December 2015

Capacitor with Multi-layer Lead

Conventional product∗

Commercial Grade

FK Series

(∗) For a new design, FA or FG Series with halogen-free specification are recommended.

Type:

General (Up to 50V)
FK28, FK18
FK24, FK14
FK26, FK16
FK20, FK11
FK22

Mid Voltage (100 to 630V)
FK28, FK18
FK24, FK14
FK26, FK16
FK20, FK11
FK22

Capacitor with Multi-layer Lead

Commercial Grade

Product compatible with RoHS directive

Overview of the FK General (Up to 50V) Series

FEATURES

- High capacitance has been achieved through improvements in the thinning process of ceramic dielectric layers and multi-layer lamination technology.
- High reliability is maintained under specified environmental conditions.
- Low residual inductance and excellent frequency characteristics has been achieved.
- The leads are formed with a "kink" to achieve consistent insertion heights and facilitate the release of gases during soldering for dramatically improved solderability.
- Taping specifications are available for automatic insertions, which contribute to reduce 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

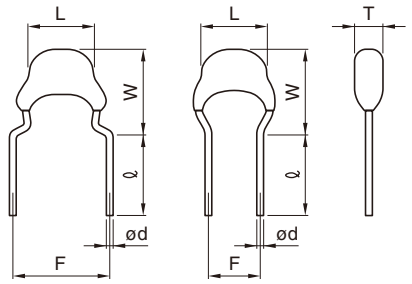


Fig.1 Fig.2

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
X7S	±22%	–55 to +125°C

(4) Rated voltage Edc

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.

0R5	0.5pF
010	1pF
100	10pF
102	1,000pF

(6) Capacitance tolerance

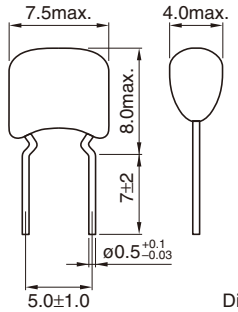
Symbol	Tolerance	Applicable capacitance range
C	±0.25pF	10pF max.
D	±0.5pF	
J	±5%	Over 10pF
K	±10%	
M	±20%	

(7) TDK internal code

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2011/65/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FK22 TYPE

SHAPES AND DIMENSIONS



Dimensions in mm

RATED VOLTAGE Edc: 6.3 to 50V

Temperature characteristics	Capacitance (pF)	Tolerance	Rated voltage Edc(V)	Part No. FK22 type
X7R	1.5μF	±10%	50	FK22X7R1H155K
X7R	2.2μF	±10%	50	FK22X7R1H225K
X7R	3.3μF	±10%	50	FK22X7R1H335K
X7R	4.7μF	±10%	50	FK22X7R1H475K
X7R	6.8μF	±10%	50	FK22X7R1H685K
X7R	4.7μF	±10%	25	FK22X7R1E475K
X7R	6.8μF	±10%	25	FK22X7R1E685K
X7R	10μF	±10%	25	FK22X7R1E106K
X7R	15μF	±20%	25	FK22X7R1E156M
X7R	22μF	±20%	25	FK22X7R1E226M
X7R	15μF	±20%	16	FK22X7R1C156M
X7R	22μF	±20%	16	FK22X7R1C226M
X7R	33μF	±20%	16	FK22X7R1C336M
X5R	4.7μF	±10%	50	FK22X5R1H475K
X5R	6.8μF	±10%	50	FK22X5R1H685K
X5R	15μF	±20%	25	FK22X5R1E156M
X5R	22μF	±20%	25	FK22X5R1E226M
X5R	33μF	±20%	16	FK22X5R1C336M
X5R	33μF	±20%	10	FK22X5R1A336M
X5R	47μF	±20%	10	FK22X5R1A476M
X5R	68μF	±20%	6.3	FK22X5R0J686M
X5R	100μF	±20%	6.3	FK22X5R0J107M

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