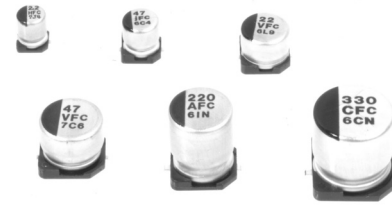
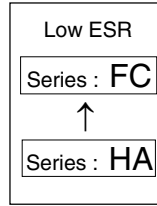


### Surface Mount Type

#### Series : FC

##### ■ Features

- Life time: 105°C 1000 h
- Low impedance (1/2 that of HA series)
- 5.5 mm height ( $\leq \phi 6.3$ )

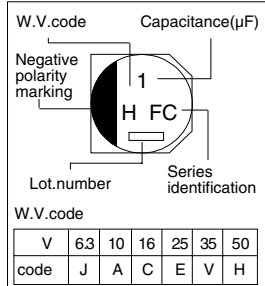


##### ■ Specifications

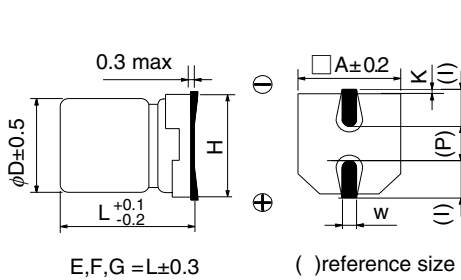
Operating Temp. Range	-40 to +105°C							
Rated W.V. Range	6.3 to 50 V .DC							
Nominal Cap. Range	1 to 1500 $\mu$ F							
Capacitance Tolerance	$\pm 20\%$ (120Hz/+20°C)							
D.C. Leakage Current	$I \leq 0.01 CV$ or $3(\mu A)$ after 2 minutes (whichever is greater)							
Impedance & $\tan \delta$	Refer to standard products table.							
Characteristics at Low Temperature	W.V. (V)	6.3	10	16	25	35	50	(Impedance ratio max at 120Hz)
	-25 / +20 °C	2	2	2	2	2	2	
	-40 / +20 °C	3	3	3	3	3	3	
Endurance	After applying rated working voltage for 1000 hours at +105 $\pm 2^\circ$ C and then being stabilized at +20°C, capacitors shall meet the following limits .							
	Capacitance change	$\pm 20\%$ of initial measured value						
	D.F.	$\leq 200\%$ of initial specified value						
Shelf Life	After storage for 1000 hours at +105 $\pm 2^\circ$ C with no voltage applied and then being stabilized at +20°C, capacitor shall meet the limits specified in "Endurance." (With voltage treatment)							
	After reflow soldering (refer to Application Guidelines) and then being stabilized at +20°C, capacitor shall meet the following limits.							
	Capacitance change	$\pm 10\%$ of initial measured value						
Resistance to Soldering Heat	After reflow soldering (refer to Application Guidelines) and then being stabilized at +20°C, capacitor shall meet the following limits.							
	D.F.	$\leq$ initial specified value						
	D.C leakage current	$\leq$ initial specified value						

##### ■ Marking

Example; 50V1 $\mu$ F(polarized)



##### ■ Dimensions in mm (not to scale)



Size code	D	L	A	H	I	W	P	K
B	4.0	5.4	4.3	5.5 MAX	1.8	0.65 $\pm 0.1$	1.0	0.35 <sup>+0.15</sup> <sub>-0.20</sub>
C	5.0	5.4	5.3	6.5 MAX	2.2	0.65 $\pm 0.1$	1.5	0.35 <sup>+0.15</sup> <sub>-0.20</sub>
D	6.3	5.4	6.6	7.8 MAX	2.6	0.65 $\pm 0.1$	1.8	0.35 <sup>+0.15</sup> <sub>-0.20</sub>
E	8.0	6.2	8.3	9.5 MAX	3.4	0.65 $\pm 0.1$	2.2	0.35 <sup>+0.15</sup> <sub>-0.20</sub>
F	8.0	10.2	8.3	10.0 MAX	3.4	0.90 $\pm 0.2$	3.1	0.70 $\pm 0.2$
G	10.0	10.2	10.3	12.0 MAX	3.5	0.90 $\pm 0.2$	4.6	0.70 $\pm 0.2$

