKMQ161E 331MMP1S
25	2,200	12.5×25	0.18	1,090	EKMQ250E 222MK25S		470	18×40	0.20	855	EKMQ161E 471MM40S
	3,300	16×25	0.20	1,400	EKMQ250E 332ML25S		47	12.5×20	0.20	195	EKMQ201E 470MK20S
	4,700	16×25	0.22	1,570	EKMQ250E 472ML25S		68	12.5 × 25	0.20	250	EKMQ201E 680MK25S
	6,800	16×35.5	0.26	1,850	EKMQ250E 682MLP1S	*1 200	100	16×25	0.20	335	EKMQ201E 101ML25S
	10,000	18×40	0.34	2,000	EKMQ250E 103MM40S	200	220	16×35.5	0.20	500	EKMQ201E 221MLP1S
	47	5×11	0.14	93	EKMQ350E 470ME11D		330	18×40	0.20	675	EKMQ201E 331MM40S
	68	6.3×11	0.14	110	EKMQ350E 680MF11D		47	12.5×20	0.20	190	EKMQ251E 470MK20S
	100	6.3×11	0.14	150	EKMQ350E 101MF11D	*1	68	16×25	0.20	270	EKMQ251E 680ML25S
	220	8×11.5	0.14	270	EKMQ350E 221MHB5D	250	100	16×25	0.20	310	EKMQ251E 101ML25S
	330	10 × 12.5	0.14	350	EKMQ350E 331MJC5S		220	18×35.5	0.20	485	EKMQ251E
35	470	10×16	0.14	460	EKMQ350E 471MJ16S		22	12.5×20	0.24	130	EKMQ351E 220MK20S
	1,000	12.5×20	0.14	810	EKMQ350E 102MK20S	*1	33	12.5×25	0.24	170	EKMQ351E 330MK25S
	2,200	16×25	0.16	1,260	EKMQ350E 222ML25S	350	47	16×25	0.24	230	EKMQ351E 470ML25S
	3,300	16×31.5	0.18	1,500	EKMQ350E 332MLN3S		68	16×25	0.24	285	EKMQ351E 680ML25S
	4,700	16×35.5	0.20	1,780	EKMQ350E 472MLP1S		100	18×31.5	0.24	375	EKMQ351E 101MMN3S
	6,800	18×40	0.24	2,000	EKMQ350E 682MM40S		22	12.5×25	0.24	145	EKMQ401E 220MK25S
	1.0		0.12	13	EKMQ500E 1R0ME11D	400 •1	33	16×25	0.24	195	EKMQ401E 330ML25S
	2.2		0.12	20	EKMQ500E 2R2ME11D		47	16×25	0.24	200	EKMQ401E 470ML25S
	3.3		0.12	25	EKMQ500E 3R3ME11D		68	16×31.5	0.24	240	EKMQ401E 680MLN3S
	4.7		0.12	30	EKMQ500E		100	18×35.5	0.24	310	EKMQ401E 101MMP1S
50	10	5×11	0.12	46	EKMQ500E		22	12.5×25	0.24	100	EKMQ451E
	22	5×11	0.12	68	EKMQ500E		33	16×25	0.24	125	EKMQ451E 330ML25S
	33	5×11	0.12	90	EKMQ500E	450	47	16 × 31.5	0.24	155	EKMQ451E
	47	6.3 × 11	0.12	115	EKMQ500E		68	18 × 35.5	1	185	
	68	6.3×11	0.12	150			100	18×40	0.24	200	EKMQ451E 101MM40S
	100	8×11.5	0.12	190	EKMQ500E						

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.

 $\Box\,\Box$: Enter the appropriate lead forming or taping code.

Production of the products shown in ______ is scheduled to be discontinued. *1: Assembly boards with the designated products attached cannot be cleaned.

KNQseries

♦RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Capacitance(µF) Frequency(Hz)	50	120	300	1k	10k	100k
1.0 to 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 to 68	0.75	1.00	1.25	1.50	1.75	1.80
100 to 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 to	0.85	1.00	1.03	1.05	1.08	1.08

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.

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.

CHEMI-CON ALUMINUM ELECTROLYTIC CAPACITORS

- 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.

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.

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