SME Series

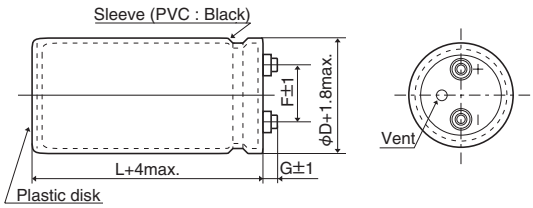
- Endurance with ripple current : 2,000 hours at 85℃
- RoHS2 Compliant

◆SPECIFICATIONS

Items	Characteristics	
Category Temperature Range	-40 to +85℃ (10 to 100V_{dc})	
Rated Voltage Range	10 to 100V_{dc}	
Capacitance Tolerance	±20% (M)	(at 20℃, 120Hz)
Leakage Current	I=0.02CV or 5mA, whichever is smaller. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)	(at 20℃ after 5 minutes)
Dissipation Factor (tan δ)	Shall not exceed the values shown in the STANDARD RATINGS	(at 20℃, 120Hz)
Low Temperature Characteristics	Capacitance change C(-25℃)/C(+20℃)≧0.7	(at 120Hz)
Insulation Resistance	When measured between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case by using an insulation resistance meter of 500V_{dc}, the insulation resistance shall not be less than 100MΩ.	
Insulation Withstanding Voltage	When a voltage of 2,000V_{ac} is applied for 1 minute between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case, there shall not be electrical damage.	
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 2,000 hours at 85℃.	
	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℃ after exposing them for 500 hours at 85℃ 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	≦±20% of the initial value
	D.F. (tan δ)	≦150% of the initial specified value
	Leakage current	≦The initial specified value

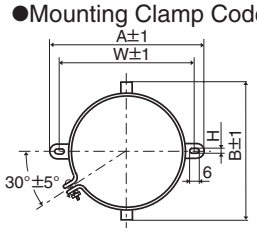
◆DIMENSIONS (Screw-Mount) [mm]

●Terminal Code : LG



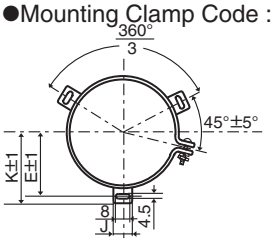
ϕ35 to ϕ63.5 : G=6
ϕ76.2 & ϕ89 : G=5

●Mounting Clamp Code : B



ϕD	A	B	W	H	F
35	58.0	44.0	48.0	3.5	12.7
50	78.0	64.0	68.0	4.5	22.4
63.5	90.0	76.0	80.0	4.5	28.0
76.2	104.5	90.0	93.5	4.5	31.5

●Mounting Clamp Code : C



ϕD	E	K	J	F
50	32.5	37.0	14.0	22.4
63.5	38.1	43.5	14.0	28.0
76.2	44.5	50.0	14.0	31.5
89	50.8	56.5	16.0	31.5

<Screw specifcations>
Plus hexagon-headed screw :M5×0.8×10
Maximum screw tightening torque :3.23Nm
* The screw and the mounting clamp are separately supplied and not attached to the product.

◆PART NUMBERING SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
E	S	M	E				L	G					M				U

Supplement code
Size code
Capacitance tolerance code
Capacitance code (ex. 6,800μF:682, 39,000μF:393)
Mounting clamp code (N, B, C)
Terminal code
Voltage code (ex. 10V:100, 100V:101)
Series code
Category

Please refer to "Product code guide (screw-mount terminal type)"

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.

