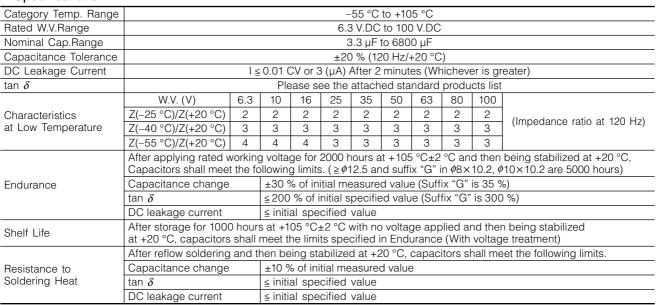
Surface Mount Type

Series: **FK** Type: **V**

■ Features

- Endurance: 2000 h to 5000 h at 105 °C
- Low impedance (40 % to 60 % less than FC series)
 Miniaturized (30 % to 50 % less than FC series)
- Vibration-proof product is available upon request. (φ8 mm and larger)
- AEC-Q200 qualified*
- RoHS directive compliant

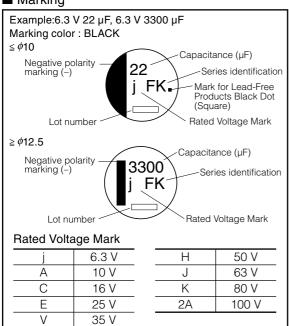
■ Specifications



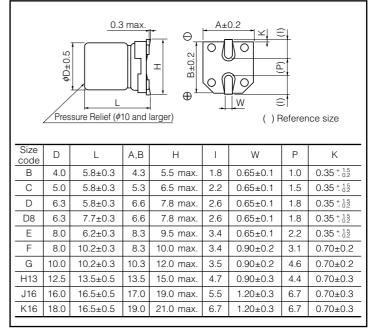
■ Frequency correction factor for ripple current

		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



■ Dimensions in mm (not to scale)



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

(Unit: mm)

