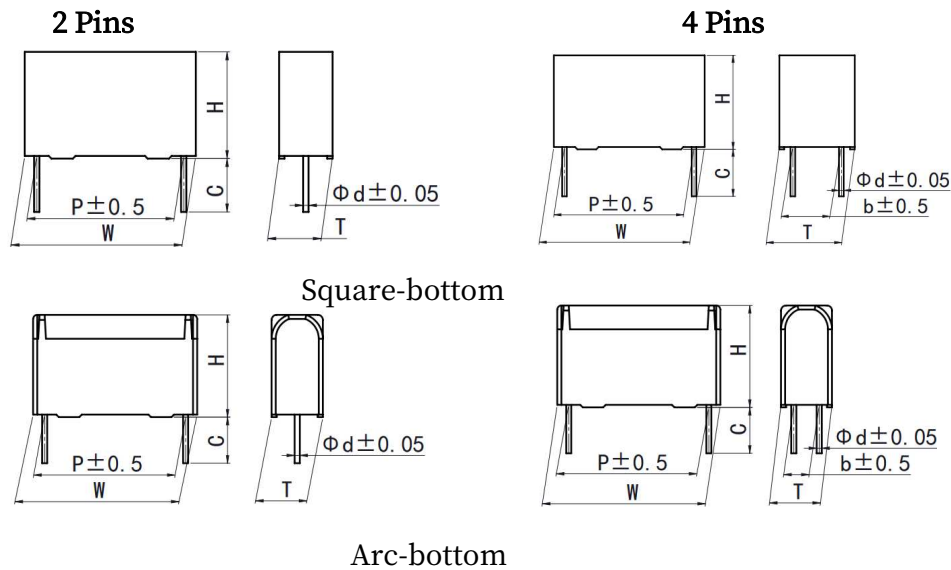


## Version history

Current version	Date	Author	Change description

## DC-Link Capacitor for PCB

### ■ Outline Drawing



### ■ Features

- Metallized polypropylene structure.
- Excellent electric property.
- Plastic case (UL94 V-0), Filled with resin.
- High performance DC filtering applications (i.e. transducers, Industrial and high-end power supplies and solar inverters)

### ■ Safety Approvals

●		TUV Rheinland	EN 61071: 2007, EN 61881-1: 2011, 450Vdc ~ 3200Vdc, 0.56μF~220μF, -40/85°C Certificate No.: R 50266108
●		UL	UL 810 (construction only), Max. 5000Vdc, 90°C File No.: E256238, CCN: CZDS2

### ■ Specifications

Reference Standard	GB/T 17702 (IEC 61071)
Climatic Category	40/85/56
Operating temperature (case)	-40°C~105°C (+85°C to +105°C: decreasing factor 1.35% per °C for $U_{N,85°C}$ )
$U_{N,85°C}$	500Vdc, 600Vdc, 800Vdc, 900Vdc, 1 000Vdc, 1 100Vdc, 1 200Vdc
Capacitance Tolerance	J (±5%), K (±10%)
Voltage Proof	1.5 $U_N$ (10s)
Insulation Resistance(IR× $C_N$ )	≥10 000s (20°C, 100V, 1min)
Self Inductance ( $L_s$ )	<1nH per mm of lead spacing
Maximum peak current $\hat{I}$ (A)	$\hat{I} = C \cdot dV/dt$
Expected lifetime	100 000h @ $U_N$ , $\Theta_{hs} = 70°C$



## ■ Part number code system

The 15 digits part number is formed as follow:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

C	3	D												
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- Digit 1 to 3 Series code C3D
- Digit 4 to 5 D.C. rated voltage 2H=500V 1U=600V 2K=800V 1X=900V  
3A=1 000V 1M=1 100V 3L=1 200V
- Digit 6 to 8 Rated capacitance value for example: 256=25×106pF=25.0μF
- Digit 9 Capacitance tolerance J=±5% K=±10%
- Digit 10 Pitch B=27.5 mm C=30.0 mm F=37.5 mm M=52.5 mm
- Digit 11 Internal use
- Digit 12 to 15 Lead form and packaging code

## ■ Table 1 lead form and packaging code

Digit 12		Digit 13 and Digit 14			Digit 15	
Code	Explanation	Code	Explanation		Code	Explanation
0	2 pins (bulk)	38	lead length 3.8mm		0	Length tolerance ±1.0mm
2	4 pins (bulk) b=12.7mm	C0	Standard lead length 5.5mm		2	Length tolerance ±0.5mm
A	4 pins(bulk) b=20.3mm					
B	4 pins(bulk) b=10.2mm					



# C3D(R)

## ■ Technical data (mm)

U <sub>N,85°C</sub> : 500Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
5.0	32.0	20.0	11.0	27.5	-	0.8	65	10	100	21.9	5.0	C3D2H505+B00***
10.0	32.0	24.5	15.0	27.5	-	0.8	65	10	100	11.5	6.5	C3D2H106+B00***
22.0	32.0	37.0	22.0	27.5	-	0.8	65	10	100	5.9	10.0	C3D2H226+B00***
30.0	42.0	40.0	20.0	37.5	10.2	1.0	30	15	150	8.0	12.5	C3D2H306+F0B***
35.0	42.0	36.0	24.0	37.5	10.2	1.0	30	15	150	8.0	13.5	C3D2H356+F0B***
40.0	41.5	37.5	27.5	37.5	10.2	1.0	30	15	150	5.0	14.5	C3D2H406+F0B***
50.0	41.0	43.0	28.0	37.5	12.7	1.2	30	15	150	4.0	16.0	C3D2H506+F02***
50.0	42.0	45.0	30.0	37.5	20.3	1.2	30	15	150	4.0	16.0	C3D2H506+F0A***
60.0	42.0	45.0	30.0	37.5	20.3	1.2	30	15	150	3.8	16.5	C3D2H606+F0A***
75.0	57.0	43.5	29.5	52.5	12.7	1.2	15	35	350	5.5	16.0	C3D2H756+M02***
75.0	57.0	43.5	29.5	52.5	20.3	1.2	15	35	350	5.5	16.0	C3D2H756+M0A***
80.0	57.0	43.5	29.5	52.5	20.3	1.2	15	35	350	5.0	16.5	C3D2H806+M0A***
100.0	57.0	50.0	35.0	52.5	20.3	1.2	15	35	350	4.0	18.0	C3D2H107+M0A***
110.0	57.0	50.0	35.0	52.5	20.3	1.2	15	35	350	4.0	19.0	C3D2H117+M0A***