SME Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 85℃, 120Hz)	Part No.
10	39,000	35 × 50	0.60	4.70	ESME100LGB393MA50U
	82,000	35 × 80	0.60	7.40	ESME100LGB823MA80U
	100,000	35 × 100	0.70	8.00	ESME100LGB104MAA0U
	120,000	35 × 120	0.70	9.40	ESME100LGB124MAC0U
	150,000	50 × 80	0.90	9.80	ESME100LGC154MC80U
	220,000	50 × 100	1.00	12.1	ESME100LGC224MCA0U
	270,000	50 × 120	1.20	13.6	ESME100LGC274MCC0U
	390,000	63.5 × 100	1.50	15.3	ESME100LGC394MDA0U
	470,000	63.5 × 120	2.00	16.0	ESME100LGC474MDC0U
	560,000	76.2 × 100	2.50	17.3	ESME100LGC564MEA0U
	680,000	76.2 × 120	3.00	18.7	ESME100LGC684MEC0U
16	27,000	35 × 50	0.45	4.20	ESME160LGB273MA50U
	56,000	35 × 80	0.60	6.50	ESME160LGB563MA80U
	82,000	35 × 100	0.70	8.00	ESME160LGB823MAA0U
	100,000	35 × 120	0.70	9.60	ESME160LGB104MAC0U
	120,000	50 × 80	0.80	9.60	ESME160LGC124MC80U
	150,000	50 × 100	0.90	11.2	ESME160LGC154MCA0U
	220,000	50 × 120	1.00	14.2	ESME160LGC224MCC0U
	270,000	63.5 × 100	1.20	15.3	ESME160LGC274MDA0U
	330,000	63.5 × 120	1.30	17.1	ESME160LGC334MDC0U
	390,000	76.2 × 100	1.60	18.0	ESME160LGC394MEA0U
	470,000	76.2 × 120	1.80	19.3	ESME160LGC474MEC0U
	560,000	76.2 × 140	2.00	20.7	ESME160LGC564MEE0U
25	18,000	35 × 50	0.35	4.00	ESME250LGB183MA50U
	39,000	35 × 80	0.40	6.20	ESME250LGB393MA80U
	47,000	35 × 100	0.40	7.40	ESME250LGB473MAA0U
	56,000	35 × 120	0.45	8.30	ESME250LGB563MAC0U
	82,000	50 × 80	0.50	9.70	ESME250LGC823MC80U
	100,000	50 × 100	0.60	10.8	ESME250LGC104MCA0U
	120,000	50 × 120	0.60	12.8	ESME250LGC124MCC0U
	180,000	63.5 × 100	0.75	14.7	ESME250LGC184MDA0U
	220,000	63.5 × 120	0.80	16.8	ESME250LGC224MDC0U
	270,000	76.2 × 100	0.90	18.3	ESME250LGC274MEA0U
	330,000	76.2 × 120	1.00	20.7	ESME250LGC334MEC0U
	390,000	76.2 × 140	1.20	22.1	ESME250LGC394MEE0U
	560,000	89 × 140	1.50	25.8	ESME250LGC564MFE0U
35	15,000	35 × 50	0.30	3.90	ESME350LGB153MA50U
	33,000	35 × 80	0.40	6.00	ESME350LGB333MA80U
	39,000	35 × 100	0.40	7.00	ESME350LGB393MAA0U
	47,000	35 × 120	0.45	8.00	ESME350LGB473MAC0U
	68,000	50 × 80	0.50	9.00	ESME350LGC683MC80U
	82,000	50 × 100	0.55	10.3	ESME350LGC823MCA0U
	120,000	50 × 120	0.60	12.8	ESME350LGC124MCC0U
	150,000	63.5 × 100	0.70	14.0	ESME350LGC154MDA0U
	180,000	63.5 × 120	0.70	16.6	ESME350LGC184MDC0U
	220,000	76.2 × 100	0.75	17.3	ESME350LGC224MEA0U
	270,000	76.2 × 120	0.80	19.8	ESME350LGC274MEC0U
	330,000	76.2 × 140	0.90	22.5	ESME350LGC334MEE0U
	470,000	89 × 140	1.00	28.3	ESME350LGC474MFE0U