##### ■ Case size

( ) : shows W.V. code

W.V.(V)	6.3	10	16	25	35	50
Cap.( $\mu$ F)	(0J)	(1A)	(1C)	(1E)	(1V)	(1H)
1.0						B
2.2						B
3.3						B
4.7					B	C
6.8				B	C	
10			B	C	D	
22	B		C	D	D	E
33		C		D	E	F
47	C		D	E	E	G
68			E	F		
100	D	E	E	F	G	G
150		E				
220	E	F	G	G	G	G
330	F		G	G	G	
470		G	G	G		
680			G			
1000	G	G				
1500	G					

##### ■ Impedance ( $\Omega$ ) (100kHz/+20°C)

(6.3 to 35W.V)

Size Code	B	C	D	E	F	G
Impedance	3.0	1.8	1.0	0.4	0.3	0.15

(50W.V)

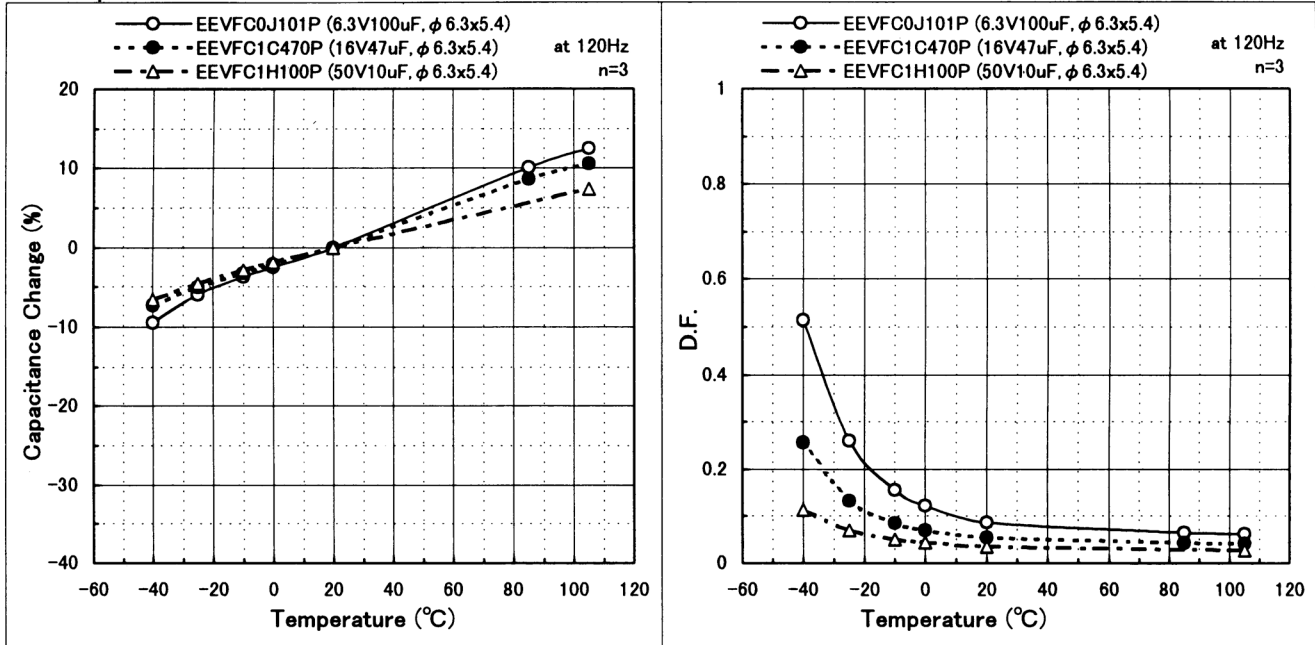
Size Code	B	C	D	E	F	G
Impedance	5.0	3.0	2.0	0.7	0.6	0.3

