

# Multilayer Ceramic Capacitors

Dipped radial lead type

General use

## FK series

Type:            **FK28, FK18**  
                     **FK24, FK14**  
                     **FK26, FK16**  
                     **FK20, FK11**  
                     **FK22**

Issue date:     June 2006

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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# Dipped Radial Ceramic Capacitors

## General Use FK Series

Conformity to RoHS Directive

### FEATURES

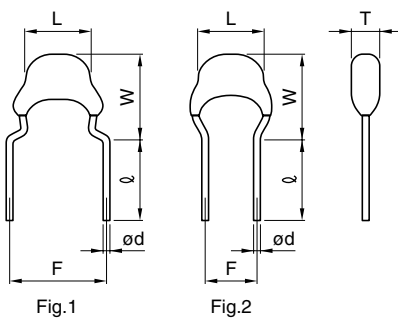
- Due to the technological progress in creating thinner layers of ceramic dielectric and achieving multilayer lamination, this product provides large electrostatic capacity.
- It maintains a high level of reliability under specified environmental conditions.
- Its residual inductance is small and it provides good frequency characteristics.
- The leads are formed with a "kink" to achieve consistent insertion heights and facilitate the release of gases during soldering for dramatically improved solderability.
- Also available are products that meet taping specifications for automatic insertions, which contribute to reducing on-board costs.

### PRODUCT IDENTIFICATION

FK 28 C0G 1H 101 J □□□□  
 (1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions and shapes of lead wire



Dimensions in mm

Type	L max.	W max.	T max.	F	ℓ	ød	Fig
28	4.0	5.5	2.5	5.0±1.0	7±2	0.5+0.1,-0.03	1
24	4.5	5.5	2.5	5.0±1.0	7±2	0.5+0.1,-0.03	1
26	5.5	6.0	3.5	5.0±1.0	7±2	0.5+0.1,-0.03	1
20	5.5	7.0	4.0	5.0±1.0	7±2	0.5+0.1,-0.03	1
22	7.5	8.0	4.0	5.0±1.0	7±2	0.5+0.1,-0.03	1
18	4.0	5.5	2.5	2.5±0.8	5+3,-1	0.5+0.1,-0.03	2
14	4.5	5.5	2.5	2.5±0.8	5+3,-1	0.5+0.1,-0.03	2
16	5.5	6.0	3.5	2.5±0.8	5+3,-1	0.5+0.1,-0.03	2
11	5.5	7.0	4.0	2.5±0.8	5+3,-1	0.5+0.1,-0.03	2

(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C
Y5V	+22,-82%	-30 to +85°C

(4) Rated voltage E<sub>dc</sub>

0J	6.3V
1A	10V
1C	16V
1E	25V
1H	50V

(5) Nominal capacitance

The capacitance is expressed in three digit codes and in units of pico farads (pF).

The first and second digits identify the first and second significant figures of the capacitance.

The third digit identifies the multiplier.

010	1pF
100	10pF
102	1,000pF

(6) Capacitance tolerance

Symbol	Tolerance	Applicable capacitance range
D	±0.5pF	10pF max.
J	±5%	Over 10pF
K	±10%	
M	±20%	
Z	+80,-20%	

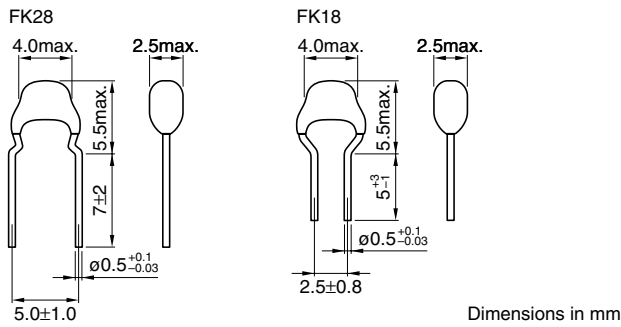
(7) TDK internal code

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• All specifications are subject to change without notice.