Panasonic

■ Standard Products

■ Sta	ndard Pro	ducts			ı			Endurance : 105 °C	2000 h (🛚	
		Case size			Specification					Min. Packaging Q'ty
W.V.	Cap. (±20 %)	Dia.	Length	* Size Code		Impedance (100 kHz) (+20 °C)	(120 Hz)	Part No. (RoHS:compliant)	Reflow	Taping
(V)	(µF)	(mm)	(mm)		(mA r.m.s.)	(Ω)				(pcs)
	22	4	5.8	В	90	1.35	0.26	EEEFK0J220R	(1)	2000
	47	4	5.8	(B)	90	1.35	0.26	EEEFK0J470UR	(1)	2000
		5	5.8	C	160	0.70	0.26	EEEFK0J470R	(1)	1000
	100	5 6.3	5.8 5.8	(C) D	160 240	0.70 0.36	0.26 0.26	EEEFK0J101UR EEEFK0J101P	(1)	1000 1000
	220	6.3	5.8	D	240	0.36	0.26	EEEFK0J221P	(1)	1000
6.3		6.3	7.7	D8	280	0.34	0.26	EEEFK0J331XP	(1)	900
0.0	330	8	6.2	E	300	0.26	0.26	EEEFK0J331P	(2)	1000
	470	8	10.2	F	600	0.16	0.26	EEEFK0J471P	(2)	500
	1000	8	10.2	F	600	0.16	0.26	EEEFK0J102P	(2)	500
	1500	10	10.2	G	850	0.08	0.26	EEEFK0J152P	(2)	500
	3300	12.5	13.5	H13	1100	0.06	0.30	EEVFK0J332Q	(3)	200
	6800	16	16.5	J16	1800	0.035	0.36	EEVFK0J682M	(3)	125
	22	4	5.8	B	90	1.35	0.19	EEEFK1A220R	(1)	2000
	33	<u>4</u> 5	5.8 5.8	(B) C	90	1.35 0.70	0.19 0.19	EEEFK1A330UR EEEFK1A330R	(1)	2000 1000
	150	6.3	5.8	D	240	0.70	0.19	EEEFK1A330H	(1)	1000
		6.3	7.7	D8	280	0.34	0.19	EEEFK1A221XP	(1)	900
	220	8	6.2	E	300	0.26	0.19	EEEFK1A221P	(2)	1000
10	330	8	10.2	F	600	0.16	0.19	EEEFK1A331P	(2)	500
-	470	8	10.2	F	600	0.16	0.19	EEEFK1A471P	(2)	500
	680	8	10.2	F	600	0.16	0.19	EEEFK1A681P	(2)	500
	1000	10	10.2	G	850	0.08	0.19	EEEFK1A102P	(2)	500
	2200	12.5	13.5	H13	1100	0.06	0.21	EEVFK1A222Q	(3)	200
	4700	16	16.5	J16	1800	0.035	0.25	EEVFK1A472M	(3)	125
	6800 10	18 4	16.5	K16	2060 90	0.033 1.35	0.29 0.16	EEVFK1A682M	(3)	125 2000
		4	5.8 5.8	(B)	90	1.35	0.16	EEEFK1C100R EEEFK1C220UR	(1)	2000
	22	5	5.8	C	160	0.70	0.16	EEEFK1C2200R	(1)	1000
		5	5.8	(C)	160	0.70	0.16	EEEFK1C470UR	(1)	1000
	47	6.3	5.8	D	240	0.36	0.16	EEEFK1C470P	(1)	1000
	68	6.3	5.8	D	240	0.36	0.16	EEEFK1C680P	(1)	1000
	100	6.3	5.8	D	240	0.36	0.16	EEEFK1C101P	(1)	1000
16	150	6.3	7.7	D8	280	0.34	0.16	EEEFK1C151XP	(1)	900
.0	220	6.3	7.7	D8	280	0.34	0.16	EEEFK1C221XP	(1)	900
		8	6.2	E	300	0.26	0.16	EEEFK1C221P	(2)	1000
	330 470	<u>8</u> 8	10.2 10.2	F F	600	0.16 0.16	0.16 0.16	EEEFK1C331P EEEFK1C471P	(2)	500 500
	680	10	10.2	G	850	0.10	0.16	EEEFK1C681P	(2)	500
	1500	12.5	13.5	H13	1100	0.06	0.16	EEVFK1C152Q	(3)	200
	3300	16	16.5	J16	1800	0.035	0.20	EEVFK1C332M	(3)	125
	4700	18	16.5	K16	2060	0.033	0.22	EEVFK1C472M	(3)	125
_	10	4	5.8	В	90	1.35	0.14	EEEFK1E100R	(1)	2000
	22	5	5.8	C	160	0.70	0.14	EEEFK1E220R	(1)	1000
	33	5	5.8	(C)	160	0.70	0.14	EEEFK1E330UR	(1)	1000
		6.3	5.8	D	240	0.36	0.14	EEEFK1E330P	(1)	1000
	47 68	6.3 6.3	5.8 5.8	D D	240 240	0.36 0.36	0.14 0.14	EEEFK1E470P EEEFK1E680P	(1)	1000
		6.3	7.7	D8	280	0.36	0.14	EEEFK1E080P	(1)	900
	100	8	6.2	E	300	0.26	0.14	EEEFK1E101P	(2)	1000
25	150	8	10.2	F	600	0.16	0.14	EEEFK1E151P	(2)	500
	220	8	10.2	F	600	0.16	0.14	EEEFK1E221P	(2)	500
	330	8	10.2	F	600	0.16	0.14	EEEFK1E331P	(2)	500
	470	10	10.2	G	850	0.08	0.14	EEEFK1E471P	(2)	500
	1000	12.5	13.5	H13	1100	0.06	0.14	EEVFK1E102Q	(3)	200
	1500	16	16.5	J16	1800	0.035	0.14	EEVFK1E152M	(3)	125
	2200	16	16.5	J16	1800	0.035	0.16	EEVFK1E222M	(3)	125
	3300	18	16.5	K16	2060	0.033	0.18	EEVFK1E332M	(3)	125

^{*} Size code():Miniaturization product
· 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"

Endurance : 105 °C 2000 h ($\geq \phi$ 12.5 : 5000 h)