### Standard Products

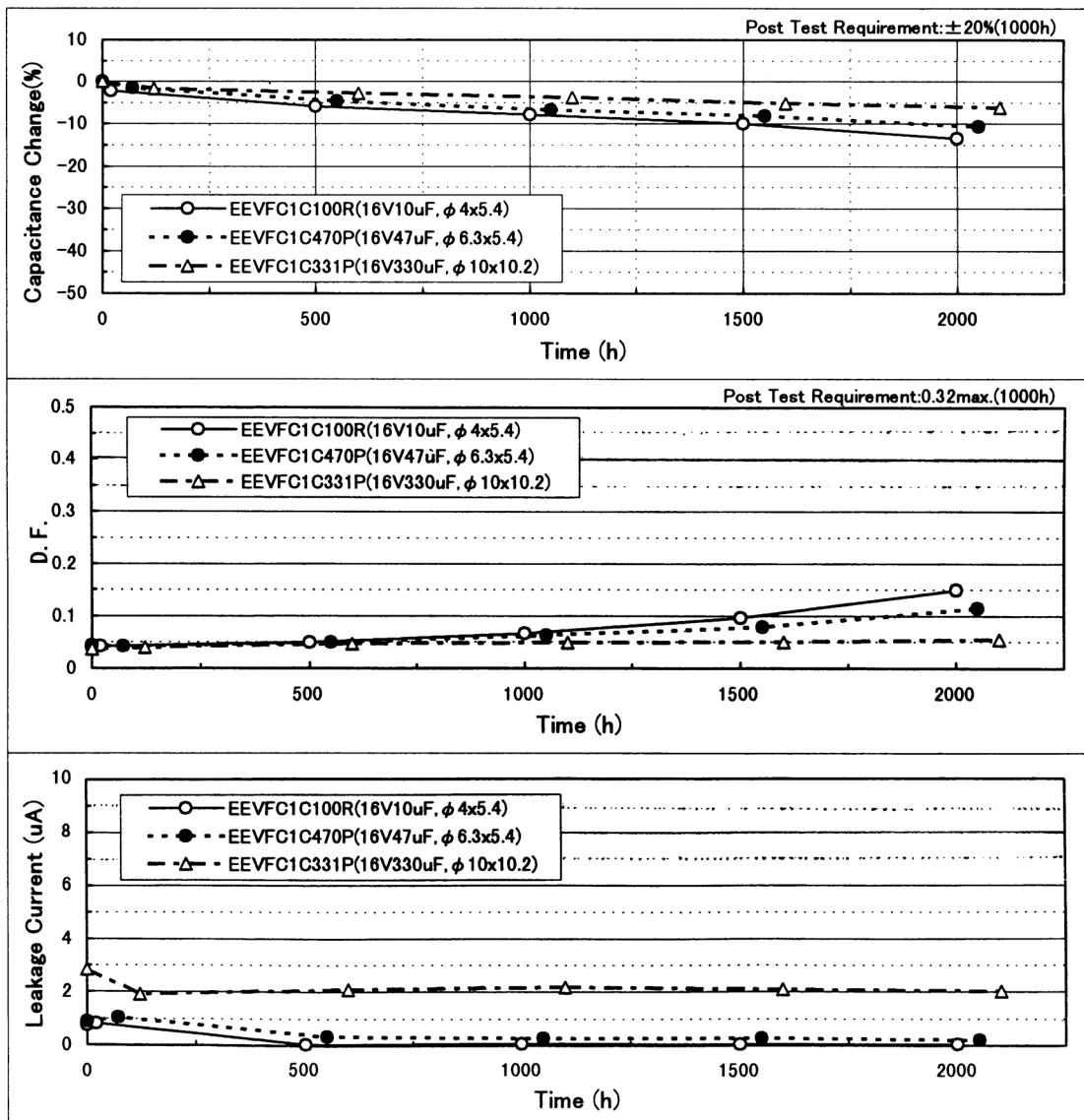
W.V. [V.DC]	Cap. [μF]	Part No.	tan δ	R.C. [mA rms]	Imp. [ohms]	Size [mm]	
						D	L
6.3	22	EEVFC0J220R	0.26	60	3.00	4	5.4
	47	EEVFC0J470R	0.26	95	1.80	5	5.4
	100	EEVFC0J101P	0.26	140	1.00	6.3	5.4
	220	EEVFC0J221P	0.26	230	0.40	8	6.2
	330	EEVFC0J331P	0.26	450	0.30	8	10.2
	1000	EEVFC0J102P	0.26	670	0.15	10	10.2
	1500	EEVFC0J152P	0.26	670	0.15	10	10.2
10	33	EEVFC1A330R	0.19	95	1.80	5	5.4
	100	EEVFC1A101P	0.19	230	0.40	8	6.2
	150	EEVFC1A151P	0.19	230	0.40	8	6.2
	220	EEVFC1A221P	0.19	450	0.30	8	10.2
	470	EEVFC1A471P	0.19	670	0.15	10	10.2
	1000	EEVFC1A102P	0.22	670	0.15	10	10.2
16	10	EEVFC1C100R	0.16	60	3.00	4	5.4
	22	EEVFC1C220R	0.16	95	1.80	5	5.4
	47	EEVFC1C470P	0.16	140	1.00	6.3	5.4
	68	EEVFC1C680P	0.16	230	0.40	8	6.2
	100	EEVFC1C101P	0.16	230	0.40	8	6.2
	220	EEVFC1C221P	0.16	670	0.15	10	10.2
	330	EEVFC1C331P	0.16	670	0.15	10	10.2
	470	EEVFC1C471P	0.16	670	0.15	10	10.2
25	680	EEVFC1C681P	0.16	670	0.15	10	10.2
	6.8	EEVFC1E6R8R	0.14	60	3.00	4	5.4
	22	EEVFC1E220P	0.14	140	1.00	6.3	5.4
