



SME Series

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

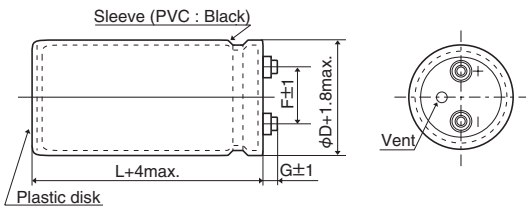


SPECIFICATIONS

Items	Characteristics						
Category	-40 to +85°C (10 to 100V _{dc})						
Temperature Range	-40 to +85°C (10 to 100V _{dc})						
Rated Voltage Range	10 to 100V _{dc}						
Capacitance Tolerance	±20% (M) (at 20°C, 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°C after 5 minutes)						
Dissipation Factor (tan δ)	Shall not exceed the values shown in the STANDARD RATINGS (at 20°C, 120Hz)						
Low Temperature Characteristics	Capacitance change $C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.7$ (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°C 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°C. <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value
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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 500 hours at 85°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. <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 150% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 150% of the initial specified value	Leakage current	≤ The initial specified value
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D.F. (tan δ)	≤ 150% of the initial specified value						
Leakage current	≤ The initial specified value						

DIMENSIONS (Screw-Mount) [mm]

● Terminal Code : LG



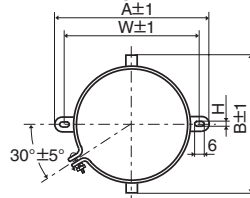
φ35 to φ63.5 : G=6
 φ76.2 & φ89 : G=5

<Screw specifications>

Plus hexagon-headed screw : M5×0.8×10
 Maximum screw tightening torque : 3.23Nm

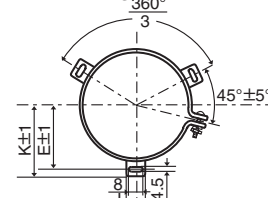
* The screw and the mounting clamp are separately supplied and not attached to the product.

● Mounting Clamp Code : B



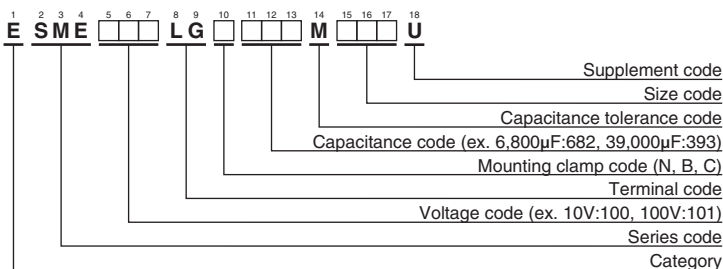
φD	A	B	W	H	F
35	58.0	44.0	48.0	3.5	12.7
50	78.0	64.0	68.0	4.5	22.4
63.5	90.0	76.0	80.0	4.5	28.0
76.2	104.5	90.0	93.5	4.5	31.5