Panasonic

■ Standard Products

					1				· · ·	έφιζ.5 . 5000 Π,
		Case size			Specification					Min. Packaging Q'ty
14/1/	Cap.				Ripple	Impedance	tan δ	5		
W.V.	(±20 %)	Ċ:		* Size	Current	Impodance	tarro	Part No.	Reflow	_ ·
	, ,	Dia.	Length	Code		(100 kHz)	(120 Hz)	(RoHS:compliant)		Taping
					(+105 °C)	(+20 °C)	(+20 °C)			
(V)	(µF)	(mm)	(mm)		(mA r.m.s.)	(Ω)				(pcs)
	4.7	4	5.8	В	90	1.35	0.12	EEEFK1V4R7R	(1)	2000
	10	4	5.8	(B)	90	1.35	0.12	EEEFK1V100UR	(1)	2000
		5	5.8	С	160	0.70	0.12	EEEFK1V100R	(1)	1000
	22	5	5.8	С	160	0.70	0.12	EEEFK1V220R	(1)	1000
	33	6.3	5.8	D	240	0.36	0.12	EEEFK1V330P	(1)	1000
	47	6.3	5.8	D	240	0.36	0.12	EEEFK1V470P	(1)	1000
	68	6.3 6.3	7.7 7.7	D8 D8	280 280	0.34	0.12 0.12	EEEFK1V680XP EEEFK1V101XP	(1)	900 900
35	100	8	10.2	F	600	0.34	0.12	EEEFK1V101AP	(2)	500
	150	8	10.2	F	600	0.16	0.12	EEEFK1V151P	(2)	500
	220	8	10.2	F	600	0.16	0.12	EEEFK1V221P	(2)	500
	330	10	10.2	. G	850	0.08	0.12	EEEFK1V331P	(2)	500
	470	12.5	13.5	H13	1100	0.06	0.12	EEVFK1V471Q	(3)	200
	680	12.5	13.5	H13	1100	0.06	0.12	EEVFK1V681Q	(3)	200
	1000	16	16.5	J16	1800	0.035	0.12	EEVFK1V102M	(3)	125
	1500	16	16.5	J16	1800	0.035	0.12	EEVFK1V152M	(3)	125
	4.7	4	5.8	В	60	2.90	0.10	EEEFK1H4R7R	(1)	2000
	10	5	5.8	(C)	85	1.52	0.10	EEEFK1H100UR	(1)	1000
		6.3	5.8	<u>D</u>	165	0.88	0.10	EEEFK1H100P	(1)	1000
	22	6.3	5.8	D	165	0.88	0.10	EEEFK1H220P	(1)	1000
	33	6.3	7.7 6.2	D8 E	195 195	0.68 0.68	0.10 0.10	EEEFK1H330XP	(1)	900
		8 6.3	7.7	<u>_</u> D8	195	0.68	0.10	EEEFK1H330P EEEFK1H470XP	(2)	900
	47	8	6.2	E	195	0.68	0.10	EEEFK1H470P	(2)	1000
50	100	8	10.2	F	350	0.34	0.10	EEEFK1H101P	(2)	500
00	150	10	10.2	. G	670	0.18	0.10	EEEFK1H151P	(2)	500
	220	10	10.2	G	670	0.18	0.10	EEEFK1H221P	(2)	500
	330	12.5	13.5	H13	900	0.12	0.10	EEVFK1H331Q	(3)	200
	390	12.5	13.5	H13	900	0.12	0.10	EEVFK1H391Q	(3)	200
	470	16	16.5	J16	1610	0.073	0.10	EEVFK1H471M	(3)	125
	560	16	16.5	J16	1610	0.073	0.10	EEVFK1H561M	(3)	125
	680	16	16.5	J16	1610	0.073	0.10	EEVFK1H681M	(3)	125
	1000	16	16.5	J16	1610	0.073	0.10	EEVFK1H102M	(3)	125
	4.7	5 6.3	5.8 5.8	C D	50 80	3.00 1.50	0.08	EEEFK1J4R7R EEEFK1J100P	(1)	1000 1000
		6.3	7.7	 D8	120	1.20	0.08	EEEFK1J220XP	(1)	900
	22	8	6.2	E	120	1.20	0.08	EEEFK1J220P	(2)	1000
	33	8	10.2	F	250	0.65	0.08	EEEFK1J330P	(2)	500
00	47	8	10.2	F	250	0.65	0.08	EEEFK1J470P	(2)	500
63	68	8	10.2	(F)	250	0.65	0.08	EEEFK1J680UP	(2)	500
	100	10	10.2	G	400	0.35	0.08	EEEFK1J101P	(2)	500
	150	12.5	13.5	H13	800	0.16	0.08	EEVFK1J151Q	(3)	200
	220	12.5	13.5	H13	800	0.16	0.08	EEVFK1J221Q	(3)	200
	470	16	16.5	J16	1410	0.082	0.08	EEVFK1J471M	(3)	125
	680	18	16.5	K16	1690	0.08	0.08	EEVFK1J681M	(3)	125
	3.3 4.7	5 6.3	5.8 5.8	C D	25 40	5.00 3.00	0.08	EEEFK1K3R3R EEEFK1K4R7P	(1)	1000 1000
		6.3	7.7	 D8	60	2.40	0.08	EEEFK1K100XP	(1)	900
	10	8	6.2	E	60	2.40	0.08	EEEFK1K100AF	(2)	1000
	22	8	10.2	F	130	1.30	0.08	EEEFK1K220P	(2)	500
00	33	8	10.2	F	130	1.30	0.08	EEEFK1K330P	(2)	500
80	47	10	10.2	G	200	0.70	0.08	EEEFK1K470P	(2)	500
	68	12.5	13.5	H13	500	0.32	0.08	EEVFK1K680Q	(3)	200
	100	12.5	13.5	H13	500	0.32	0.08	EEVFK1K101Q	(3)	200
	150	12.5	13.5	H13	500	0.32	0.08	EEVFK1K151Q	(3)	200
	330	16	16.5	J16	793	0.17	0.08	EEVFK1K331M	(3)	125
	470	18	16.5	K16	917	0.153	0.08	EEVFK1K471M	(3)	125