## FK28 AND FK18 TYPES

### SHAPES AND DIMENSIONS



### CAPACITANCE RANGES:

#### CLASS 1 (TEMPERATURE COMPENSATION)

#### TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK28 type	FK18 type
10	±0.5pF	FK28C0G1H100D	FK18C0G1H100D
12	±5%	FK28C0G1H120J	FK18C0G1H120J
15	±5%	FK28C0G1H150J	FK18C0G1H150J
18	±5%	FK28C0G1H180J	FK18C0G1H180J
22	±5%	FK28C0G1H220J	FK18C0G1H220J
27	±5%	FK28C0G1H270J	FK18C0G1H270J
33	±5%	FK28C0G1H330J	FK18C0G1H330J
39	±5%	FK28C0G1H390J	FK18C0G1H390J
47	±5%	FK28C0G1H470J	FK18C0G1H470J
56	±5%	FK28C0G1H560J	FK18C0G1H560J
68	±5%	FK28C0G1H680J	FK18C0G1H680J
82	±5%	FK28C0G1H820J	FK18C0G1H820J
100	±5%	FK28C0G1H101J	FK18C0G1H101J
120	±5%	FK28C0G1H121J	FK18C0G1H121J
150	±5%	FK28C0G1H151J	FK18C0G1H151J
180	±5%	FK28C0G1H181J	FK18C0G1H181J
220	±5%	FK28C0G1H221J	FK18C0G1H221J
270	±5%	FK28C0G1H271J	FK18C0G1H271J
330	±5%	FK28C0G1H331J	FK18C0G1H331J
390	±5%	FK28C0G1H391J	FK18C0G1H391J
470	±5%	FK28C0G1H471J	FK18C0G1H471J
560	±5%	FK28C0G1H561J	FK18C0G1H561J
680	±5%	FK28C0G1H681J	FK18C0G1H681J
820	±5%	FK28C0G1H821J	FK18C0G1H821J
1,000	±5%	FK28C0G1H102J	FK18C0G1H102J
1,200	±5%	FK28C0G1H122J	FK18C0G1H122J
1,500	±5%	FK28C0G1H152J	FK18C0G1H152J
1,800	±5%	FK28C0G1H182J	FK18C0G1H182J
2,200	±5%	FK28C0G1H222J	FK18C0G1H222J
2,700	±5%	FK28C0G1H272J	FK18C0G1H272J
3,300	±5%	FK28C0G1H332J	FK18C0G1H332J

### CAPACITANCE RANGES: CLASS 2

### TEMPERATURE CHARACTERISTICS: X7R(±15%)

### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK28 type	FK18 type
1,000	±10%	FK28X7R1H102K	FK18X7R1H102K
1,500	±10%	FK28X7R1H152K	FK18X7R1H152K
2,200	±10%	FK28X7R1H222K	FK18X7R1H222K
3,300	±10%	FK28X7R1H332K	FK18X7R1H332K
4,700	±10%	FK28X7R1H472K	FK18X7R1H472K
6,800	±10%	FK28X7R1H682K	FK18X7R1H682K
10,000	±10%	FK28X7R1H103K	FK18X7R1H103K
15,000	±10%	FK28X7R1H153K	FK18X7R1H153K
22,000	±10%	FK28X7R1H223K	FK18X7R1H223K
33,000	±10%	FK28X7R1H333K	FK18X7R1H333K
47,000	±10%	FK28X7R1H473K	FK18X7R1H473K
68,000	±10%	FK28X7R1H683K	FK18X7R1H683K
100,000	±10%	FK28X7R1H104K	FK18X7R1H104K

### RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No. FK28 type	FK18 type
150,000	±10%	FK28X7R1E154K	FK18X7R1E154K
	±20%	FK28X7R1E154M	FK18X7R1E154M

### RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No. FK28 type	FK18 type
220,000	±10%	FK28X7R1C224K	FK18X7R1C224K
	±20%	FK28X7R1C224M	FK18X7R1C224M

### TEMPERATURE CHARACTERISTICS: X5R(±15%)

### RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No. FK28 type	FK18 type
330,000	±10%	FK28X5R1A334K	FK18X5R1A334K
	±20%	FK28X5R1A334M	FK18X5R1A334M
470,000	±10%	FK28X5R1A474K	FK18X5R1A474K
	±20%	FK28X5R1A474M	FK18X5R1A474M
680,000	±10%	FK28X5R1A684K	FK18X5R1A684K
	±20%	FK28X5R1A684M	FK18X5R1A684M
1,000,000 [1μF]	±10%	FK28X5R1A105K	FK18X5R1A105K
	±20%	FK28X5R1A105M	FK18X5R1A105M

**TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)**

RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK28 type	FK18 type
100,000	+80,-20%	FK28Y5V1H104Z	FK18Y5V1H104Z
220,000	+80,-20%	FK28Y5V1H224Z	FK18Y5V1H224Z

RATED VOLTAGE Edc: 25V

Capacitance (pF)	Tolerance	Part No.	
		FK28 type	FK18 type
470,000	+80,-20%	FK28Y5V1E474Z	FK18Y5V1E474Z

RATED VOLTAGE Edc: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK28 type	FK18 type
1,000,000 [1μF]	+80,-20%	FK28Y5V1C105Z	FK18Y5V1C105Z

RATED VOLTAGE Edc: 10V

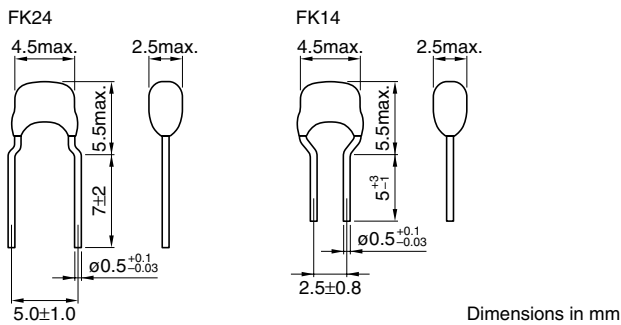
Capacitance (pF)	Tolerance	Part No.	
		FK28 type	FK18 type
2,200,000 [2.2μF]	+80,-20%	FK28Y5V1A225Z	FK18Y5V1A225Z

RATED VOLTAGE Edc: 6.3V

Capacitance (pF)	Tolerance	Part No.	
		FK28 type	FK18 type
4,700,000 [4.7μF]	+80,-20%	FK28Y5V0J475Z	FK18Y5V0J475Z

## FK24 AND FK14 TYPES

### SHAPES AND DIMENSIONS



#### CAPACITANCE RANGES:

##### CLASS 1 (TEMPERATURE COMPENSATION)

#### TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
3,900	±5%	FK24C0G1H392J	FK14C0G1H392J
4,700	±5%	FK24C0G1H472J	FK14C0G1H472J
5,600	±5%	FK24C0G1H562J	FK14C0G1H562J
6,800	±5%	FK24C0G1H682J	FK14C0G1H682J
8,200	±5%	FK24C0G1H822J	FK14C0G1H822J
10,000	±5%	FK24C0G1H103J	FK14C0G1H103J

#### CAPACITANCE RANGES: CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7R(±15%)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
150,000	±10%	FK24X7R1H154K	FK14X7R1H154K
	±20%	FK24X7R1H154M	FK14X7R1H154M
220,000	±10%	FK24X7R1H224K	FK14X7R1H224K
	±20%	FK24X7R1H224M	FK14X7R1H224M
330,000	±10%	FK24X7R1H334K	FK14X7R1H334K
	±20%	FK24X7R1H334M	FK14X7R1H334M

RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
470,000	±10%	FK24X7R1E474K	FK14X7R1E474K
	±20%	FK24X7R1E474M	FK14X7R1E474M
680,000	±10%	FK24X7R1E684K	FK14X7R1E684K
	±20%	FK24X7R1E684M	FK14X7R1E684M
1,000,000 [1μF]	±10%	FK24X7R1E105K	FK14X7R1E105K
	±20%	FK24X7R1E105M	FK14X7R1E105M
1,500,000	±10%	FK24X7R1E155K	FK14X7R1E155K
	±20%	FK24X7R1E155M	FK14X7R1E155M

RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
680,000	±10%	FK24X7R1C684K	FK14X7R1C684K
	±20%	FK24X7R1C684M	FK14X7R1C684M
1,000,000 [1μF]	±10%	FK24X7R1C105K	FK14X7R1C105K
	±20%	FK24X7R1C105M	FK14X7R1C105M
1,500,000	±10%	FK24X7R1C155K	FK14X7R1C155K
	±20%	FK24X7R1C155M	FK14X7R1C155M
2,200,000	±10%	FK24X7R1C225K	FK14X7R1C225K
	±20%	FK24X7R1C225M	FK14X7R1C225M