U <sub>N,85°C</sub> : 600Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
2.0	32.0	18.0	9.0	27.5	-	0.8	65	11	100	47.8	2.8	C3D1U205+B00***
3.0	32.0	20.0	11.0	27.5	-	0.8	65	11	100	31.8	4.1	C3D1U305+B00***
4.0	32.0	20.0	11.0	27.5	-	0.8	65	11	100	23.9	5.5	C3D1U405+B00***
5.0	32.0	22.0	13.0	27.5	-	0.8	65	11	100	19.1	6.9	C3D1U505+B00***
6.0	32.0	24.5	15.0	27.5	-	0.8	65	11	100	18.6	7.1	C3D1U605+B00***
7.0	32.0	24.5	15.0	27.5	-	0.8	65	11	100	15.9	8.3	C3D1U705+B00***
8.0	32.0	28.0	14.0	27.5	-	0.8	65	11	100	13.9	9.5	C3D1U805+B00***
9.0	32.0	30.0	16.0	27.5	-	0.8	65	11	100	12.4	10.7	C3D1U905+B00***
10.0	32.0	30.0	16.0	27.5	-	0.8	65	11	100	11.1	11.0	C3D1U106+B00***
12.0	32.0	33.0	18.0	27.5	-	0.8	65	11	100	10.8	12.0	C3D1U126+B00***
★ 12.0	32.0	33.0	18.0	27.5	-	0.8	65	11	100	10.8	12.0	C3D1U126+BY0***
15.0	32.0	37.0	22.0	27.5	-	0.8	65	11	100	9.0	12.0	C3D1U156+B00***
15.0	32.0	37.0	22.0	27.5	10.2	0.8	65	11	100	7.4	16.5	C3D1U156+B0B***
18.0	32.0	37.0	22.0	27.5	-	0.8	65	11	100	8.0	12.0	C3D1U186+B00***
18.0	32.0	37.0	22.0	27.5	12.7	0.8	65	11	100	6.2	17.0	C3D1U186+B02***
10.0	41.0	30.0	16.0	37.5	-	1.0	30	20	175	19.5	6.2	C3D1U106+F00***
12.0	41.0	30.0	16.0	37.5	-	1.0	30	20	175	16.3	7.4	C3D1U126+F00***
★ 15.0	41.0	33.5	18.5	37.5	-	1.0	30	20	175	13.0	9.2	C3D1U156+FY0***
20.0	42.0	40.0	20.0	37.5	10.2	1.0	30	20	175	9.8	12.3	C3D1U206+F0B***
22.0	42.0	40.0	20.0	37.5	10.2	1.0	30	20	175	8.9	13.5	C3D1U226+F0B***
25.0	42.0	40.0	20.0	37.5	10.2	1.0	30	20	175	7.8	15.4	C3D1U256+F0B***
30.0	42.0	44.0	24.0	37.5	12.7	1.0	30	20	175	6.5	18.5	C3D1U306+F02***
★ 35.0	42.0	45.0	30.0	37.5	12.7	1.2	30	20	175	6.0	20.1	C3D1U356+FY2***
35.0	42.0	45.0	30.0	37.5	20.3	1.2	30	20	175	6.0	20.1	C3D1U356+F0A***
40.0	42.0	45.0	30.0	37.5	12.7	1.2	30	20	175	5.2	23.0	C3D1U406+F02***
40.0	42.0	45.0	30.0	37.5	20.3	1.2	30	20	175	5.2	23.0	C3D1U406+F0A***



# C3D(R)

## ■ Technical data (mm)

U <sub>N, 85°C</sub> : 600Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
★ 45.0	42.0	50.0	35.0	37.5	12.7	1.2	30	20	175	4.6	25.8	C3D1U456+F02***
★ 45.0	42.0	50.0	35.0	37.5	20.3	1.2	30	20	175	4.6	25.8	C3D1U456+FYA***
★ 50.0	42.0	50.0	35.0	37.5	20.3	1.2	30	20	175	4.2	28.7	C3D1U506+F0A***
★ 50.0	42.0	46.0	35.0	37.5	20.3	1.2	30	20	175	4.2	28.7	C3D1U506+FAA***
55.0	42.0	50.0	35.0	37.5	20.3	1.2	30	20	175	3.8	31.6	C3D1U556+F0A***
60.0	42.0	55.0	40.0	37.5	20.3	1.2	30	20	175	3.5	34.5	C3D1U606+F0A***
★ 65.0	42.0	55.0	40.0	37.5	20.3	1.2	30	20	175	3.2	35.0	C3D1U656+FYA***
70.0	42.0	55.0	40.0	37.5	20.3	1.2	30	20	175	3.0	35.0	C3D1U706+F0A***
★ 75.0	42.0	60.0	45.0	37.5	20.3	1.2	30	20	175	2.8	35.0	C3D1U756+FYA***
★ 80.0	42.0	60.0	45.0	37.5	20.3	1.2	30	20	175	2.6	35.0	C3D1U806+F0A***
★ 85.0	42.0	60.0	45.0	37.5	20.3	1.2	30	20	175	2.5	35.0	C3D1U856+F0A***
★ 40.0	57.0	45.0	25.0	52.5	12.7	1.2	15	36	350	9.8	12.3	C3D1U406+MY2***
★ 45.0	57.0	45.0	25.0	52.5	12.7	1.2	15	36	350	8.7	13.8	C3D1U456+MY2***
★ 50.0	57.0	45.0	25.0	52.5	12.7	1.2	15	36	350	7.8	15.4	C3D1U506+MY2***
★ 55.0	57.0	43.5	29.5	52.5	12.7	1.2	15	36	350	7.1	16.9	C3D1U556+MY2***
★ 55.0	57.0	43.5	29.5	52.5	20.3	1.2	15	36	350	7.1	16.9	C3D1U556+MYA***
60.0	57.0	43.5	29.5	52.5	12.7	1.2	15	36	350	6.5	18.5	C3D1U606+M02***
60.0	57.0	43.5	29.5	52.5	20.3	1.2	15	36	350	6.5	18.5	C3D1U606+M0A***
★ 65.0	57.0	50.0	35.0	52.5	12.7	1.2	15	36	350	6.0	20.0	C3D1U656+MY2***
★ 65.0	57.0	50.0	35.0	52.5	20.3	1.2	15	36	350	6.0	20.0	C3D1U656+MYA***
★ 70.0	57.0	50.0	35.0	52.5	20.3	1.2	15	36	350	5.6	21.5	C3D1U706+MYA***
75.0	57.0	50.0	35.0	52.5	20.3	1.2	15	36	350	5.2	23.1	C3D1U756+M0A***
80.0	57.0	50.0	35.0	52.5	20.3	1.2	15	36	350	4.9	24.6	C3D1U806+M0A***
★ 85.0	57.0	55.0	45.0	52.5	20.3	1.2	15	36	350	4.8	25.1	C3D1U856+MYA***
★ 90.0	57.0	55.0	45.0	52.5	20.3	1.2	15	36	350	4.6	25.8	C3D1U906+MYA***
★ 95.0	57.0	55.0	45.0	52.5	20.3	1.2	15	36	350	4.4	27.3	C3D1U956+MYA***
100.0	57.0	55.0	45.0	52.5	20.3	1.2	15	36	350	4.2	28.7	C3D1U107+M0A***
110.0	57.0	55.0	45.0	52.5	20.3	1.2	15	36	350	3.8	31.6	C3D1U117+M0A***
120.0	57.0	65.0	45.0	52.5	20.3	1.2	15	36	350	3.5	34.5	C3D1U127+M0A***
★ 130.0	57.0	65.0	45.0	52.5	20.3	1.2	15	36	350	3.2	35.0	C3D1U137+MYA***
140.0	57.0	65.0	45.0	52.5	20.3	1.2	15	36	350	3.0	35.0	C3D1U147+M0A***

