

Solid Aluminum Capacitors With Organic Semiconductor Electrolyte

FEATURES



- Guaranteed long life (+ 105°C x 5,000 hours).
- 94SH capacitors are used for industrial equipment.

STANDARD RATINGS							
CASE CODE	PART* NUMBER	RATED VOLTAGE (V)	NOMINAL CAPACITANCE (μF)	MAX. ALLOWABLE RIPPLE CURRENT (mArms) (@ 100kHz, + 45°C)	MAX. LEAKAGE CURRENT (μA) (After 2 Minutes)	MAX. TANGENT OF LOSS ANGLE	MAX. ESR 100k ~ 300kHz (mΩ)
A	94SH105X0025ABP	25.0	1.0	430	0.50	0.03	350
	94SH155X0025ABP	25.0	1.5	435	0.75	0.03	300
	94SH105X0016ABP	16.0	1.0	430	0.50	0.03	350
	94SH155X0016ABP	16.0	1.5	435	0.50	0.03	300
	94SH225X0016ABP	16.0	2.2	450	0.70	0.04	280
	94SH335X0016ABP	16.0	3.3	500	1.06	0.04	280
	94SH475X0010ABP	10.0	4.7	540	0.94	0.05	280
	94SH685X06R3ABP	6.3	6.8	560	0.86	0.05	250
B	94SH225X0025BBP	25.0	2.2	695	1.10	0.03	200
	94SH335X0025BBP	25.0	3.3	700	1.65	0.03	200
	94SH475X0016BBP	16.0	4.7	720	1.50	0.04	180
	94SH685X0016BBP	16.0	6.8	745	2.18	0.04	150
	94SH106X0010BBP	10.0	10.0	780	2.00	0.05	150
	94SH156X06R3BBP	6.3	15.0	815	1.89	0.05	120
C	94SH475X0025CBP	25.0	4.7	1130	2.35	0.03	100
	94SH685X0025CBP	25.0	6.8	1140	3.40	0.03	100
	94SH106X0025CBP	25.0	10.0	1150	5.00	0.03	90
	94SH156X0020CBP	20.0	15.0	1200	6.00	0.05	90
	94SH226X0020CBP	20.0	22.0	1300	8.80	0.05	70
	94SH106X0016CBP	16.0	10.0	1150	3.20	0.04	90
	94SH336X0016CBP	16.0	33.0	1370	10.56	0.06	70
	94SH476X06R3CBP	6.3	47.0	1430	5.92	0.07	60
D	94SH156X0025DBP	25.0	15.0	1650	7.50	0.04	70
	94SH336X0020DBP	20.0	33.0	1710	13.20	0.06	70
	94SH476X0016DBP	16.0	47.0	1830	15.04	0.06	60
	94SH686X0010DBP	10.0	68.0	2000	13.60	0.07	50
E	94SH476X0020EBP	20.0	47.0	2450	18.80	0.06	40
	94SH686X0020EBP	20.0	68.0	2600	27.20	0.06	36
	94SH107X0016EBP	16.0	100.0	2740	32.00	0.06	30
	94SH157X06R3EBP	6.3	150.0	2780	18.90	0.07	30
F	94SH107X0020FBP	20.0	100.0	3210	40.00	0.06	30
	94SH157X0016FBP	16.0	150.0	3260	48.00	0.06	28
	94SH227X0010FBP	10.0	220.0	3370	44.00	0.07	27
	94SH337X06R3FBP	6.3	330.0	3500	41.58	0.07	25

*Part Numbers shown are for ± 20% capacitance tolerance (X0).

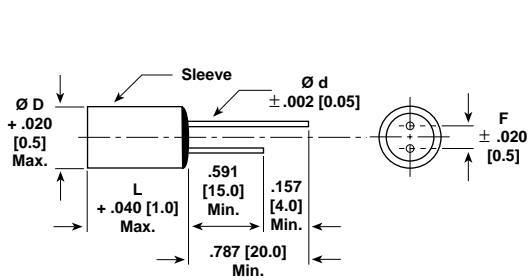
94SH106X0016_ _ _ Part Number is complete with Case Code and 2 character Package or Process Code. BP as shown indicates Bulk Pack.

