

## Surface Mount Type

Series : Medium-size **FK** Type : **V**

**High temperature**

**Lead-Free reflow (suffix : A\*)**



### Features

- Endurance : 105 °C 5000 h
- Vibration-proof product is available upon request.
- RoHS compliant

### Specifications

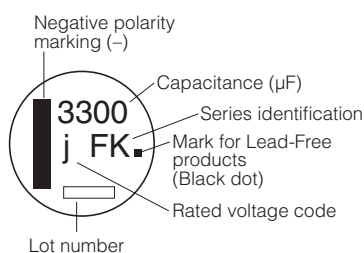
Category temperature range	-55 °C to +105 °C										
Rated voltage range	6.3 V.DC to 100 V.DC										
Capacitance range	47 μF to 6800 μF										
Capacitance tolerance	±20 % (120 Hz/+20 °C)										
Leakage current	I ≤ 0.01 CV (μA) After 2 minutes										
Dissipation factor (tan δ)	Please see the attached characteristics list										
Characteristics at low temperature	V.DC	6.3	10	16	25	35	50	63	80	100	(Impedance ratio at 120 Hz)
	Z(-25 °C)/Z(+20 °C)	2	2	2	2	2	2	2	2	2	
	Z(-40 °C)/Z(+20 °C)	3	3	3	3	3	3	3	3	3	
	Z(-55 °C)/Z(+20 °C)	4	4	4	3	3	3	3	3	3	
Endurance	After applying rated working voltage for 5000 hours at +105 °C±2 °C and then being stabilized at +20 °C, Capacitors shall meet the following limits.										
	Capacitance change	Within ±30 % of the initial value									
	tan δ	≤200 % of the initial limit									
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)										
	After reflow soldering and then being stabilized at +20 °C, capacitors shall meet the following limits.										
Resistance to soldering heat	Capacitance change	Within ±10 % of the initial value									
	tan δ	Within the initial limit									
	DC leakage current	Within the initial limit									
AEC-Q200	AEC-Q200 compliant										

### Frequency correction factor for ripple current

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

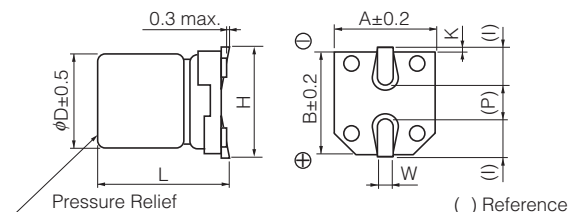
### Marking

Example : 6.3 V.DC 3300 μF  
Marking color : BLACK



R. Voltage (V.DC)	6.3	10	16	25	35	50	63	80	100
Code	j	A	C	E	V	H	J	K	2A

### Dimensions



(Unit : mm)

Size code	φD	L	A, B	H	I	W	P	K
H13	12.5	13.5±0.5	13.5	15.0 max.	4.7	0.90±0.3	4.4	0.70±0.30
J16	16.0	16.5±0.5	17.0	19.0 max.	5.5	1.20±0.3	6.7	0.70±0.30
K16	18.0	16.5±0.5	19.0	21.0 max.	6.7	1.20±0.3	6.7	0.70±0.30

