

Ceramic Disc Capacitors, Class 2 (High Dielectric Constant) 25 VDC, 50 VDC, 500 VDC

Series: **ECK**

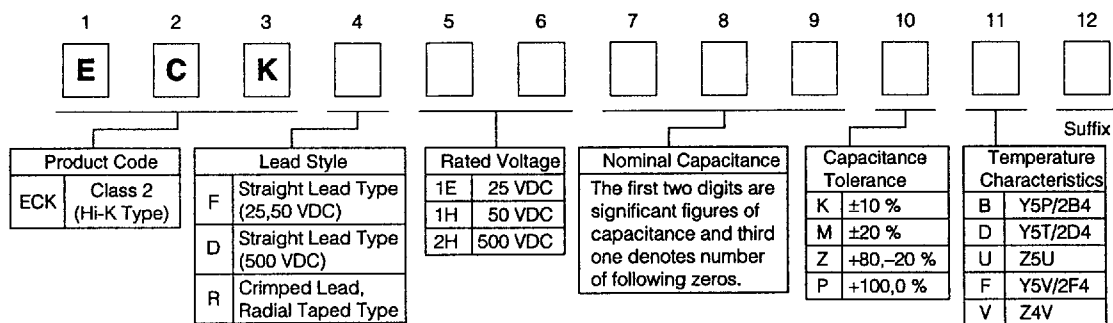
■ Features

- Large capacitance in small size

■ Recommended Applications

- Coupling and By-pass, where low losses and high stability of capacitance are not so important

■ Explanation of Part Numbers



■ Specifications

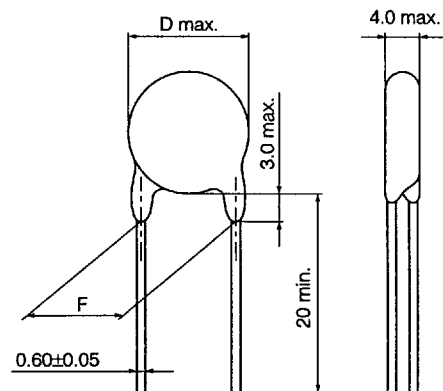
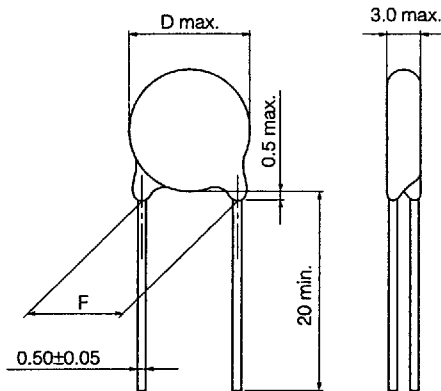
Operating Temp. Range	-25 to 85 °C	
Rated Voltage	25 VDC, 50 VDC, 500 VDC	
Dielectric Withstanding Voltage	250 % of the rated voltage for 1 to 5 seconds	
Capacitance	Within the specified tolerance at 1 kHz, 1 Vrms and 20 °C	
Dissipation Factor (tan δ)	D.F. ≤ 0.025/Char. B, D, U D.F. ≤ 0.05/Char. F, V	
Insulation Resistance (IR)	C ≤ 0.02 μF IR ≥ 10000 MΩ C > 0.02 μF IR ≥ 200/C MΩ (C: Cap. in μF) at rated voltage, 1 minute electrification	
Temperature Characteristics	T.C Cap. Change	Temp. Range
	B	±10 % -25 to 85 °C
	D	+20, -30 % -25 to 85 °C
	U	+20, -55 % -10 to 70 °C
	F	+30, -80 % -25 to 85 °C
V	+30, -80 % 0 to 70 °C	

Straight Leads Type

■ Dimensions in mm (not to scale)

ECKF1E□□□□□□ (25 VDC)
ECKF1H□□□□□□ (50 VDC)

ECKD2H□□□□□□ (500 VDC)



■ Capacitance Range (Rated 25 VDC, 50 VDC)