● 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

PART NUMBERING SYSTEM



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



◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/85°C, 120Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (Arms/85°C, 120Hz)	Part No.
10	39,000	35 × 50	0.60	4.70	ESME100LGB393MA50U	50	10,000	35 × 50	0.25	4.10	ESME500LGB103MA50U
	82,000	35 × 80	0.60	7.40	ESME100LGB823MA80U		18,000	35 × 80	0.25	5.20	ESME500LGB183MA80U
	100,000	35 × 100	0.70	8.00	ESME100LGB104MAA0U		22,000	35 × 100	0.30	5.90	ESME500LGB223MAA0U
	120,000	35 × 120	0.70	9.40	ESME100LGB124MAC0U		27,000	35 × 120	0.35	6.60	ESME500LGB273MAC0U
	150,000	50 × 80	0.90	9.80	ESME100LGC154MC80U		39,000	50 × 80	0.40	7.40	ESME500LGC393MC80U
	220,000	50 × 100	1.00	12.1	ESME100LGC224MCA0U		56,000	50 × 100	0.40	9.80	ESME500LGC563MCA0U
	270,000	50 × 120	1.20	13.6	ESME100LGC274MCC0U		68,000	50 × 120	0.45	11.1	ESME500LGC683MCC0U
	390,000	63.5 × 100	1.50	15.3	ESME100LGC394MDA0U		82,000	63.5 × 100	0.50	12.2	ESME500LGC823MDA0U
	470,000	63.5 × 120	2.00	16.0	ESME100LGC474MDC0U		120,000	63.5 × 120	0.50	16.0	ESME500LGC124MDC0U
	560,000	76.2 × 100	2.50	17.3	ESME100LGC564MEA0U		150,000	76.2 × 120	0.60	18.1	ESME500LGC154MEC0U
680,000	76.2 × 120	3.00	18.7	ESME100LGC684MEC0U	180,000	76.2 × 140	0.70	19.5	ESME500LGC184MEE0U		
16	27,000	35 × 50	0.45	4.20	ESME160LGB273MA50U	270,000	89 × 140	0.80	24.6	ESME500LGC274MFE0U	
	56,000	35 × 80	0.60	6.50	ESME160LGB563MA80U	63	5,600	35 × 50	0.20	3.00	ESME630LGB562MA50U
	82,000	35 × 100	0.70	8.00	ESME160LGB823MAA0U		10,000	35 × 80	0.25	4.00	ESME630LGB103MA80U
	100,000	35 × 120	0.70	9.60	ESME160LGB104MAC0U		15,000	35 × 100	0.25	5.30	ESME630LGB153MAA0U
	120,000	50 × 80	0.80	9.60	ESME160LGC124MC80U		18,000	35 × 120	0.25	6.20	ESME630LGB183MAC0U
	150,000	50 × 100	0.90	11.2	ESME160LGC154MCA0U		22,000	50 × 80	0.30	6.50	ESME630LGC223MC80U
	220,000	50 × 120	1.00	14.2	ESME160LGC224MCC0U		33,000	50 × 100	0.35	8.10	ESME630LGC333MCA0U
	270,000	63.5 × 100	1.20	15.3	ESME160LGC274MDA0U		39,000	50 × 120	0.35	9.60	ESME630LGC393MCC0U
	330,000	63.5 × 120	1.30	17.1	ESME160LGC334MDC0U		47,000	63.5 × 100	0.40	10.2	ESME630LGC473MDA0U
	390,000	76.2 × 100	1.60	18.0	ESME160LGC394MEA0U		68,000	63.5 × 120	0.40	13.3	ESME630LGC683MDC0U
470,000	76.2 × 120	1.80	19.3	ESME160LGC474MEC0U	100,000		76.2 × 120	0.45	17.1	ESME630LGC104MEC0U	
560,000	76.2 × 140	2.00	20.7	ESME160LGC564MEE0U	120,000	76.2 × 140	0.50	19.0	ESME630LGC124MEE0U		
25	18,000	35 × 50	0.35	4.00	ESME250LGB183MA50U	150,000	89 × 140	0.55	22.0	ESME630LGC154MFE0U	
	39,000	35 × 80	0.40	6.20	ESME250LGB393MA80U	80	3,300	35 × 50	0.15	2.50	ESME800LGB332MA50U
	47,000	35 × 100	0.40	7.40	ESME250LGB473MAA0U		6,800	35 × 80	0.20	3.70	ESME800LGB682MA80U
	56,000	35 × 120	0.45	8.30	ESME250LGB563MAC0U		10,000	35 × 100	0.20	4.90	ESME800LGB103MAA0U
	82,000	50 × 80	0.50	9.70	ESME250LGC823MC80U		12,000	35 × 120	0.20	5.40	ESME800LGB123MAC0U
	100,000	50 × 100	0.60	10.8	ESME250LGC104MCA0U		15,000	50 × 80	0.25	6.00	ESME800LGC153MC80U
	120,000	50 × 120	0.60	12.8	ESME250LGC124MCC0U		22,000	50 × 100	0.30	7.10	ESME800LGC223MCA0U
	180,000	63.5 × 100	0.75	14.7	ESME250LGC184MDA0U		27,000	50 × 120	0.30	8.60	ESME800LGC273MCC0U
	220,000	63.5 × 120	0.80	16.8	ESME250LGC224MDC0U		33,000	63.5 × 100	0.35	9.30	ESME800LGC333MDA0U
	270,000	76.2 × 100	0.90	18.3	ESME250LGC274MEA0U		47,000	63.5 × 120	0.35	12.0	ESME800LGC473MDC0U
330,000	76.2 × 120	1.00	20.7	ESME250LGC334MEC0U	68,000		76.2 × 120	0.35	15.4	ESME800LGC683MEC0U	
390,000	76.2 × 140	1.20	22.1	ESME250LGC394MEE0U	82,000	76.2 × 140	0.35	18.1	ESME800LGC823MEE0U		
560,000	89 × 140	1.50	25.8	ESME250LGC564MFE0U	100,000	89 × 140	0.40	21.0	ESME800LGC104MFE0U		
35	15,000	35 × 50	0.30	3.90	ESME350LGB153MA50U	100	2,200	35 × 50	0.10	2.50	ESME101LGB222MA50U
	33,000	35 × 80	0.40	6.00	ESME350LGB333MA80U		4,700	35 × 80	0.15	3.40	ESME101LGB472MA80U
	39,000	35 × 100	0.40	7.00	ESME350LGB393MAA0U		6,800	35 × 100	0.15	4.20	ESME101LGB682MAA0U
	47,000	35 × 120	0.45	8.00	ESME350LGB473MAC0U		8,200	35 × 120	0.15	5.00	ESME101LGB822MAC0U
	68,000	50 × 80	0.50	9.00	ESME350LGC683MC80U		10,000	50 × 80	0.20	5.20	ESME101LGC103MC80U
	82,000	50 × 100	0.55	10.3	ESME350LGC823MCA0U		18,000	50 × 120	0.20	8.10	ESME101LGC183MCC0U
	120,000	50 × 120	0.60	12.8	ESME350LGC124MCC0U		22,000	63.5 × 100	0.25	8.60	ESME101LGC223MDA0U
	150,000	63.5 × 100	0.70	14.0	ESME350LGC154MDA0U		27,000	63.5 × 120	0.25	10.3	ESME101LGC273MDC0U
	180,000	63.5 × 120	0.70	16.6	ESME350LGC184MDC0U		33,000	76.2 × 100	0.25	11.1	ESME101LGC333MEA0U
	220,000	76.2 × 100	0.75	17.3	ESME350LGC224MEA0U		39,000	76.2 × 120	0.25	12.4	ESME101LGC393MEC0U
270,000	76.2 × 120	0.80	19.8	ESME350LGC274MEC0U	47,000	76.2 × 140	0.25	14.3	ESME101LGC473MEE0U		
330,000	76.2 × 140	0.90	22.5	ESME350LGC334MEE0U	68,000	89 × 140	0.30	18.0	ESME101LGC683MFE0U		
470,000	89 × 140	1.00	28.3	ESME350LGC474MFE0U							

◆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.



- 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.
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- 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](#)