Surface Mount Type

Series: **FC** Type: **V**

Low impedance

FC
↑
HA



■ Features

- Endurance : 105 °C 1000 h
- Low impedance (1/2 for HA series)
- Vibration-proof product is available upon request. (ϕ8 mm and larger)
- AEC-Q200 qualified*
- RoHS directive compliant

■ Specifications

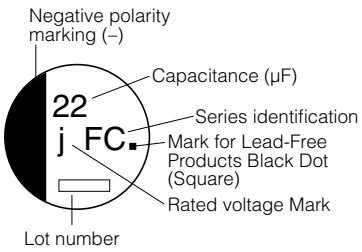
Category Temp. Range	−40 °C to +105 °C							
Rated W.V. Range	6.3 V.DC to 50 V.DC							
Nominal Cap. Range	1 µF to 1500 µF							
Capacitance Tolerance	±20 % (120 Hz/+20 °C)							
DC Leakage Current	I ≦ 0.01 CV or 3 (µA) After 2 minutes (Whichever is greater)							
tan δ	Please see the attached standard products list							
Characteristics at Low Temperature	W.V. (V)	6.3	10	16	25	35	50	(Impedance ratio at 120 Hz)
	Z(−25 °C) / Z(+20 °C)	2	2	2	2	2	2	
	Z(−40 °C) / Z(+20 °C)	3	3	3	3	3	3	
Endurance	After applying rated working voltage for 1000 hours at +105 °C±2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits.							
	Capacitance change	±20 % of initial measured value						
	tan δ	≦ 200 % of initial specified value						
	DC leakage current	≦ initial specified value						
Shelf Life	After storage for 1000 hours at +105 °C±2 °C with no voltage applied and then being stabilized at +20 °C, capacitors shall meet the limits specified in Endurance.(With voltage treatment)							
Resistance to Soldering Heat	After reflow soldering and then being stabilized at +20 °C, capacitor shall meet the following limits.							
	Capacitance change	±10 % of initial measured value						
	tan δ	≦ initial specified value						
	DC leakage current	≦ initial specified value						

■ Frequency correction factor for ripple current

	Frequency (Hz)				
	50, 60	120	1 k	10 k	100 k to
Correction factor	0.70	0.75	0.90	0.95	1.00

■ Marking

Example:6.3 V 22 µF
Marking color : BLACK

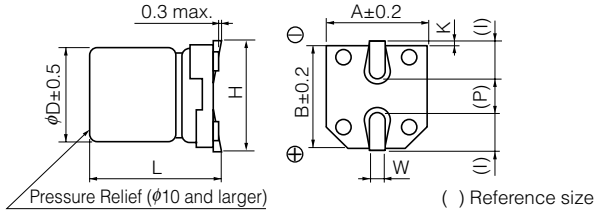


Rated Voltage Mark

j	6.3 V	E	25 V
A	10 V	V	35 V
C	16 V	H	50 V

■ Dimensions in mm (not to scale)

(Unit : mm)



Size code	D	L	A, B	H	I	W	P	K
B	4.0	$5.4^{+0.1}_{-0.2}$	4.3	5.5 max.	1.8	0.65±0.1	1.0	$0.35^{+0.15}_{-0.20}$
C	5.0	$5.4^{+0.1}_{-0.2}$	5.3	6.5 max.	2.2	0.65±0.1	1.5	$0.35^{+0.15}_{-0.20}$
D	6.3	$5.4^{+0.1}_{-0.2}$	6.6	7.8 max.	2.6	0.65±0.1	1.8	$0.35^{+0.15}_{-0.20}$
E	8.0	6.2±0.3	8.3	9.5 max.	3.4	0.65±0.1	2.2	$0.35^{+0.15}_{-0.20}$
F	8.0	10.2±0.3	8.3	10.0 max.	3.4	0.90±0.2	3.1	0.70±0.2
G	10.0	10.2±0.3	10.3	12.0 max.	3.5	0.90±0.2	4.6	0.70±0.2

✻ This product qualify for AEC-Q200, but it has some deviations.

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Should a safety concern arise regarding this product, please be sure to contact us immediately.