#### TEMPERATURE CHARACTERISTICS: X5R(±15%)

RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
1,500,000 [1.5μF]	±10%	FK24X5R1A155K	FK14X5R1A155K
	±20%	FK24X5R1A155M	FK14X5R1A155M
2,200,000	±10%	FK24X5R1A225K	FK14X5R1A225K
	±20%	FK24X5R1A225M	FK14X5R1A225M
3,300,000	±10%	FK24X5R1A335K	FK14X5R1A335K
	±20%	FK24X5R1A335M	FK14X5R1A335M
4,700,000	±10%	FK24X5R1A475K	FK14X5R1A475K
	±20%	FK24X5R1A475M	FK14X5R1A475M

RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
4,700,000 [4.7μF]	±10%	FK24X5R0J475K	FK14X5R0J475K
	±20%	FK24X5R0J475M	FK14X5R0J475M
6,800,000	±10%	FK24X5R0J685K	FK14X5R0J685K
	±20%	FK24X5R0J685M	FK14X5R0J685M
10,000,000	±10%	FK24X5R0J106K	FK14X5R0J106K
	±20%	FK24X5R0J106M	FK14X5R0J106M

#### TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
470,000	+80, -20%	FK24Y5V1H474Z	FK14Y5V1H474Z
1,000,000 [1μF]	+80, -20%	FK24Y5V1H105Z	FK14Y5V1H105Z

RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
2,200,000 [2.2μF]	+80, -20%	FK24Y5V1E225Z	FK14Y5V1E225Z

RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
4,700,000 [4.7μF]	+80, -20%	FK24Y5V1C475Z	FK14Y5V1C475Z

RATED VOLTAGE E<sub>dc</sub>: 10V

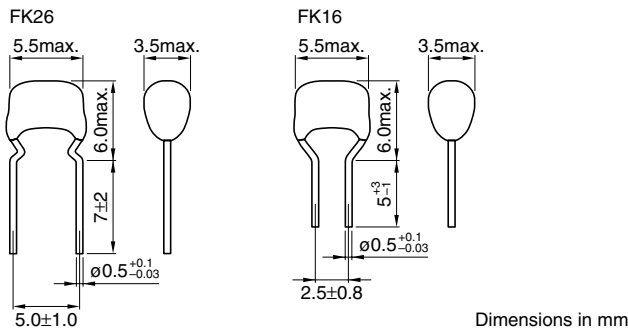
Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
10,000,000 [10μF]	+80, -20%	FK24Y5V1A106Z	FK14Y5V1A106Z

RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No.	
		FK24 type	FK14 type
22,000,000 [22μF]	+80, -20%	FK24Y5V0J226Z	FK14Y5V0J226Z

## FK26 AND FK16 TYPES

### SHAPES AND DIMENSIONS



### CAPACITANCE RANGES:

#### CLASS 1 (TEMPERATURE COMPENSATION)

#### TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
15,000	±5%	FK26C0G1H153J	FK16C0G1H153J
22,000	±5%	FK26C0G1H223J	FK16C0G1H223J
33,000	±5%	FK26C0G1H333J	FK16C0G1H333J

### CAPACITANCE RANGES: CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7R(±15%)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
470,000	±10%	FK26X7R1H474K	FK16X7R1H474K
	±20%	FK26X7R1H474M	FK16X7R1H474M

RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
680,000	±10%	FK26X7R1E684K	FK16X7R1E684K
	±20%	FK26X7R1E684M	FK16X7R1E684M
1,000,000 [1μF]	±10%	FK26X7R1E105K	FK16X7R1E105K
	±20%	FK26X7R1E105M	FK16X7R1E105M
1,500,000 [1.5μF]	±10%	FK26X7R1E155K	FK16X7R1E155K
	±20%	FK26X7R1E155M	FK16X7R1E155M
2,200,000 [2.2μF]	±10%	FK26X7R1E225K	FK16X7R1E225K
	±20%	FK26X7R1E225M	FK16X7R1E225M

RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
3,300,000 [3.3μF]	±10%	FK26X7R1C335K	FK16X7R1C335K
	±20%	FK26X7R1C335M	FK16X7R1C335M
4,700,000	±10%	FK26X7R1C475K	FK16X7R1C475K
	±20%	FK26X7R1C475M	FK16X7R1C475M

### TEMPERATURE CHARACTERISTICS: X5R(±15%)

RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
3,300,000 [3.3μF]	±10%	FK26X5R1C335K	FK16X5R1C335K
	±20%	FK26X5R1C335M	FK16X5R1C335M
4,700,000	±10%	FK26X5R1C475K	FK16X5R1C475K
	±20%	FK26X5R1C475M	FK16X5R1C475M

RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
6,800,000 [6.8μF]	±10%	FK26X5R1A685K	FK16X5R1A685K
	±20%	FK26X5R1A685M	FK16X5R1A685M
10,000,000 [10μF]	±10%	FK26X5R1A106K	FK16X5R1A106K
	±20%	FK26X5R1A106M	FK16X5R1A106M

RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
6,800,000 [6.8μF]	±10%	FK26X5R0J685K	FK16X5R0J685K
	±20%	FK26X5R0J685M	FK16X5R0J685M
10,000,000 [10μF]	±10%	FK26X5R0J106K	FK16X5R0J106K
	±20%	FK26X5R0J106M	FK16X5R0J106M
15,000,000	±20%	FK26X5R0J156M	FK16X5R0J156M
22,000,000	±20%	FK26X5R0J226M	FK16X5R0J226M

### TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)

RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
2,200,000 [2.2μF]	+80, -20%	FK26Y5V1H225Z	FK16Y5V1H225Z

RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
4,700,000 [4.7μF]	+80, -20%	FK26Y5V1E475Z	FK16Y5V1E475Z

RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
10,000,000 [10μF]	+80, -20%	FK26Y5V1C106Z	FK16Y5V1C106Z

RATED VOLTAGE E<sub>dc</sub>: 10V

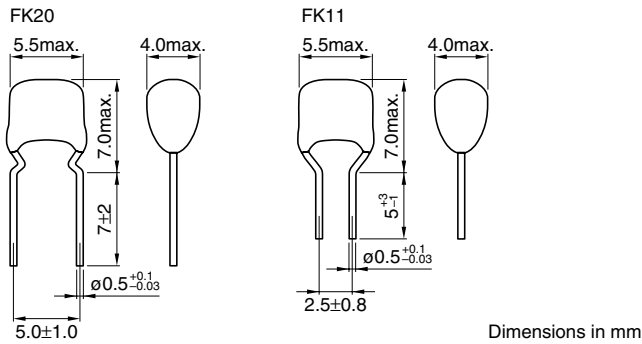
Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
22,000,000 [22μF]	+80, -20%	FK26Y5V1A226Z	FK16Y5V1A226Z

RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No.	
		FK26 type	FK16 type
47,000,000 [47μF]	+80, -20%	FK26Y5V0J476Z	FK16Y5V0J476Z

## FK20 AND FK11 TYPES

### SHAPES AND DIMENSIONS



### CAPACITANCE RANGES:

#### CLASS 1 (TEMPERATURE COMPENSATION)

#### TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
47,000	±5%	FK20C0G1H473J	FK11C0G1H473J
68,000	±5%	FK20C0G1H683J	FK11C0G1H683J
100,000	±5%	FK20C0G1H104J	FK11C0G1H104J

### CAPACITANCE RANGES: CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7R(±15%)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
680,000	±10%	FK20X7R1H684K	FK11X7R1H684K
	±20%	FK20X7R1H684M	FK11X7R1H684M
1,000,000 [1μF]	±10%	FK20X7R1H105K	FK11X7R1H105K
	±20%	FK20X7R1H105M	FK11X7R1H105M
1,500,000 [1.5μF]	±10%	FK20X7R1H155K	FK11X7R1H155K
	±20%	FK20X7R1H155M	FK11X7R1H155M

#### RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
2,200,000 [2.2μF]	±10%	FK20X7R1E225K	FK11X7R1E225K
	±20%	FK20X7R1E225M	FK11X7R1E225M
3,300,000	±10%	FK20X7R1E335K	FK11X7R1E335K
	±20%	FK20X7R1E335M	FK11X7R1E335M
4,700,000	±10%	FK20X7R1E475K	FK11X7R1E475K
	±20%	FK20X7R1E475M	FK11X7R1E475M
6,800,000	±10%	FK20X7R1E685K	FK11X7R1E685K
	±20%	FK20X7R1E685M	FK11X7R1E685M

#### RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
10,000,000 [10μF]	±10%	FK20X7R1C106K	FK11X7R1C106K
	±20%	FK20X7R1C106M	FK11X7R1C106M
15,000,000	±20%	FK20X7R1C156M	FK11X7R1C156M