^{*} Size code():Miniaturization product
· 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"

Endurance : 105 °C 2000 h ($\ge \phi 12.5$: 5000 h)

Panasonic

■ Standard Products

		Case size			Specification					Min. Packaging Q'ty
W.V.	Cap. (±20 %)	Dia.	Length	* Size Code	Current (100 kHz)	Impedance (100 kHz) (+20 °C)		Part No. (RoHS:compliant)	Reflow	Taping
(V)	(µF)	(mm)	(mm)		(mA r.m.s.)	(Ω)				(pcs)
	22	8	10.2	F	130	1.30	0.07	EEEFK2A220P	(2)	500
	33	10	10.2	G	200	0.70	0.07	EEEFK2A330P	(2)	500
	47	12.5	13.5	H13	500	0.32	0.07	EEVFK2A470Q	(3)	200
100	68	12.5	13.5	H13	500	0.32	0.07	EEVFK2A680Q	(3)	200
100	100	16	16.5	J16	793	0.17	0.07	EEVFK2A101M	(3)	125
	150	16	16.5	J16	793	0.17	0.07	EEVFK2A151M	(3)	125
	220	18	16.5	K16	917	0.153	0.07	EEVFK2A221M	(3)	125
	330	18	16.5	K16	917	0.153	0.07	EEVFK2A331M	(3)	125