	33	EEVFC1E330P	0.14	140	1.00	6.3	5.4
	47	EEVFC1E470P	0.14	230	0.40	8	6.2
25	68	EEVFC1E680P	0.14	450	0.30	8	10.2
	100	EEVFC1E101P	0.14	450	0.30	8	10.2
	220	EEVFC1E221P	0.14	670	0.15	10	10.2
	330	EEVFC1E331P	0.14	670	0.15	10	10.2
	470	EEVFC1E471P	0.14	670	0.15	10	10.2
	4.7	EEVFC1V4R7R	0.12	60	3.00	4	5.4
	6.8	EEVFC1V6R8R	0.12	95	1.80	5	5.4
35	10	EEVFC1V100R	0.12	95	1.80	5	5.4
	22	EEVFC1V220P	0.12	140	1.00	6.3	5.4
	33	EEVFC1V330P	0.12	230	0.40	8	6.2
	47	EEVFC1V470P	0.12	230	0.40	8	6.2
	100	EEVFC1V101P	0.12	670	0.15	10	10.2
	220	EEVFC1V221P	0.12	670	0.15	10	10.2
	330	EEVFC1V331P	0.12	670	0.15	10	10.2
50	1	EEVFC1H1R0R	0.12	30	5.00	4	5.4
	2.2	EEVFC1H2R2R	0.12	30	5.00	4	5.4
	3.3	EEVFC1H3R3R	0.12	30	5.00	4	5.4
	4.7	EEVFC1H4R7R	0.12	50	3.00	5	5.4
	10	EEVFC1H100P	0.12	70	2.00	6.3	5.4
	22	EEVFC1H220P	0.12	120	0.70	8	6.2
	33	EEVFC1H330P	0.12	300	0.60	8	10.2
	47	EEVFC1H470P	0.12	500	0.30	10	10.2
	100	EEVFC1H101P	0.12	500	0.30	10	10.2
	220	EEVFC1H221P	0.12	500	0.30	10	10.2

tan δ = at 120Hz/+20°C, Ripple current = 100kHz/+105°C,  
Impedance = 100kHz/+20°C