U <sub>N, 85°C</sub> : 800Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
2.0	32.0	18.0	9.0	27.5	-	0.8	65	10	95	45.4	2.9	C3D2K205+B00***
3.0	32.0	20.0	11.0	27.5	-	0.8	65	10	95	30.3	4.4	C3D2K305+B00***
3.3	32.0	30.0	16.0	27.5	-	0.8	65	10	95	18.8	7.0	C3D2K335+B00***
4.0	32.0	25.0	13.0	27.5	-	0.8	65	10	95	22.7	5.8	C3D2K405+B00***
5.0	32.0	24.5	15.0	27.5	-	0.8	65	10	95	18.2	7.3	C3D2K505+B00***
★ 6.0	32.0	30.0	16.0	27.5	-	0.8	65	10	95	15.1	8.7	C3D2K605+BY0***
7.0	32.0	30.0	16.0	27.5	-	0.8	65	10	95	13.0	10.2	C3D2K705+B00***
8.0	32.0	33.0	18.0	27.5	-	0.8	65	10	95	12.5	10.5	C3D2K805+B00***
9.0	32.0	33.0	18.0	27.5	-	0.8	65	10	95	11.1	11.8	C3D2K905+B00***
10.0	32.0	37.0	22.0	27.5	-	0.8	65	10	95	11.0	12.0	C3D2K106+B00***
★ 10.0	32.0	37.0	22.0	27.5	-	1.0	65	10	95	11.0	13.0	C3D2K106+B10***