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/ 85℃, 120Hz)	Part No.
50	10,000	35 × 50	0.25	4.10	ESME500LGB103MA50U
	18,000	35 × 80	0.25	5.20	ESME500LGB183MA80U
	22,000	35 × 100	0.30	5.90	ESME500LGB223MAA0U
	27,000	35 × 120	0.35	6.60	ESME500LGB273MAC0U
	39,000	50 × 80	0.40	7.40	ESME500LGC393MC80U
	56,000	50 × 100	0.40	9.80	ESME500LGC563MCA0U
	68,000	50 × 120	0.45	11.1	ESME500LGC683MCC0U
	82,000	63.5 × 100	0.50	12.2	ESME500LGC823MDA0U
	120,000	63.5 × 120	0.50	16.0	ESME500LGC124MDC0U
	150,000	76.2 × 120	0.60	18.1	ESME500LGC154MEC0U
	180,000	76.2 × 140	0.70	19.5	ESME500LGC184MEE0U
	270,000	89 × 140	0.80	24.6	ESME500LGC274MFE0U
63	5,600	35 × 50	0.20	3.00	ESME630LGB562MA50U
	10,000	35 × 80	0.25	4.00	ESME630LGB103MA80U
	15,000	35 × 100	0.25	5.30	ESME630LGB153MAA0U
	18,000	35 × 120	0.25	6.20	ESME630LGB183MAC0U
	22,000	50 × 80	0.30	6.50	ESME630LGC223MC80U
	33,000	50 × 100	0.35	8.10	ESME630LGC333MCA0U
	39,000	50 × 120	0.35	9.60	ESME630LGC393MCC0U
	47,000	63.5 × 100	0.40	10.2	ESME630LGC473MDA0U
	68,000	63.5 × 120	0.40	13.3	ESME630LGC683MDC0U
	100,000	76.2 × 120	0.45	17.1	ESME630LGC104MEC0U
	120,000	76.2 × 140	0.50	19.0	ESME630LGC124MEE0U
	150,000	89 × 140	0.55	22.0	ESME630LGC154MFE0U
80	3,300	35 × 50	0.15	2.50	ESME800LGB332MA50U
	6,800	35 × 80	0.20	3.70	ESME800LGB682MA80U
	10,000	35 × 100	0.20	4.90	ESME800LGB103MAA0U
	12,000	35 × 120	0.20	5.40	ESME800LGB123MAC0U
	15,000	50 × 80	0.25	6.00	ESME800LGC153MC80U
	22,000	50 × 100	0.30	7.10	ESME800LGC223MCA0U
	27,000	50 × 120	0.30	8.60	ESME800LGC273MCC0U
	33,000	63.5 × 100	0.35	9.30	ESME800LGC333MDA0U
	47,000	63.5 × 120	0.35	12.0	ESME800LGC473MDC0U
	68,000	76.2 × 120	0.35	15.4	ESME800LGC683MEC0U
	82,000	76.2 × 140	0.35	18.1	ESME800LGC823MEE0U
	100,000	89 × 140	0.40	21.0	ESME800LGC104MFE0U
100	2,200	35 × 50	0.10	2.50	ESME101LGB222MA50U
	4,700	35 × 80	0.15	3.40	ESME101LGB472MA80U
	6,800	35 × 100	0.15	4.20	ESME101LGB682MAA0U
	8,200	35 × 120	0.15	5.00	ESME101LGB822MAC0U
	10,000	50 × 80	0.20	5.20	ESME101LGC103MC80U
	18,000	50 × 120	0.20	8.10	ESME101LGC183MCC0U
	22,000	63.5 × 100	0.25	8.60	ESME101LGC223MDA0U
	27,000	63.5 × 120	0.25	10.3	ESME101LGC273MDC0U
	33,000	76.2 × 100	0.25	11.1	ESME101LGC333MEA0U
	39,000	76.2 × 120	0.25	12.4	ESME101LGC393MEC0U
	47,000	76.2 × 140	0.25	14.3	ESME101LGC473MEE0U
	68,000	89 × 140	0.30	18.0	ESME101LGC683MFE0U

◆RATED RIPPLE CURRENT MULTIPLIERS

◎Frequency Multipliers

Rated voltage (V_{dc})	Case diameter (mm)	Frequency (Hz)					
		50	120	300	1k	10k	50k
10 to 50	φ35 to φ89	0.95	1.00	1.03	1.05	1.09	1.12
63 & 80	φ35	0.90	1.00	1.06	1.10	1.18	1.22
	φ50 to φ89	0.95	1.00	1.03	1.05	1.09	1.12
100	φ35	0.82	1.00	1.12	1.22	1.30	1.33
	φ50	0.90	1.00	1.06	1.10	1.18	1.22
	φ63.5 to φ89	0.95	1.00	1.03	1.05	1.09	1.12

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.

■ 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

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.

CAT. No. E1001A 2026