### Temperature Characteristics

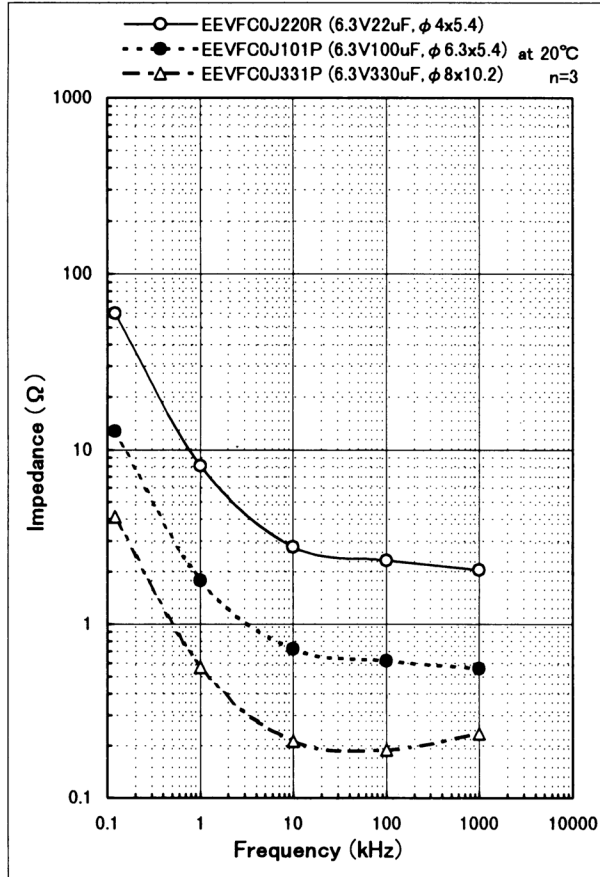


### Load Life Data

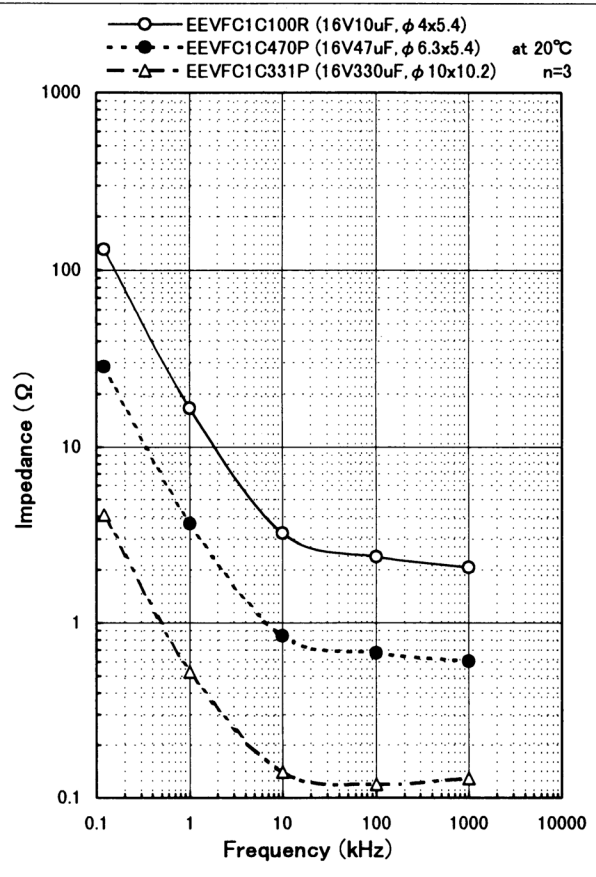


### Frequency Characteristics