Unit: pF

Rated Voltage	Temperature Characteristics	T.C. Code	D max. (mm)		4.0	5.0	6.5	8.0	8.5	9.5	12.5
			F (mm)	2.5±1.0		5.0±1.5					
25 VDC	V/Z4V	V	—	10000	22000	—	47000	—	100000		
	B/Y5P/2B4	B	—	100-1500	1800-2700	3300-4700	—	5600, 6800	8200, 10000		
	D/Y5T/2D4	D	—	2200	3300, 4700	6800	—	10000	15000		
	F/Y5V/2F4	F	1000	2200, 4700	10000	—	22000	—	47000		

■ Capacitance Range (Rated 500 VDC)

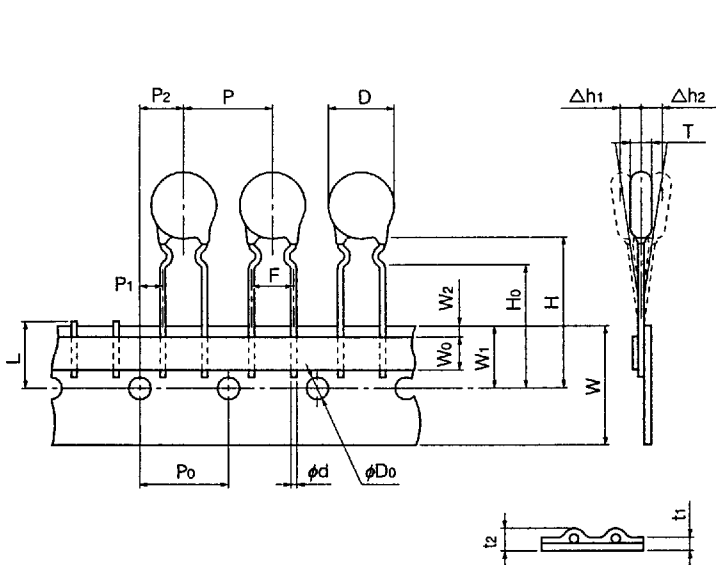
Unit: pF

Rated Voltage	Temperature Characteristics	T.C. Code	D max. (mm)		6.0	7.0	8.5	10.0	11.0	13.0	14.0	16.0	17.0	17.5
			F (mm)	5.0±1.5					10.0±2.0					
500 VDC	B/Y5P/2B4	B	100-680	820-1200	1500-2200	2700, 3300	3900	4700, 5600	6800	8200	—	10000		
	D/Y5T/2D4	D	—	1000, 1500	2200	3300	4700	6800	—	—	10000	—		
	U/Z5U	U	—	1000, 2200	—	4700	10000*	10000	—	—	—	—		

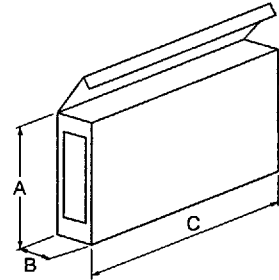
*Capacitance Tolerance: +80, -20 %

Crimped Lead, Radial Taped Type

■ Dimensions in mm (not to scale)



Symbol	Dimensions
P	12.7±1.0
P ₀	12.7±0.3
F	5.0±0.8
P ₁	3.85±0.50
P ₂	6.35±1.30
W	18.0 ^{+1.0} _{-0.5}
W ₀	5.0 min.
W ₁	9.0±0.5
W ₂	3.0 max.
H	(20)
H ₀	16.0±0.5
φD ₀	4.0±0.2
φd	0.60±0.05
t ₁	0.6±0.3
t ₂	1.5 max.
T	3.5 max.
Δh ₁ , Δh ₂	2.0 max.
L	11.0 max.



Symbol	Dimensions*
A	175 or 150 or 190
B	47
C	335

*Tolerance: ±3 mm
Packing quantity: 2000 pcs./box

■ Capacitance Range (Rated 25 VDC, 50 VDC)

Unit: pF

Rated Voltage	Temperature Characteristics	D max. (mm)					
		T.C. Code	5.0	6.5	8.0	8.5	9.5
25 VDC	V/Z4V	V	10000	22000	—	47000	—
	B/Y5P/2B4	B	100–1500	1800–2700	3300–4700	—	5600, 6800
	D/Y5T/2D4	D	2200	3300–4700	6800	—	10000
50 VDC	F/Y5V/2F4	F	1000–4700	10000	—	22000	—

■ Capacitance Range (Rated 500 VDC)