# C3D(R)

## ■ Technical data (mm)

U <sub>N, 85°C</sub> : 800Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
10.0	32.0	37.0	22.0	27.5	10.2	0.8	65	10	95	9.1	14.5	C3D2K106+B0B***
★ 11.0	32.0	37.0	22.0	27.5	-	0.8	65	10	95	10.0	12.0	C3D2K116+BY0***
★ 11.0	32.0	37.0	22.0	27.5	10.2	0.8	65	10	95	8.3	16.0	C3D2K116+BYB***
12.0	32.0	37.0	22.0	27.5	-	0.8	65	10	95	9.3	12.0	C3D2K126+B00***
12.0	32.0	37.0	22.0	27.5	10.2	0.8	65	10	95	7.6	16.0	C3D2K126+B0B***
13.0	32.0	37.0	22.0	27.5	-	0.8	65	10	95	8.8	12.0	C3D2K136+B00***
13.0	32.0	37.0	22.0	27.5	12.7	0.8	65	10	95	8.1	16.2	C3D2K136+B02***
14.0	32.0	37.0	22.0	27.5	-	0.8	65	10	95	8.2	12.0	C3D2K146+B00***
14.0	32.0	37.0	22.0	27.5	12.7	0.8	65	10	95	7.6	16.5	C3D2K146+B02***
★ 22.0	32.0	55.0	22.0	27.5	-	1.0	65	10	95	7.5	15.0	C3D2K226+B10***
★ 8.0	41.0	30.0	16.0	37.5	-	1.0	30	18	160	22.3	5.4	C3D2K805+FY0***
9.0	41.0	30.0	16.0	37.5	-	1.0	30	18	160	19.8	6.1	C3D2K905+F00***
10.0	41.0	33.5	18.5	37.5	-	1.0	30	18	160	17.8	6.7	C3D2K106+F00***
12.0	41.0	33.5	18.5	37.5	-	1.0	30	18	160	14.9	8.1	C3D2K126+F00***
14.0	41.0	33.5	18.5	37.5	-	1.0	30	18	160	13.8	9.4	C3D2K146+F00***
15.0	42.0	40.0	20.0	37.5	10.2	1.0	30	18	160	11.9	10.1	C3D2K156+F0B***
20.0	42.0	44.0	24.0	37.5	12.7	1.0	30	18	160	8.9	13.5	C3D2K206+F02***
25.0	42.0	44.0	24.0	37.5	12.7	1.0	30	18	160	7.1	16.8	C3D2K256+F02***
30.0	42.0	45.0	30.0	37.5	12.7	1.2	30	18	160	5.9	20.2	C3D2K306+F02***
30.0	42.0	45.0	30.0	37.5	20.3	1.2	30	18	160	5.9	20.2	C3D2K306+F0A***
★ 35.0	42.0	50.0	35.0	37.5	20.3	1.2	30	18	160	5.5	22.0	C3D2K356+F0A***
40.0	42.0	50.0	35.0	37.5	20.3	1.2	30	18	160	4.8	25.1	C3D2K406+F0A***
★ 45.0	42.0	55.0	40.0	37.5	20.3	1.2	30	18	160	4.2	28.3	C3D2K456+FYA***
50.0	42.0	55.0	40.0	37.5	20.3	1.2	30	18	160	3.8	31.4	C3D2K506+F0A***
★ 55.0	42.0	60.0	45.0	37.5	20.3	1.2	30	18	160	3.5	34.5	C3D2K556+FYA***
★ 60.0	42.0	60.0	45.0	37.5	20.3	1.2	30	18	160	3.2	35.0	C3D2K606+F0A***
★ 65.0	42.0	60.0	45.0	37.5	20.3	1.2	30	18	160	2.9	35.0	C3D2K656+F0A***
★ 25.0	57.0	45.0	25.0	52.5	12.7	1.2	15	33	320	14.3	8.4	C3D2K256+MY2***
★ 30.0	57.0	45.0	25.0	52.5	12.7	1.2	15	33	320	11.9	10.1	C3D2K306+MY2***
★ 35.0	57.0	45.0	25.0	52.5	12.7	1.2	15	33	320	10.2	11.8	C3D2K356+M02***
40.0	57.0	43.5	29.5	52.5	12.7	1.2	15	33	320	8.9	13.5	C3D2K406+M02***
40.0	57.0	43.5	29.5	52.5	20.3	1.2	15	33	320	8.9	13.5	C3D2K406+M0A***
45.0	57.0	43.5	29.5	52.5	12.7	1.2	15	33	320	7.9	15.1	C3D2K456+M02***
45.0	57.0	43.5	29.5	52.5	20.3	1.2	15	33	320	7.9	15.1	C3D2K456+M0A***
50.0	57.0	50.0	35.0	52.5	12.7	1.2	15	33	320	7.1	16.8	C3D2K506+M02***
50.0	57.0	50.0	35.0	52.5	20.3	1.2	15	33	320	7.1	16.8	C3D2K506+M0A***
50.0	57.0	45.0	30.0	52.5	20.3	1.2	15	33	320	7.1	16.8	C3D2K506+M1A***
55.0	57.0	50.0	35.0	52.5	20.3	1.2	15	33	320	6.5	18.5	C3D2K556+M0A***
60.0	57.0	50.0	35.0	52.5	20.3	1.2	15	33	320	5.9	20.2	C3D2K606+M0A***
★ 65.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	5.5	21.9	C3D2K656+MYA***
70.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	5.1	23.6	C3D2K706+M0A***
★ 75.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	4.8	25.2	C3D2K756+MYA***
80.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	4.6	25.9	C3D2K806+M0A***
★ 85.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	4.5	26.7	C3D2K856+MYA***
90.0	57.0	55.0	45.0	52.5	20.3	1.2	15	33	320	4.2	28.3	C3D2K906+M0A***
95.0	57.0	65.0	45.0	52.5	20.3	1.2	15	33	320	4.0	29.8	C3D2K956+M0A***
100.0	57.0	65.0	45.0	52.5	20.3	1.2	15	33	320	3.8	31.4	C3D2K107+M0A***
110.0	57.0	65.0	45.0	52.5	20.3	1.2	15	33	320	3.5	34.5	C3D2K117+M0A***