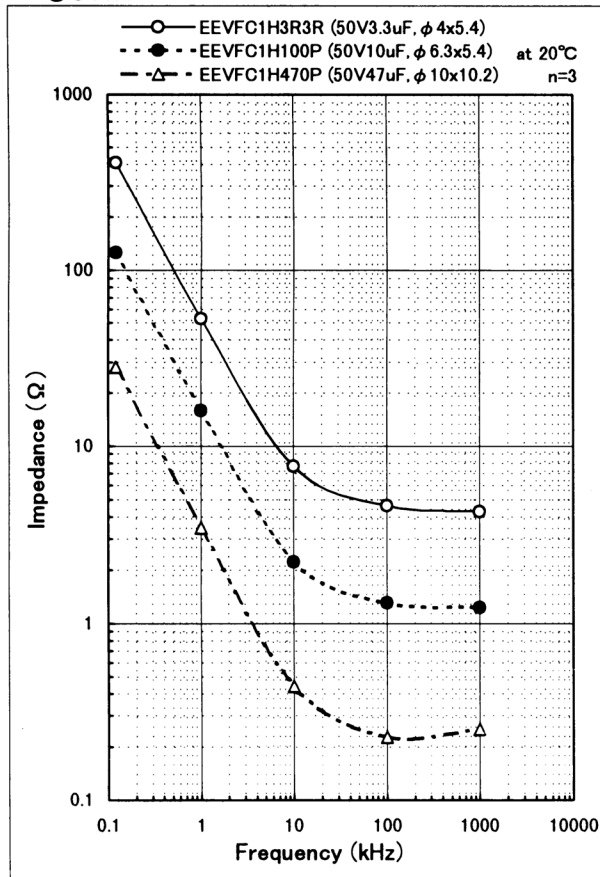
◎ 6.3WV



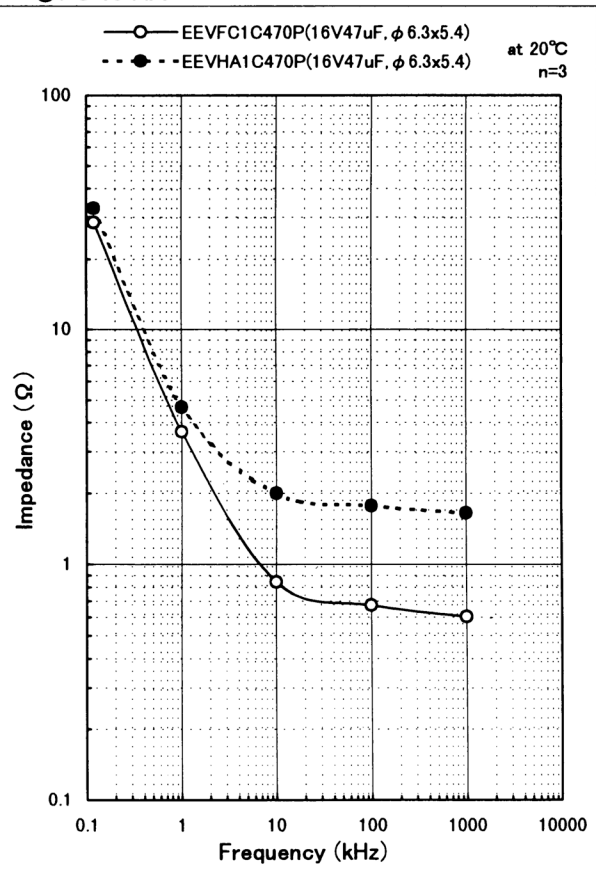
◎ 16WV



◎ 50WV



◎ FC vs HA



### Temperature Characteristics

