



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Surface Mount Type

Series: **FKS** Type: **V**

High temperature Lead-Free reflow



■ Features

- Endurance: 2000 h at 105 °C
- 1 size smaller than series FK
- Vibration-proof product is available upon request. (ϕ 8 mm and larger)
- AEC-Q200 qualified*
- RoHS directive compliant

■ Specifications

Category Temp. Range	-55 °C to +105 °C							
Rated W.V. Range	6.3 V.DC to 50 V.DC							
Nominal Cap. Range	39 μ F to 1800 μ F							
Capacitance Tolerance	\pm 20 % (120 Hz/+20 °C)							
DC Leakage Current	$I \leq 0.01 CV$ or 3 (μ A) 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 120Hz)
	Z(-25 °C)/Z(+20 °C)	2	2	2	2	2	2	
	Z(-40 °C)/Z(+20 °C)	3	3	3	3	3	3	
	Z(-55 °C)/Z(+20 °C)	4	4	4	3	3	3	
Endurance	After applying rated working voltage for 2000 hours at +105°C \pm 2°C and then being stabilized at +20°C, capacitors shall meet the following limits.							
	Capacitance Change	\pm 30 % of initial measured value						
	tan δ	\leq 200 % initial specified value						
	DC Leakage Current	\leq initial specified value						
Shelf Life	After storage for 1000 hours at +105 °C \pm 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, capacitors shall meet the following limits.							
	Capacitance Change	\pm 10 % of initial measured value						
	tan δ	\leq initial specified value						
	DC Leakage Current	\leq initial specified value						

■ Frequency correction factor for ripple current

Capacitance (μ F)	Frequency (Hz)			
	120	1k	10k	100k to
39 to 1800	0.65	0.85	0.95	1.00

■ Marking

Example: 6.3 V.DC / 270 μ F Marking color: BLACK

Negative polarity marking (-)

Capacitance (μ F)

Series identification

Rated voltage mark

Lot number

Rated Voltage Mark

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

■ Dimensions in mm (not to scale)

Unit: mm

0.3 max.

$\phi D \pm 0.5$

L

H

A \pm 0.2

B \pm 0.2

I

W

P

K

() Reference

Pressure Relief (ϕ 10 and larger)

Size code	D	L	A, B	H	I	W	P	K
D	6.3	5.8 \pm 0.3	6.6	7.8 max.	2.6	0.65 \pm 0.1	1.8	0.35 $\begin{smallmatrix} +0.15 \\ -0.20 \end{smallmatrix}$
D8	6.3	7.7 \pm 0.3	6.6	7.8 max.	2.6	0.65 \pm 0.1	1.8	0.35 $\begin{smallmatrix} +0.15 \\ -0.20 \end{smallmatrix}$
F	8.0	10.2 \pm 0.3	8.3	10.0 max.	3.4	0.90 \pm 0.2	3.1	0.70 \pm 0.2
G	10.0	10.2 \pm 0.3	10.3	12.0 max.	3.5	0.90 \pm 0.2	4.6	0.70 \pm 0.2

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

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

Standard Products

Endurance : 105 °C 2000 h

Rated voltage (V.DC)	Capacitance (±20 %) (μF)	Case size			Specification			Part No. (RoHS: compliant)	Reflow	Min. Packaging Q't	
		Dia (mm)	Length (mm)	Size code	Ripple current (100 kHz) (+105 °C) (mA r.m.s.)	ESR (100 kHz) (+20 °C) (Ω)	tan δ (120 Hz) (+20 °C)			Taping (pcs)	
6.3	270	6.3	5.8	D	240	0.36	0.26	EEEFK0J271SP	(5)	1000	
	470	6.3	7.7	D8	280	0.34	0.26	EEEFKJ471XSP	(5)	900	
	1800	10	10.2	G	850	0.08	0.26	EEEFK0J182SP	(6)	500	
10	220	6.3	5.8	D	240	0.36	0.19	EEEFK1A221SP	(5)	1000	
	330	6.3	7.7	D8	280	0.34	0.19	EEEFKA331XSP	(5)	900	
	820	8	10.2	F	600	0.16	0.19	EEEFK1A821SP	(6)	500	
	1200	10	10.2	G	850	0.08	0.19	EEEFK1A122SP	(6)	500	
16	150	6.3	5.8	D	240	0.36	0.16	EEEFK1C151SP	(5)	1000	
	270	6.3	7.7	D8	280	0.34	0.16	EEEFKC271XSP	(5)	900	
	560	8	10.2	F	600	0.16	0.16	EEEFK1C561SP	(6)	500	
	1000	10	10.2	G	850	0.08	0.16	EEEFK1C102SP	(6)	500	
25	100	6.3	5.8	D	240	0.36	0.14	EEEFK1E101SP	(5)	1000	
	150	6.3	7.7	D8	280	0.34	0.14	EEEFKE151XSP	(5)	900	
	180	6.3	7.7	D8	280	0.34	0.14	EEEFKE181XSP	(5)	900	
	390	8	10.2	F	600	0.16	0.14	EEEFK1E391SP	(6)	500	
	680	10	10.2	G	850	0.08	0.14	EEEFK1E681SP	(6)	500	
35	68	6.3	5.8	D	240	0.36	0.12	EEEFK1V680SP	(5)	1000	
	82	6.3	5.8	D	240	0.36	0.12	EEEFK1V820SP	(5)	1000	
	120	6.3	7.7	D8	280	0.34	0.12	EEEFKV121XSP	(5)	900	
	270	8	10.2	F	600	0.16	0.12	EEEFK1V271SP	(6)	500	
	470	10	10.2	G	850	0.08	0.12	EEEFK1V471SP	(6)	500	
50	39	6.3	5.8	D	165	0.88	0.10	EEEFK1H390SP	(5)	1000	
	82	6.3	7.7	D8	195	0.68	0.10	EEEFKH820XSP	(5)	900	
	180	8	10.2	F	350	0.34	0.10	EEEFK1H181SP	(6)	500	
	270	10	10.2	G	670	0.18	0.10	EEEFK1H271SP	(6)	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"