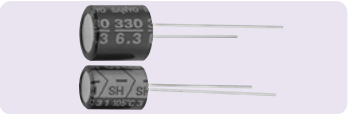
SANYO

Organic semiconductive electrolyte type / Radial lead type **RoHS compliance**

SH Series



Long life (105℃ 5,000h)

SH series has a long life (guaranteed at105℃ for 5,000h) with keeping high frequency characteristics.
Please use the SH series for industrial equipment that requires high reliability.
Lead free-flow is supported.

SC (Standard) → SH Long life

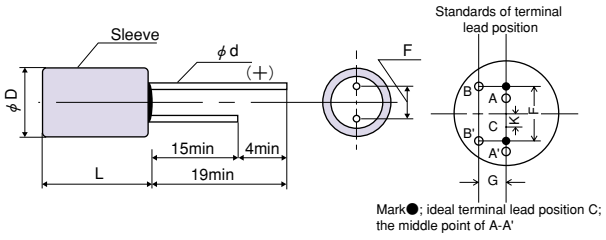
■ Specifications

Items	Condition		Specifications				
Rated voltage (V)	–		6.3	10	16	20	25
Surge voltage (V)	Room temperature		7.2	11.5	18.4	23	25
Category temperature range (℃)	–		−55 to +105				
Capacitance tolerance (%)	120Hz/20℃		M : ±20				
Dissipation Factor (DF)	120Hz/20℃		Please see the attached characteristics list				
Leakage current※2	Rated voltage applied, after 2 minutes		Please see the attached characteristics list				
Equivalent series resistance (ESR)	100kHz to 300kHz/20℃		Please see the attached characteristics list				
Characteristics of impedance ratio at high temp. and low temp.	Based the value at 100kHz, +20℃	−55℃ Z/Z20℃	0.75 to 1.25				
		+105℃ Z/Z20℃	0.75 to 1.25				
Endurance	105℃, 5,000h, Rated voltage applied (25V→20V applied)※1	△C/C	Within ±30% of the initial value				
		DF	Within 1.5 times of the initial limit				
		LC	Within 5 times of the initial limit				
Damp heat(Steady state)	60℃, 90 to 95%RH, 1,000h, No-applied voltage	△C/C	Within ±10% of the initial value				
		DF	Within 1.5 times of the initial limit				
		LC	Within the initial limit				
Resistance to soldering heat	Flow method (260±5℃ X 10s)	△C/C	Within ±5% of the initial value				
		DF	Within the initial limit				
		LC	Within the initial limit (after voltage processing)				

※1 Please reduce 0.25V per 1℃ from over 85℃ for 25V products.
※2 In case of some problems for measured values, measure after applying rated voltage for 6.3 to 20V products or temperature derating voltage for 25V products for 30 minutes at 105℃ .

■ Dimensions

(unit : mm)



Size code	φD +0.5max	L max	F	φd ±0.05	G max	K max
A	4.0	7.8	2.0 ±0.5	0.45	0.5	0.5
B	5.0	7.8	2.0 ±0.5	0.45	0.5	0.5
C	6.3	7.8	2.5 ±0.5	0.45	0.5	0.5
D	6.3	10.8	2.5 ±0.5	0.60	0.5	0.5
E	8.0	11.5	3.5 ±0.5	0.60	0.8	0.8
F	10.0	11.5	5.0 ±0.5	0.60	0.8	0.8

■ Size list

RV : Rated voltage

μF \ RV	6.3	10	16	20	25
1.0					A
1.5					A
2.2			A		B
3.3			A		B
4.7		A	B		C
6.8	A		B		C
10		B			C
15	B			C	D
22				C	
33			C	D	
47	C		D	E	
68		D		E	
100			E	F	
150	E		F		
220		F			
330	F				

■ SH series characteristics list

Size code	Part number	Rated voltage (V)	Rated capacitance (μF)	ESR(mΩ) (max) 100kHz to 300kHz/20℃	Allowable ripple current (mArms)※1	DF (% max)	Leakage current (μA)(max) After 2 minutes
A	25SH1M	25	1.0	350	430	3	0.5
	25SH1R5M	25	1.5	300	435	3	0.75
	16SH2R2M	16	2.2	280	450	4	0.7
	16SH3R3M	16	3.3	280	500	4	1.06
	10SH4R7M	10	4.7	280	540	5	0.94
	6SH6R8M	6.3	6.8	250	560	5	0.86
B	25SH2R2M	25	2.2	200	695	3	1.1
	25SH3R3M	25	3.3	200	700	3	1.65
	16SH4R7M	16	4.7	180	720	4	1.5
	16SH6R8M	16	6.8	150	745	4	2.18
	10SH10M	10	10	150	780	5	2
	6SH15M	6.3	15	120	815	5	1.89
C	25SH4R7M	25	4.7	100	1130	3	2.35
	25SH6R8M	25	6.8	100	1140	3	3.4
	25SH10M	25	10	90	1150	3	5
	20SH15M	20	15	90	1200	5	6
	20SH22M	20	22	70	1300	5	8.8
	16SH33M	16	33	70	1370	6	10.56
	6SH47M	6.3	47	60	1430	7	5.92
D	25SH15M	25	15	70	1650	4	7.5
	20SH33M	20	33	70	1710	6	13.2
	16SH47M	16	47	60	1830	6	15.04
	10SH68M	10	68	50	2000	7	13.6
E	20SH47M	20	47	40	2450	6	18.8
	20SH68M	20	68	36	2600	6	27.2
	16SH100M	16	100	30	2740	6	32
	6SH150M	6.3	150	30	2780	7	18.9
F	20SH100M	20	100	30	3210	6	40
	16SH150M	16	150	28	3260	6	48
	10SH220M	10	220	27	3370	7	44
	6SH330M	6.3	330	25	3500	7	41.58

※1 100kHz, +45℃

Temperature coefficient for allowable ripple current

Ambient temp.	Tx ≤ 45℃	45℃ < Tx ≤ 65℃	65℃ < Tx ≤ 85℃	85℃ < Tx ≤ 95℃	95℃ < Tx ≤ 105℃
Coefficient	1	0.85	0.7	0.4	0.25

Frequency coefficient for allowable ripple current

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f ≤ 500kHz
Coefficient	0.05	0.2	0.5	1