■ Endurace 5000 h Products

■ End	lurace 50	000 h Pro	oducts	Endurance: 105 °C 5000 I						
			Case size			pecificatio	n			Min. Packaging Q'ty
W.V.	Cap. (±20 %)	Dia.	Length	Size Code	Current (100 kHz)	Impedance (100 kHz) (+20 °C)	tan δ (120 Hz) (+20 °C)	Part No. (RoHS:compliant)	Reflow	Taping
_(V)	(µF)	(mm)	(mm)		(mA r.m.s.)	(Ω)				(pcs)
	470	8	10.2	F	600	0.16	0.26	EEEFK0J471GP	(2)	500
6.3	1000	8	10.2	F	600	0.16	0.26	EEEFK0J102GP	(2)	500
	1500	10	10.2	G	850	0.08	0.26	EEEFK0J152GP	(2)	500
	330	8	10.2	F	600	0.16	0.19	EEEFK1A331GP	(2)	500
10	470	8	10.2	F	600	0.16	0.19	EEEFK1A471GP	(2)	500
10	680	8	10.2	F	600	0.16	0.19	EEEFK1A681GP	(2)	500
	1000	10	10.2	G	850	0.08	0.19	EEEFK1A102GP	(2)	500
	330	8	10.2	F	600	0.16	0.16	EEEFK1C331GP	(2)	500
16	470	8	10.2	F	600	0.16	0.16	EEEFK1C471GP	(2)	500
	680	10	10.2	G	850	0.08	0.16	EEEFK1C681GP	(2)	500
	150	8	10.2	F	600	0.16	0.14	EEEFK1E151GP	(2)	500
25	220	8	10.2	F	600	0.16	0.14	EEEFK1E221GP	(2)	500
25	330	8	10.2	F	600	0.16	0.14	EEEFK1E331GP	(2)	500
	470	10	10.2	G	850	0.08	0.14	EEEFK1E471GP	(2)	500
	100	8	10.2	F	600	0.16	0.12	EEEFK1V101GP	(2)	500
35	150	8	10.2	F	600	0.16	0.12	EEEFK1V151GP	(2)	500
33	220	8	10.2	F	600	0.16	0.12	EEEFK1V221GP	(2)	500
	330	10	10.2	G	850	0.08	0.12	EEEFK1V331GP	(2)	500
	100	8	10.2	F	350	0.34	0.10	EEEFK1H101GP	(2)	500
50	150	10	10.2	G	670	0.18	0.10	EEEFK1H151GP	(2)	500
	220	10	10.2	G	670	0.18	0.10	EEEFK1H221GP	(2)	500

[·] Please refer to the page of "Reflow Profile" and "The Taping Dimensions".

^{*} Size code():Miniaturization product
· 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"

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panasonic:

EEV-FK1V102M EEV-FK2A151M EEV-FK1H681M EEV-FK1J151Q EEE-FK1V100AR EEV-FK0J682M EEE-FK1E471V EEE-FK1J680UP EEV-FK1J681V EEE-FK1C681V EEV-FK1K101Q EEE-FK1H101GP EEE-FK1H221A EEE-FKE101XAP EEE-FKA330UAR EEE-FKC220UAR EEE-FKC470UAR EEE-FKE330UAR EEE-FKJ101UAR EEE-FKJ331XAP EEE-FKJ470UAR EEE-FKV100UAR EEE-FKV680XAP EEE-FK0J101AP EEE-FK0J102AP EEE-FK0J152AP EEE-FK0J220AR EEE-FK0J221AP EEE-FK0J331AP EEE-FK0J470AR EEE-FK0J471AP EEE-FK1A151AP EEE-FK1A220AR EEE-FK1A221AP EEE-FK1A330AR EEE-FK1A331AP EEE-FK1A471AP EEE-FK1A681AP EEE-FK1C220AR EEE-FK1C221AP EEE-FK1C331AP EEE-FK1C470AP EEE-FK1C471AP EEE-FK1C680AP EEE-FK1E100AR EEE-FK1E101AP EEE-FK1E151AP EEE-FK1E220AR EEE-FK1E221AP EEE-FK1E330AP EEE-FK1E331AP EEE-FK1E470AP EEE-FK1E680AP EEE-FK1V151AP EEE-FK1V220AR EEE-FK1V330AP EEE-FK1V4R7AR EEE-FK0J101P EEE-FK0J101UR EEE-FK0J102P EEE-FK0J152P EEE-FK0J220R EEE-FK0J221P EEE-FK0J331P EEE-FK0J331XP EEE-FK0J470R EEE-FK0J470UR EEE-FK0J471P EEE-FK1A102P EEE-FK1A151P EEE-FK1A220R EEE-FK1A221P EEE-FK1A221XP EEE-FK1A330R EEE-FK1A330UR EEE-FK1A331P EEE-FK1A471P EEE-FK1A681P EEE-FK1C100R EEE-FK1C101P EEE-FK1C151XP EEE-FK1C220R EEE-FK1C220UR EEE-FK1C221P EEE-FK1C221XP EEE-FK1C331P EEE-FK1C470P EEE-FK1C470UR EEE-FK1C471P EEE-FK1C680P EEE-FK1C681P EEE-FK1E100R EEE-FK1E101P EEE-FK1E101XP EEE-FK1E151P EEE-FK1E220R EEE-FK1E221P EEE-FK1E330P EEE-FK1E330UR EEE-FK1E331P