# C3D(R)

## ■ Technical data (mm)

U <sub>N, 85°C</sub> : 900Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
1.0	32.0	18.0	9.0	27.5	-	0.8	70	9	90	86.0	1.5	C3D1X105+B00***
2.0	32.0	20.0	11.0	27.5	-	0.8	70	9	90	43.0	3.1	C3D1X205+B00***
3.0	32.0	22.0	13.0	27.5	-	0.8	70	9	90	28.7	4.6	C3D1X305+B00***
4.0	32.0	24.5	15.0	27.5	-	0.8	70	9	90	21.5	6.1	C3D1X405+B00***
5.0	32.0	30.0	16.0	27.5	-	0.8	70	9	90	17.2	7.7	C3D1X505+B00***
★ 6.0	32.0	33.0	18.0	27.5	-	0.8	70	9	90	18.0	6.9	C3D1X605+BY0***
7.0	32.0	33.0	18.0	27.5	-	0.8	70	9	90	13.0	10.2	C3D1X705+B00***
8.0	32.0	37.0	22.0	27.5	-	0.8	70	9	90	11.5	11.4	C3D1X805+B00***
8.0	32.0	37.0	22.0	27.5	10.2	0.8	70	9	90	10.7	12.3	C3D1X805+B0B***
9.0	32.0	37.0	22.0	27.5	-	0.8	70	9	90	10.4	12.0	C3D1X905+B00***
9.0	32.0	37.0	22.0	27.5	12.7	0.8	70	9	90	9.6	13.8	C3D1X905+B02***
10.0	32.0	37.0	22.0	27.5	-	0.8	70	9	90	12.0	12.2	C3D1X106+B00***
10.0	32.0	37.0	22.0	27.5	12.7	0.8	70	9	90	8.6	15.4	C3D1X106+B02***
4.7	41.0	26.0	15.0	37.5	-	1.0	35	17	150	35.6	3.4	C3D1X475+F00***
5.0	41.0	30.0	16.0	37.5	-	1.0	35	17	150	33.4	3.6	C3D1X505+F00***
★ 6.0	41.0	30.0	16.0	37.5	-	1.0	35	17	150	27.9	4.3	C3D1X605+FY0***
7.0	41.0	30.0	16.0	37.5	-	1.0	35	17	150	23.9	5.0	C3D1X705+F00***
8.0	41.0	33.5	18.5	37.5	-	1.0	35	17	150	20.9	5.7	C3D1X805+F00***
10.0	42.0	40.0	20.0	37.5	10.2	1.0	35	17	150	16.7	7.2	C3D1X106+F0B***
12.0	41.0	37.0	22.0	37.5	10.2	1.0	35	17	150	13.9	8.6	C3D1X126+F0B***
15.0	42.0	44.0	24.0	37.5	12.7	1.0	35	17	150	11.1	10.8	C3D1X156+F02***
★ 18.0	42.0	44.0	24.0	37.5	12.7	1.0	35	17	150	9.3	12.9	C3D1X186+FY2***
20.0	42.0	44.0	24.0	37.5	12.7	1.0	35	17	150	8.4	14.4	C3D1X206+F02***
25.0	42.0	45.0	30.0	37.5	12.7	1.2	35	17	150	6.7	17.9	C3D1X256+F02***
25.0	42.0	45.0	30.0	37.5	20.3	1.2	35	17	150	6.7	17.9	C3D1X256+F0A***
30.0	42.0	50.0	35.0	37.5	20.3	1.2	35	17	150	5.6	21.5	C3D1X306+F0A***
★ 35.0	42.0	55.0	40.0	37.5	20.3	1.2	35	17	150	5.1	23.4	C3D1X356+FYA***
40.0	42.0	55.0	40.0	37.5	20.3	1.2	35	17	150	4.5	26.8	C3D1X406+F0A***
★ 45.0	42.0	60.0	45.0	37.5	20.3	1.2	35	17	150	4.0	30.1	C3D1X456+FYA***
★ 50.0	42.0	60.0	45.0	37.5	20.3	1.2	35	17	150	3.6	33.5	C3D1X506+F0A***
★ 15.0	57.0	45.0	25.0	52.5	10.2	1.2	15	31	300	22.3	5.4	C3D1X156+MYB***
★ 20.0	57.0	45.0	25.0	52.5	12.7	1.2	15	31	300	16.7	7.2	C3D1X206+MY2***
★ 25.0	57.0	45.0	25.0	52.5	12.7	1.2	15	31	300	13.4	9.0	C3D1X256+MY2***
★ 30.0	57.0	43.5	29.5	52.5	12.7	1.2	15	31	300	11.1	10.8	C3D1X306+MY2***
30.0	57.0	43.5	29.5	52.5	20.3	1.2	15	31	300	11.1	10.8	C3D1X306+M0A***
★ 35.0	57.0	43.5	29.5	52.5	12.7	1.2	15	31	300	9.6	12.6	C3D1X356+MY2***
★ 35.0	57.0	43.5	29.5	52.5	20.3	1.2	15	31	300	9.6	12.6	C3D1X356+MYA***
40.0	57.0	50.0	35.0	52.5	20.3	1.2	15	31	300	8.4	14.4	C3D1X406+M0A***
★ 45.0	57.0	50.0	35.0	52.5	20.3	1.2	15	31	300	7.4	16.1	C3D1X456+MYA***
50.0	57.0	50.0	35.0	52.5	20.3	1.2	15	31	300	6.7	17.9	C3D1X506+M0A***
★ 55.0	57.0	55.0	45.0	52.5	20.3	1.2	15	31	300	6.1	19.7	C3D1X556+MYA***
★ 60.0	57.0	55.0	45.0	52.5	20.3	1.2	15	31	300	5.6	21.5	C3D1X606+MYA***
★ 65.0	57.0	55.0	45.0	52.5	20.3	1.2	15	31	300	5.1	23.3	C3D1X656+MYA***
★ 70.0	57.0	65.0	45.0	52.5	20.3	1.2	15	31	300	4.8	25.1	C3D1X706+MYA***
★ 75.0	57.0	65.0	45.0	52.5	20.3	1.2	15	31	300	4.7	25.7	C3D1X756+MYA***
★ 80.0	57.0	65.0	45.0	52.5	20.3	1.2	15	31	300	4.5	26.8	C3D1X806+MYA***
85.0	57.0	65.0	45.0	52.5	20.3	1.2	15	31	300	4.2	28.5	C3D1X856+M0A***