Unit: pF

Rated Voltage	Temperature Characteristics	D max. (mm)					
		T.C. Code	6.0	7.0	8.5	10.0	11.0
500 VDC	B/Y5P/2B4	B	100–680	820–1200	1500–2200	2700, 3300	3900
	D/Y5T/2D4	D	—	1000, 1500	2200	3300	4700
	U/Z5U	U	—	1000, 2200	—	4700	10000*

* Capacitance Tolerance: +80, -20 %

■ Ratings and Characteristics

Rated 50 VDC, Char. B/Y5P/2B4

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
100	±10 %	5.0	2.5	ECKF1H101KB	ECKR1H101KB5
120	±10 %	5.0	2.5	ECKF1H121KB	ECKR1H121KB5
150	±10 %	5.0	2.5	ECKF1H151KB	ECKR1H151KB5
180	±10 %	5.0	2.5	ECKF1H181KB	ECKR1H181KB5
220	±10 %	5.0	2.5	ECKF1H221KB	ECKR1H221KB5
270	±10 %	5.0	2.5	ECKF1H271KB	ECKR1H271KB5
330	±10 %	5.0	2.5	ECKF1H331KB	ECKR1H331KB5
390	±10 %	5.0	2.5	ECKF1H391KB	ECKR1H391KB5
470	±10 %	5.0	2.5	ECKF1H471KB	ECKR1H471KB5
560	±10 %	5.0	2.5	ECKF1H561KB	ECKR1H561KB5
680	±10 %	5.0	2.5	ECKF1H681KB	ECKR1H681KB5
820	±10 %	5.0	2.5	ECKF1H821KB	ECKR1H821KB5
1000	±10 %	5.0	2.5	ECKF1H102KB	ECKR1H102KB5
1200	±10 %	5.0	2.5	ECKF1H122KB	ECKR1H122KB5
1500	±10 %	5.0	2.5	ECKF1H152KB	ECKR1H152KB5
1800	±10 %	6.5	5.0	ECKF1H182KB	ECKR1H182KB5
2200	±10 %	6.5	5.0	ECKF1H222KB	ECKR1H222KB5
2700	±10 %	6.5	5.0	ECKF1H272KB	ECKR1H272KB5
3300	±10 %	8.0	5.0	ECKF1H332KB	ECKR1H332KB5
3900	±10 %	8.0	5.0	ECKF1H392KB	ECKR1H392KB5
4700	±10 %	8.0	5.0	ECKF1H472KB	ECKR1H472KB5
5600	±10 %	9.5	5.0	ECKF1H562KB	ECKR1H562KB5
6800	±10 %	9.5	5.0	ECKF1H682KB	ECKR1H682KB5
8200	±10 %	12.5	5.0	ECKF1H822KB	—
10000	±10 %	12.5	5.0	ECKF1H103KB	—

Rated 50 VDC, Char. D/Y5T/2D4

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
2200	±20 %	5.0	2.5	ECKF1H222MD	ECKR1H222MD5
3300	±20 %	6.5	5.0	ECKF1H332MD	ECKR1H332MD5
4700	±20 %	6.5	5.0	ECKF1H472MD	ECKR1H472MD5
6800	±20 %	8.0	5.0	ECKF1H682MD	ECKR1H682MD5
10000	±20 %	9.5	5.0	ECKF1H103MD	ECKR1H103MD5
15000	±20 %	12.5	5.0	ECKF1H153MD	—

Rated 50 VDC, Char. F/Y5V/2F4

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
1000	+80 -20 %	4.0*	2.5	ECKF1H102ZF	ECKR1H102ZF5
2200	+80 -20 %	5.0	2.5	ECKF1H222ZF	ECKR1H222ZF5
4700	+80 -20 %	5.0	2.5	ECKF1H472ZF	ECKR1H472ZF5
10000	+80 -20 %	6.5	5.0	ECKF1H103ZF	ECKR1H103ZF5
22000	+80 -20 %	8.5	5.0	ECKF1H223ZF	ECKR1H223ZF5
47000	+80 -20 %	12.5	5.0	ECKF1H473ZF	—