**Characteristics list**

Endurance : 105 °C 5000 h

Rated voltage (V.DC)	Cap. (±20 %) (μF)	Case size (mm)		Size code	Specification			Part No.	Reflow	Min. Packaging Qty	
		φD	L		Ripple current (100 kHz) (+105 °C) (mA r.m.s.)	Impedance (100 kHz) (+20 °C) (Ω)	tan δ (120 Hz) (+20 °C)			Taping (pcs)	
6.3	3300	12.5	13.5	H13	1100	0.06	0.30	EEEFK0J332AQ	(9)	200	
	6800	16	16.5	J16	1800	0.035	0.36	EEEFK0J682AM	(9)	125	
10	2200	12.5	13.5	H13	1100	0.06	0.21	EEEFK1A222AQ	(9)	200	
	4700	16	16.5	J16	1800	0.035	0.25	EEEFK1A472AM	(9)	125	
	6800	18	16.5	K16	2060	0.033	0.29	EEEFK1A682AM	(9)	125	
16	1500	12.5	13.5	H13	1100	0.06	0.16	EEEFK1C152AQ	(9)	200	
	3300	16	16.5	J16	1800	0.035	0.20	EEEFK1C332AM	(9)	125	
	4700	18	16.5	K16	2060	0.033	0.22	EEEFK1C472AM	(9)	125	
25	1000	12.5	13.5	H13	1100	0.06	0.14	EEEFK1E102AQ	(9)	200	
	1500	16	16.5	J16	1800	0.035	0.16	EEEFK1E152AM	(9)	125	
	2200	16	16.5	J16	1800	0.035	0.16	EEEFK1E222AM	(9)	125	
	3300	18	16.5	K16	2060	0.033	0.18	EEEFK1E332AM	(9)	125	
35	470	12.5	13.5	H13	1100	0.06	0.12	EEEFK1V471AQ	(9)	200	
	680	12.5	13.5	H13	1100	0.06	0.12	EEEFK1V681AQ	(9)	200	
	1000	16	16.5	J16	1800	0.035	0.12	EEEFK1V102AM	(9)	125	
	1500	16	16.5	J16	1800	0.035	0.12	EEEFK1V152AM	(9)	125	
50	330	12.5	13.5	H13	900	0.12	0.12	EEEFK1H331AQ	(10)	200	
	390	12.5	13.5	H13	900	0.12	0.12	EEEFK1H391AQ	(10)	200	
	470	16	16.5	J16	1610	0.073	0.12	EEEFK1H471AM	(10)	125	
	560	16	16.5	J16	1610	0.073	0.12	EEEFK1H561AM	(10)	125	
	680	16	16.5	J16	1610	0.073	0.12	EEEFK1H681AM	(10)	125	
	1000	16	16.5	J16	1610	0.073	0.12	EEEFK1H102AM	(10)	125	
63	150	12.5	13.5	H13	800	0.16	0.10	EEEFK1J151AQ	(10)	200	
	220	12.5	13.5	H13	800	0.16	0.10	EEEFK1J221AQ	(10)	200	
	470	16	16.5	J16	1410	0.082	0.10	EEEFK1J471AM	(10)	125	
	680	18	16.5	K16	1690	0.08	0.10	EEEFK1J681AM	(10)	125	
80	68	12.5	13.5	H13	500	0.32	0.08	EEEFK1K680AQ	(11)	200	
	100	12.5	13.5	H13	500	0.32	0.08	EEEFK1K101AQ	(11)	200	
	150	12.5	13.5	H13	500	0.32	0.08	EEEFK1K151AQ	(11)	200	
	330	16	16.5	J16	793	0.17	0.08	EEEFK1K331AM	(11)	125	
	470	18	16.5	K16	917	0.153	0.08	EEEFK1K471AM	(11)	125	
100	47	12.5	13.5	H13	500	0.32	0.07	EEEFK2A470AQ	(11)	200	
	68	12.5	13.5	H13	500	0.32	0.07	EEEFK2A680AQ	(11)	200	
	100	16	16.5	J16	793	0.17	0.07	EEEFK2A101AM	(11)	125	
	150	16	16.5	J16	793	0.17	0.07	EEEFK2A151AM	(11)	125	
	220	18	16.5	K16	917	0.153	0.07	EEEFK2A221AM	(11)	125	
	330	18	16.5	K16	917	0.153	0.07	EEEFK2A331AM	(11)	125	

· Please refer to the page of "Reflow Profile" and "The Taping Dimensions".  
 · When requesting vibration-proof product, please put the last "V" instead to "Q" or "M"

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