# C3D(R)

## ■ Technical data (mm)

U <sub>N,85°C</sub> : 1 000Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>-4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
1.0	32.0	18.0	9.0	27.5	-	0.8	75	8	80	76.4	1.7	C3D3A105+B00***
2.0	32.0	22.0	13.0	27.5	-	0.8	75	8	80	38.2	3.5	C3D3A205+B00***
3.0	32.0	24.5	15.0	27.5	-	0.8	75	8	80	25.5	5.2	C3D3A305+B00***
4.0	32.0	30.0	16.0	27.5	-	0.8	75	8	80	19.1	6.9	C3D3A405+B00***
5.0	32.0	33.0	18.0	27.5	-	0.8	75	8	80	15.3	8.6	C3D3A505+B00***
6.0	32.0	33.0	18.0	27.5	-	0.8	75	8	80	14.9	8.9	C3D3A605+B00***
★ 7.0	32.0	37.0	22.0	27.5	-	0.8	75	8	80	14.5	9.4	C3D3A705+B00***
★ 7.0	32.0	37.0	22.0	27.5	12.7	0.8	75	8	80	11.4	11.6	C3D3A705+B02***
8.0	32.0	37.0	22.0	27.5	-	0.8	75	8	80	13.0	10.8	C3D3A805+B00***
8.0	32.0	37.0	22.0	27.5	12.7	0.8	75	8	80	10.0	13.3	C3D3A805+B02***
★ 5.0	41.0	30.0	16.0	37.5	-	1.0	37	15	140	31.2	3.8	C3D3A505+FY0***
6.0	41.0	30.0	16.0	37.5	-	1.0	37	15	140	26.0	4.6	C3D3A605+F00***
7.0	41.0	33.5	18.5	37.5	-	1.0	37	15	140	22.3	5.4	C3D3A705+F00***
8.0	41.0	33.5	18.5	37.5	-	1.0	37	15	140	19.5	6.2	C3D3A805+F00***
10.0	42.0	40.0	20.0	37.5	-	1.0	37	15	140	15.6	6.7	C3D3A106+F00***
10.0	42.0	40.0	20.0	37.5	10.2	1.0	37	15	140	15.6	7.7	C3D3A106+F0B***
12.0	41.0	37.0	22.0	37.5	12.7	1.0	37	15	140	13.0	9.2	C3D3A126+F02***
12.0	41.0	37.0	22.0	37.5	-	1.0	37	15	140	15.0	8.0	C3D3A126+F00***
15.0	42.0	44.0	24.0	37.5	12.7	1.0	37	15	140	10.4	11.5	C3D3A156+F02***
18.0	42.0	45.0	30.0	37.5	12.7	1.2	37	15	140	8.7	13.8	C3D3A186+F02***
18.0	42.0	45.0	30.0	37.5	20.3	1.2	37	15	140	8.7	13.8	C3D3A186+F0A***
20.0	42.0	45.0	30.0	37.5	12.7	1.2	37	15	140	7.8	15.4	C3D3A206+F02***
20.0	42.0	45.0	30.0	37.5	20.3	1.2	37	15	140	7.8	15.4	C3D3A206+F0A***
25.0	42.0	50.0	35.0	37.5	20.3	1.2	37	15	140	6.2	19.2	C3D3A256+F0A***
★ 30.0	42.0	55.0	40.0	37.5	20.3	1.2	37	15	140	5.2	23.1	C3D3A306+FYA***
35.0	42.0	55.0	40.0	37.5	20.3	1.2	37	15	140	4.8	25.1	C3D3A356+F0A***
★ 40.0	42.0	60.0	45.0	37.5	20.3	1.2	37	15	140	4.2	28.7	C3D3A406+F0A***
★ 15.0	57.0	45.0	25.0	52.5	12.7	1.2	17	28	280	20.8	5.8	C3D3A156+MY2***
★ 20.0	57.0	45.0	25.0	52.5	12.7	1.2	17	28	280	15.6	7.7	C3D3A206+M02***
★ 25.0	57.0	45.0	25.0	52.5	12.7	1.2	17	28	280	12.5	9.6	C3D3A256+MY2***
★ 30.0	57.0	43.5	29.5	52.5	12.7	1.2	17	28	280	10.4	11.5	C3D3A306KM02***
30.0	57.0	43.5	29.5	52.5	20.3	1.2	17	28	280	10.4	11.5	C3D3A306KM0A***
30.0	57.0	45.0	30.0	52.5	12.7	1.2	17	28	280	10.4	11.5	C3D3A306JM02***
30.0	57.0	45.0	30.0	52.5	20.3	1.2	17	28	280	10.4	11.5	C3D3A306JM0A***
★ 35.0	57.0	50.0	35.0	52.5	20.3	1.2	17	28	280	8.9	13.5	C3D3A356+MYA***
40.0	57.0	50.0	35.0	52.5	20.3	1.2	17	28	280	7.8	15.4	C3D3A406+M0A***
45.0	57.0	55.0	45.0	52.5	20.3	1.2	17	28	280	6.9	17.3	C3D3A456+M0A***
50.0	57.0	55.0	45.0	52.5	20.3	1.2	17	28	280	6.2	19.2	C3D3A506+M0A***
55.0	57.0	55.0	45.0	52.5	20.3	1.2	17	28	280	5.7	21.1	C3D3A556+M0A***
★ 60.0	57.0	65.0	45.0	52.5	20.3	1.2	17	28	280	5.2	23.1	C3D3A606+MYA***
65.0	57.0	65.0	45.0	52.5	20.3	1.2	17	28	280	4.8	25.0	C3D3A656+M0A***
70.0	57.0	65.0	45.0	52.5	20.3	1.2	17	28	280	4.5	26.9	C3D3A706+M0A***