Type 94SH

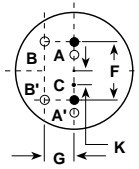
Vishay



DIMENSIONS in inches (millimeters)



Standards of Lead Position



CASE CODE	Ø D x L	F	Ø d	G (Max.)	K (Max.)
A	.158 x .268 [4.0 x 6.8]	.079 [2.0]	.018 [0.45]	.020 [0.5]	.020 [0.5]
B	.197 x .268 [5.0 x 6.8]	.079 [2.0]	.018 [0.45]	.020 [0.5]	.020 [0.5]
C	.248 x .268 [6.3 x 6.8]	0.98 [2.5]	.018 [0.45]	.020 [0.5]	.020 [0.5]
D	248 x .386 [6.3 x 9.8]	.098 [2.5]	.024 [0.6]	.020 [0.5]	.020 [0.5]
E	.315 x .413 [8.0 x 10.5]	.138 [3.5]	.024 [0.6]	.031 [0.8]	.031 [0.8]
F	.394 x .413 [10.0 x 10.5]	.020 [5.0]	.024 [0.6]	.031 [0.8]	.031 [0.8]

ENVIRONMENTAL PERFORMANCE			
ITEMS	CHARACTERISTICS		
1. Operating Temperature Range	- 55°C ~ + 105°C		
2. Capacitance Tolerance @ 120Hz	X0 = ± 20%		
3. Tangent of Loss Angle (tan δ) @ 120Hz	≤ Values in Standard Ratings Table		
4. Leakage Current (µA/2 minutes) (or less)*	0.02 CV or 0.5 (Whichever is greater)		
5. Equivalent Series Resistance (Ω) (100k ~ 300kHz)	≤ Values in Standard Ratings Table		
6. Temperature Characteristics Impedance Ratio at 100kHz	- 55°C	Z/Z _{20°C}	1.0 ~ 1.25
	+ 105°C	Z/Z _{20°C}	0.75 ~ 1.0
7. High Temperature Load (+ 105°C, 5,000 hours) Rated Voltage Applied (25 WV - 20V)**	Δ C/C	Within ± 30% of the initial value	
	tan δ	≤ 1.5 times the value of Item 3	
	Leakage Current	≤ 5 times the value of Item 4	
8. Moisture Resistance (+ 60°C, 90 ~ 95% RH, 1,000 hours, no voltage)	Δ C/C	Within ± 10% of the initial value	
	tan δ	≤ 1.5 times the value of Item 3	
	Leakage Current	≤ The value of Item 4	
9. Reverse Voltage Guarantee	Temporary:	Less than 20% of the rated voltage	
	Continuous:	Less than 10% of the rated voltage	

*If any doubt arises, measure the current after applying voltage (voltage treatment) for 30 minutes at + 105°C. The rated voltage should be applied for 6.3 to 20 WV, while a temperature reduction voltage should be applied for 25 WV.

**To use a Vishay OS-CON capacitor when the operating temperature exceeds + 85°C on a component with a rated voltage of 25V, reduce the voltage by 0.25V for every degree (1°C) relative to the value at + 85°C (25V).

CASE CODE LIST						
CAPACITANCE (µF)	WV***	6.3	10	16	20	25
	(SV)****	(7.2)	(11.5)	(18.4)	(23)	(25)
1.0	—	—	—	A	—	A
1.5	—	—	—	A	—	A
2.2	—	—	—	A	—	B
3.3	—	—	—	A	—	B
4.7	—	—	A	B	—	C
6.8	A	—	—	B	—	C
10.0	—	—	B	C	—	C
15.0	B	—	—	—	C	D
22.0	—	—	—	—	C	—
33.0	—	—	—	C	D	—
47.0	C	—	—	D	E	—
68.0	—	—	D	—	E	—
100.0	—	—	—	E	F	—
150.0	—	—	F	—	—	—
220.0	—	—	—	—	—	—
330.0	F	—	—	—	—	—

TEMPERATURE COEFFICIENT FOR RIPPLE CURRENT				
Ambient Temperature	~ + 45°C	+ 85°C	+ 95°C	+ 105°C
Coefficient	1.0	0.7	0.4	0.25

PART MARKING*****
— Polarity ⊖
— Rated voltage
— Capacitance
— OS-CON
— Lot number
— Type
— Maximum operating temperature (+ 105°C)