### TEMPERATURE CHARACTERISTICS: X5R(±15%)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
2,200,000 [2.2μF]	±10%	FK20X5R1H225K	FK11X5R1H225K
	±20%	FK20X5R1H225M	FK11X5R1H225M
3,300,000	±10%	FK20X5R1H335K	FK11X5R1H335K
	±20%	FK20X5R1H335M	FK11X5R1H335M

#### RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
15,000,000 [15μF]	±20%	FK20X5R1A156M	FK11X5R1A156M

#### RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
22,000,000 [22μF]	±20%	FK20X5R0J226M	FK11X5R0J226M

### TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
4,700,000 [4.7μF]	+80, -20%	FK20Y5V1H475Z	FK11Y5V1H475Z

#### RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
10,000,000 [10μF]	+80, -20%	FK20Y5V1E106Z	FK11Y5V1E106Z

#### RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
22,000,000 [22μF]	+80, -20%	FK20Y5V1C226Z	FK11Y5V1C226Z

#### RATED VOLTAGE E<sub>dc</sub>: 10V

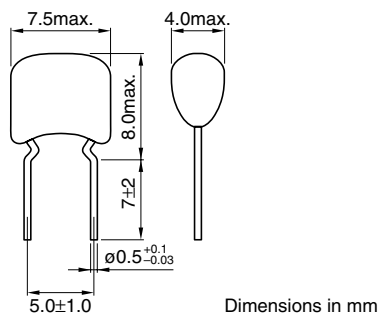
Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
47,000,000 [47μF]	+80, -20%	FK20Y5V1A476Z	FK11Y5V1A476Z

#### RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No. FK20 type	Part No. FK11 type
100,000,000 [100μF]	+80, -20%	FK20Y5V0J107Z	F11Y5V0J107Z

## FK22 TYPE

### SHAPES AND DIMENSIONS



### CAPACITANCE RANGES:

#### CLASS 1 (TEMPERATURE COMPENSATION)

##### TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK22 type
100,000	±5%	FK22C0G1H104J
150,000	±5%	FK22C0G1H154J
220,000	±5%	FK22C0G1H224J

### CAPACITANCE RANGES: CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7R(±15%)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK22 type
2,200,000 [2.2μF]	±10% ±20%	FK22X7R1H225K FK22X7R1H225M
3,300,000	±10% ±20%	FK22X7R1H335K FK22X7R1H335M

#### RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No. FK22 type
4,700,000 [4.7μF]	±10% ±20%	FK22X7R1E475K FK22X7R1E475M
6,800,000	±10% ±20%	FK22X7R1E685K FK22X7R1E685M
10,000,000 [10μF]	±10% ±20%	FK22X7R1E106K FK22X7R1E106M
15,000,000	±20%	FK22X7R1E156M

#### RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No. FK22 type
22,000,000 [22μF]	±20%	FK22X7R1C226M

### TEMPERATURE CHARACTERISTICS: X5R(±15%)

#### RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No. FK22 type
33,000,000 [33μF]	±20%	FK22X5R1A336M
47,000,000	±20%	FK22X5R1A476M

#### RATED VOLTAGE E<sub>dc</sub>: 6.3V

Capacitance (pF)	Tolerance	Part No. FK22 type
68,000,000 [68μF]	±20%	FK22X5R0J686M
100,000,000 [100μF]	±20%	FK22X5R0J107M

### TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)

#### RATED VOLTAGE E<sub>dc</sub>: 50V

Capacitance (pF)	Tolerance	Part No. FK22 type
10,000,000 [10μF]	+80, -20%	FK22Y5V1H106Z

#### RATED VOLTAGE E<sub>dc</sub>: 25V

Capacitance (pF)	Tolerance	Part No. FK22 type
22,000,000 [22μF]	+80, -20%	FK22Y5V1E226Z

#### RATED VOLTAGE E<sub>dc</sub>: 16V

Capacitance (pF)	Tolerance	Part No. FK22 type
47,000,000 [47μF]	+80, -20%	FK22Y5V1C476Z

#### RATED VOLTAGE E<sub>dc</sub>: 10V

Capacitance (pF)	Tolerance	Part No. FK22 type
100,000,000 [100μF]	+80, -20%	FK22Y5V1A107Z

• For more information about products with other capacitance or other data, please contact us.

• All specifications are subject to change without notice.