# C3D(R)

## ■ Technical data (mm)

U <sub>N,85°C</sub> : 1 100Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz	10kHz			
0.68	32.0	20.0	11.0	27.5	-	0.8	80	8	70	80.0	1.7	C3D1M684+B00***
1.0	32.0	20.0	11.0	27.5	-	0.8	80	8	70	59.4	2.2	C3D1M105+B00***
1.5	32.0	22.0	13.0	27.5	-	0.8	80	8	70	55.7	2.4	C3D1M155+B00***
2.0	32.0	25.0	13.0	27.5	-	0.8	80	8	70	27.9	4.7	C3D1M205JB00***
★ 2.0	32.0	25.0	13.0	27.5	-	0.8	80	8	70	27.9	4.7	C3D1M205KB00***
3.0	32.0	30.0	16.0	27.5	-	0.8	80	8	70	20.4	6.5	C3D1M305+B00***
4.0	32.0	33.0	18.0	27.5	-	0.8	80	8	70	15.3	8.6	C3D1M405+B00***
5.0	32.0	37.0	22.0	27.5	-	0.8	80	8	70	14.0	9.8	C3D1M505+B00***
5.0	32.0	37.0	22.0	27.5	10.2	0.8	80	8	70	12.3	10.8	C3D1M505+B0B***
6.0	32.0	37.0	22.0	27.5	-	0.8	80	8	70	12.3	10.8	C3D1M605+B00***
6.0	32.0	37.0	22.0	27.5	10.2	0.8	80	8	70	10.2	12.9	C3D1M605+B0B***
★ 3.0	41.0	30.0	16.0	37.5	-	1.0	40	15	130	48.3	2.5	C3D1M305+FY0***
★ 4.0	41.0	30.0	16.0	37.5	-	1.0	40	15	130	36.2	3.3	C3D1M405+FY0***
★ 4.7	41.0	33.5	18.5	37.5	-	1.0	40	15	130	30.8	3.9	C3D1M475+FY0***
5.0	41.0	33.5	18.5	37.5	-	1.0	40	15	130	29.0	4.1	C3D1M505+F00***
★ 6.0	41.0	33.5	18.5	37.5	-	1.0	40	15	130	24.2	5.0	C3D1M605+FY0***
7.0	42.0	40.0	20.0	37.5	10.2	1.0	40	15	130	20.7	5.8	C3D1M705+F0B***
8.0	41.0	37.0	22.0	37.5	10.2	1.0	40	15	130	18.1	6.6	C3D1M805+F0B***
9.0	41.0	37.0	22.0	37.5	12.7	1.0	40	15	130	16.1	7.5	C3D1M905+F02***
10.0	42.0	44.0	24.0	37.5	12.7	1.0	40	15	130	14.5	8.3	C3D1M106+F02***
12.0	42.0	44.0	24.0	37.5	12.7	1.0	40	15	130	12.1	9.9	C3D1M126+F02***
★ 12.0	42.0	44.0	24.0	37.5	-	1.0	40	15	130	14.0	8.6	C3D1M126+FY0***
14.0	42.0	45.0	30.0	37.5	-	1.2	40	15	130	10.4	11.6	C3D1M146+F00***
15.0	42.0	45.0	30.0	37.5	12.7	1.2	40	15	130	9.7	12.4	C3D1M156+F02***
15.0	42.0	45.0	30.0	37.5	20.3	1.2	40	15	130	9.7	12.4	C3D1M156+F0A***
★ 18.0	42.0	50.0	35.0	37.5	20.3	1.2	40	15	130	8.1	14.9	C3D1M186+FYA***
20.0	42.0	50.0	35.0	37.5	20.3	1.2	40	15	130	7.2	16.6	C3D1M206+F0A***
25.0	42.0	55.0	40.0	37.5	20.3	1.2	40	15	130	5.8	20.7	C3D1M256+F0A***
★ 30.0	42.0	60.0	45.0	37.5	20.3	1.2	40	15	130	4.8	24.8	C3D1M306+F0A***
★ 15.0	57.0	45.0	25.0	52.5	12.7	1.2	20	27	260	19.3	6.2	C3D1M156+M02***
20.0	57.0	43.5	29.5	52.5	12.7	1.2	20	27	260	14.5	8.3	C3D1M206+M02***
20.0	57.0	43.5	29.5	52.5	20.3	1.2	20	27	260	14.5	8.3	C3D1M206+M0A***
25.0	57.0	50.0	35.0	52.5	20.3	1.2	20	27	260	11.6	10.4	C3D1M256+M0A***
30.0	57.0	50.0	35.0	52.5	20.3	1.2	20	27	260	9.7	12.4	C3D1M306+M0A***
★ 35.0	57.0	55.0	45.0	52.5	20.3	1.2	20	27	260	8.4	14.3	C3D1M356+MYA***
40.0	57.0	55.0	45.0	52.5	20.3	1.2	20	27	260	7.8	15.5	C3D1M406+M0A***
★ 45.0	57.0	55.0	45.0	52.5	20.3	1.2	20	27	260	6.9	17.4	C3D1M456+MYA***
50.0	57.0	65.0	45.0	52.5	20.3	1.2	20	27	260	6.2	19.3	C3D1M506+M0A***
★ 55.0	57.0	65.0	45.0	52.5	20.3	1.2	20	27	260	5.6	21.3	C3D1M556+MYA***



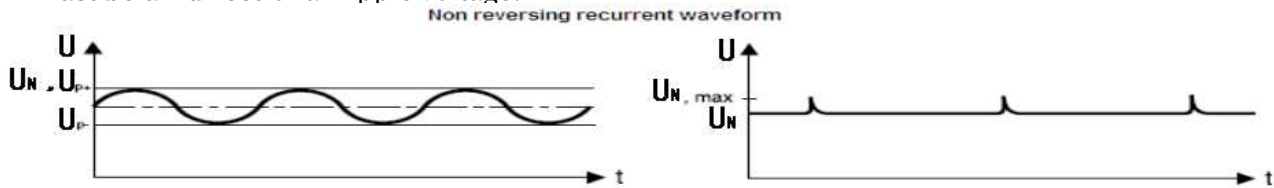
## ■ Technical data (mm)

U <sub>N,85°C</sub> : 1 200Vdc												
C <sub>N</sub> (μF)	W ±1.0	H ±1.0	T ±1.0	P ±0.5	b ±0.5	d ±0.05	dV/dt (V/μs)	tanδ×(10 <sup>4</sup> )		ESR @10kHz (mΩ)	I <sub>max</sub> (A)	Part number
								1kHz z	10kHz			
1.0	32.0	20.0	11.0	27.5	-	0.8	90	7	55	39.5	3.5	C3D3L105+B00***
2.0	32.0	24.5	15.0	27.5	-	0.8	90	7	55	26.3	5.0	C3D3L205+B00***
3.0	32.0	30.0	16.0	27.5	-	0.8	90	7	55	17.5	7.5	C3D3L305+B00***
4.0	32.0	33.0	18.0	27.5	-	0.8	90	7	55	13.9	9.5	C3D3L405+B00***
5.0	32.0	37.0	22.0	27.5	-	0.8	90	7	55	12.7	10.4	C3D3L505+B00***
5.0	32.0	37.0	22.0	27.5	10.2	0.8	90	7	55	11.1	11.8	C3D3L505+B0B***
3.0	41.0	30.0	16.0	37.5	-	1.0	45	13	100	37.2	3.2	C3D3L305+F00***
4.0	41.0	30.0	16.0	37.5	-	1.0	45	13	100	27.9	4.3	C3D3L405+F00***
5.0	41.0	33.5	18.5	37.5	-	1.0	45	13	100	22.3	5.4	C3D3L505+F00***
6.0	42.0	40.0	20.0	37.5	-	1.0	45	13	100	18.6	6.5	C3D3L605+F00***
★ 7.0	41.0	37.0	22.0	37.5	10.2	1.0	45	13	100	15.9	7.5	C3D3L705+FYB***
★ 8.0	42.0	44.0	24.0	37.5	12.7	1.0	45	13	100	13.9	8.6	C3D3L805+FY2***
★ 9.0	42.0	44.0	24.0	37.5	12.7	1.0	45	13	100	12.4	9.7	C3D3L905+FY2***
10.0	42.0	44.0	24.0	37.5	12.7	1.0	45	13	100	11.1	10.8	C3D3L106+F02***
★ 12.0	42.0	45.0	30.0	37.5	12.7	1.2	45	13	100	9.3	12.9	C3D3L126+FY2***
★ 12.0	42.0	45.0	30.0	37.5	20.3	1.2	45	13	100	9.3	12.9	C3D3L126+FYA***
★ 15.0	42.0	50.0	35.0	37.5	20.3	1.2	45	13	100	7.4	16.1	C3D3L156+FYA***
★ 18.0	42.0	50.0	35.0	37.5	20.3	1.2	45	13	100	6.6	18.1	C3D3L186+FYA***
20.0	42.0	55.0	40.0	37.5	20.3	1.2	45	13	100	6.0	20.1	C3D3L206+F0A***
★ 25.0	42.0	60.0	45.0	37.5	20.3	1.2	45	13	100	4.8	25.1	C3D3L256+FYA***
★ 12.0	57.0	45.0	25.0	52.5	12.7	1.2	23	24	200	19.9	6.0	C3D3L126+MY2***
★ 15.0	57.0	45.0	25.0	52.5	12.7	1.2	23	24	200	15.9	7.5	C3D3L156+MY2***
★ 20.0	57.0	43.5	29.5	52.5	12.7	1.2	23	24	200	11.9	10.0	C3D3L206KMY2***
20.0	57.0	43.5	29.5	52.5	20.3	1.2	23	24	200	11.9	10.0	C3D3L206KM0A***
20.0	57.0	45.0	30.0	52.5	12.7	1.2	23	24	200	11.9	10.0	C3D3L206JM02***
20.0	57.0	45.0	30.0	52.5	20.3	1.2	23	24	200	11.9	10.0	C3D3L206JM0A***
25.0	57.0	50.0	35.0	52.5	20.3	1.2	23	24	200	9.6	12.6	C3D3L256+M0A***
30.0	57.0	55.0	45.0	52.5	20.3	1.2	23	24	200	8.0	15.1	C3D3L306+M0A***
35.0	57.0	55.0	45.0	52.5	20.3	1.2	23	24	200	6.8	17.6	C3D3L356+M0A***
40.0	57.0	65.0	45.0	52.5	20.3	1.2	23	24	200	6.0	20.1	C3D3L406+M0A***
45.0	57.0	65.0	45.0	52.5	20.3	1.2	23	24	200	5.3	22.6	C3D3L456+M0A***