*5.0 mm for Crimped Lead Taped Type

Rated 25 VDC, Char. V/Z4V

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
10000	+80 -20 %	5.0	2.5	ECKF1E103ZV	ECKR1E103ZV5
22000	+80 -20 %	6.5	5.0	ECKF1E223ZV	ECKR1E223ZV5
47000	+80 -20 %	8.5	5.0	ECKF1E473ZV	ECKR1E473ZV5
100000	+80 -20 %	12.5	5.0	ECKF1E104ZV	—

■ Ratings and Characteristics
Rated 500 VDC, Char. B/Y5P/2B4

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
100	±10 %	6.0	5.0	ECKD2H101KB5	ECKR2H101KB5
120	±10 %	6.0	5.0	ECKD2H121KB5	ECKR2H121KB5
150	±10 %	6.0	5.0	ECKD2H151KB5	ECKR2H151KB5
180	±10 %	6.0	5.0	ECKD2H181KB5	ECKR2H181KB5
220	±10 %	6.0	5.0	ECKD2H221KB5	ECKR2H221KB5
270	±10 %	6.0	5.0	ECKD2H271KB5	ECKR2H271KB5
330	±10 %	6.0	5.0	ECKD2H331KB5	ECKR2H331KB5
390	±10 %	6.0	5.0	ECKD2H391KB5	ECKR2H391KB5
470	±10 %	6.0	5.0	ECKD2H471KB5	ECKR2H471KB5
560	±10 %	6.0	5.0	ECKD2H561KB5	ECKR2H561KB5
680	±10 %	6.0	5.0	ECKD2H681KB5	ECKR2H681KB5
820	±10 %	7.0	5.0	ECKD2H821KB5	ECKR2H821KB5
1000	±10 %	7.0	5.0	ECKD2H102KB5	ECKR2H102KB5
1200	±10 %	7.0	5.0	ECKD2H122KB5	ECKR2H122KB5
1500	±10 %	8.5	5.0	ECKD2H152KB5	ECKR2H152KB5
1800	±10 %	8.5	5.0	ECKD2H182KB5	ECKR2H182KB5
2200	±10 %	8.5	5.0	ECKD2H222KB5	ECKR2H222KB5
2700	±10 %	10.0	5.0	ECKD2H272KB5	ECKR2H272KB5
3300	±10 %	10.0	5.0	ECKD2H332KB5	ECKR2H332KB5
3900	±10 %	11.0	5.0	ECKD2H392KB5	ECKR2H392KB5
4700	±10 %	13.0	10.0	ECKD2H472KB5	—
5600	±10 %	13.0	10.0	ECKD2H562KB5	—
6800	±10 %	14.0	10.0	ECKD2H682KB5	—
8200	±10 %	16.0	10.0	ECKD2H822KB5	—
10000	±10 %	17.5	10.0	ECKD2H103KB5	—

Rated 500 VDC, Char. D/Y5T/2D4

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
1000	±20 %	7.0	5.0	ECKD2H102MD5	ECKR2H102MD5
1500	±20 %	7.0	5.0	ECKD2H152MD5	ECKR2H152MD5
2200	±20 %	8.5	5.0	ECKD2H222MD5	ECKR2H222MD5
3300	±20 %	10.0	5.0	ECKD2H332MD5	ECKR2H332MD5
4700	±20 %	11.0	5.0	ECKD2H472MD5	ECKR2H472MD5
6800	±20 %	13.0	10.0	ECKD2H682MD5	—
10000	±20 %	17.0	10.0	ECKD2H103MD5	—

Rated 500 VDC, Char. U/Z5U

Cap. (pF)	Cap. Tol.	Dia. D max. (mm)	Straight Lead Type		Crimped Lead, Taped Type
			Lead Spacing (mm)	Part Number	Part Number
					Lead Spacing 5 mm
1000	+100 0 %	7.0	5.0	ECKD2H102PU	ECKR2H102PU
2200	+100 0 %	7.0	5.0	ECKD2H222PU	ECKR2H222PU
4700	+100 0 %	10.0	5.0	ECKD2H472PU	ECKR2H472PU
10000	+80 -20 %	11.0	5.0	ECKD2H103ZU	ECKR2H103ZU
10000	+100 0 %	13.0	10.0	ECKD2H103PU	—

■ Typical Temperature Characteristics

[Class 2]