01 Mar. 2014

■ Standard Products

Endurance : 105 °C 1000 h

W.V. (V)	Cap. (±20 %) (μF)	Case size Dia. (mm)	Length (mm)	Size Code	Specification Ripple Current (100 kHz) (+105°C) (mA r.m.s.)	tan δ (120 Hz) (+20 °C)	Impedance (100 kHz) (+20 °C) (Ω)	Part No. (RoHS:compliant)	Reflow	Min. Packaging Q'ty Taping (pcs)
6.3	22	4	5.4	B	60	0.26	3.00	EEEFC0J220R	(1)	2000
	47	5	5.4	C	95	0.26	1.80	EEEFC0J470R	(1)	1000
	68	6.3	5.4	D	140	0.26	1.00	EEEFC0J680P	(1)	1000
	100	6.3	5.4	D	140	0.26	1.00	EEEFC0J101P	(1)	1000
	220	8	6.2	E	230	0.26	0.40	EEEFC0J221P	(2)	1000
	330	8	10.2	F	450	0.26	0.30	EEEFC0J331P	(2)	500
	1000	10	10.2	G	670	0.26	0.15	EEEFC0J102P	(2)	500
	1500	10	10.2	G	670	0.26	0.15	EEEFC0J152P	(2)	500
10	33	5	5.4	C	95	0.19	1.80	EEEFC1A330R	(1)	1000
	100	8	6.2	E	230	0.19	0.40	EEEFC1A101P	(2)	1000
	150	8	6.2	E	230	0.19	0.40	EEEFC1A151P	(2)	1000
	220	8	10.2	F	450	0.19	0.30	EEEFC1A221P	(2)	500
	470	10	10.2	G	670	0.19	0.15	EEEFC1A471P	(2)	500
	1000	10	10.2	G	670	0.19	0.15	EEEFC1A102P	(2)	500
16	10	4	5.4	B	60	0.16	3.00	EEEFC1C100R	(1)	2000
	22	5	5.4	C	95	0.16	1.80	EEEFC1C220R	(1)	1000
	47	6.3	5.4	D	140	0.16	1.00	EEEFC1C470P	(1)	1000
	68	8	6.2	E	230	0.16	0.40	EEEFC1C680P	(2)	1000
	100	8	6.2	E	230	0.16	0.40	EEEFC1C101P	(2)	1000
	220	10	10.2	G	670	0.16	0.15	EEEFC1C221P	(2)	500
	330	10	10.2	G	670	0.16	0.15	EEEFC1C331P	(2)	500
	470	10	10.2	G	670	0.16	0.15	EEEFC1C471P	(2)	500
	680	10	10.2	G	670	0.16	0.15	EEEFC1C681P	(2)	500
25	6.8	4	5.4	B	60	0.14	3.00	EEEFC1E6R8R	(1)	2000
	22	6.3	5.4	D	140	0.14	1.00	EEEFC1E220P	(1)	1000
	33	6.3	5.4	D	140	0.14	1.00	EEEFC1E330P	(1)	1000
	47	8	6.2	E	230	0.14	0.40	EEEFC1E470P	(2)	1000
	68	8	10.2	F	450	0.14	0.30	EEEFC1E680P	(2)	500
	100	8	10.2	F	450	0.14	0.30	EEEFC1E101P	(2)	500
	220	10	10.2	G	670	0.14	0.15	EEEFC1E221P	(2)	500
	330	10	10.2	G	670	0.14	0.15	EEEFC1E331P	(2)	500
	470	10	10.2	G	670	0.14	0.15	EEEFC1E471P	(2)	500
35	1	4	5.4	B	60	0.12	3.00	EEEFC1V1R0R	(1)	2000
	2.2	4	5.4	B	60	0.12	3.00	EEEFC1V2R2R	(1)	2000
	3.3	4	5.4	B	60	0.12	3.00	EEEFC1V3R3R	(1)	2000
	4.7	4	5.4	B	60	0.12	3.00	EEEFC1V4R7R	(1)	2000
	6.8	5	5.4	C	95	0.12	1.80	EEEFC1V6R8R	(1)	1000
	10	5	5.4	C	95	0.12	1.80	EEEFC1V100R	(1)	1000
	22	6.3	5.4	D	140	0.12	1.00	EEEFC1V220P	(1)	1000
	33	8	6.2	E	230	0.12	0.40	EEEFC1V330P	(2)	1000
	47	8	6.2	E	230	0.12	0.40	EEEFC1V470P	(2)	1000
	100	10	10.2	G	670	0.12	0.15	EEEFC1V101P	(2)	500
	220	10	10.2	G	670	0.12	0.15	EEEFC1V221P	(2)	500
	330	10	10.2	G	670	0.12	0.15	EEEFC1V331P	(2)	500
50	1	4	5.4	B	30	0.12	5.00	EEEFC1H1R0R	(1)	2000
	2.2	4	5.4	B	30	0.12	5.00	EEEFC1H2R2R	(1)	2000
	3.3	4	5.4	B	30	0.12	5.00	EEEFC1H3R3R	(1)	2000
	4.7	5	5.4	C	50	0.12	3.00	EEEFC1H4R7R	(1)	1000
	10	6.3	5.4	D	70	0.12	2.00	EEEFC1H100P	(1)	1000
	22	8	6.2	E	120	0.12	0.70	EEEFC1H220P	(2)	1000
	33	8	10.2	F	300	0.12	0.60	EEEFC1H330P	(2)	500
	47	10	10.2	G	500	0.12	0.30	EEEFC1H470P	(2)	500
	100	10	10.2	G	500	0.12	0.30	EEEFC1H101P	(2)	500
	220	10	10.2	G	500	0.12	0.30	EEEFC1H221P	(2)	500

· Please refer to the page of “Reflow Profile” and “The Taping Dimensions”.
· When requesting vibration-proof product, please put the last “V” instead to “P”

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