- Note: 1. “+” =capacitance tolerance code K=±10%, J=±5%
2. “+++” = lead form and packaging code
3. When the b=10.0mm, the digit 12 is “1” ; When the b=20.0mm, the digit 12 is “2” ; When the b=15.0mm, the digit 12 is “4” ;
4. “I<sub>max</sub>” =Maximum r.m.s current at 10kHz, Θ<sub>amb</sub>=70°C, ΔΘ<sub>case</sub>=15.0°C.
5. “★” = Arc-bottom of the outer case.
6. “ESR” are typical values.

## Typical waveforms

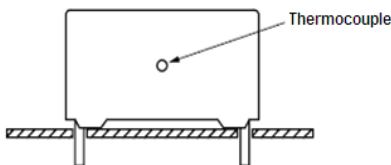
These capacitors are only suitable for DC applications. It means the voltage applied to the capacitors must be unidirectional ripple voltage.



Note:

- The peak voltage ( $U_{p+}$ ) shall not be greater than the rated DC voltage ( $U_N$ ).
- The peak-to-peak ripple voltage ( $U_{p-p}$ ) shall not be greater than  $0.3 \times (U_N)$ .
- The maximum component surface temperature rise must be lower than  $15^\circ\text{C}$ .

## Measuring the component temperature



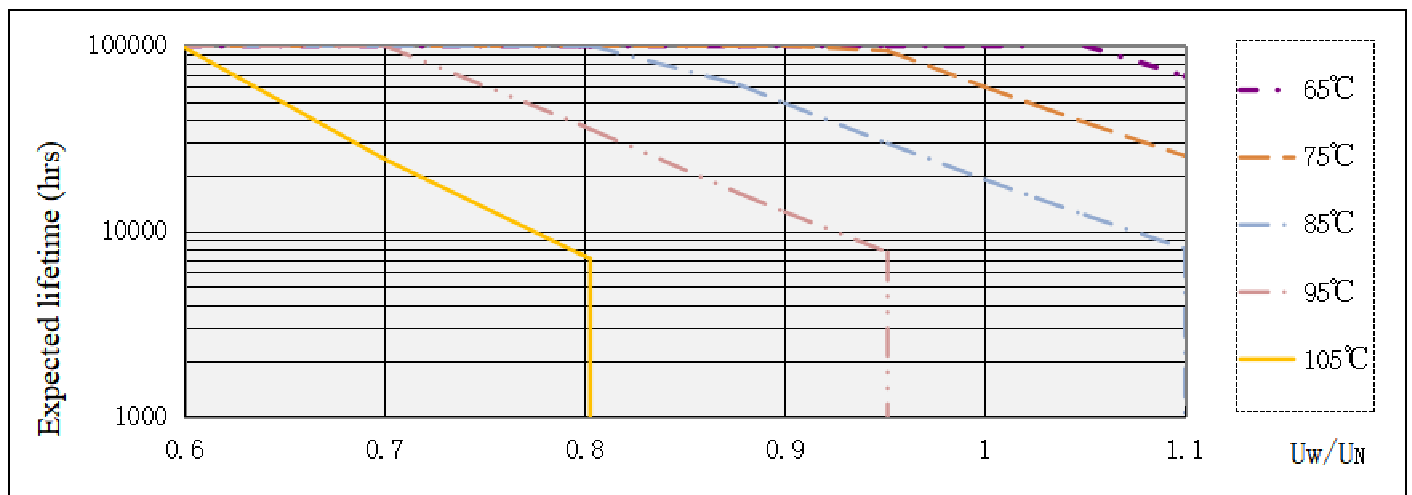
Note:

- The temperature is measured in unloaded ( $T_{amb}$ ) and maximum loaded condition ( $T_c$ )
- The temperature rise is given by  $\Delta T = T_c - T_{amb}$
- To avoid thermal radiation or convection, the capacitor must be tested in a closed area from air circulation

## Over voltages according to IEC 61071:

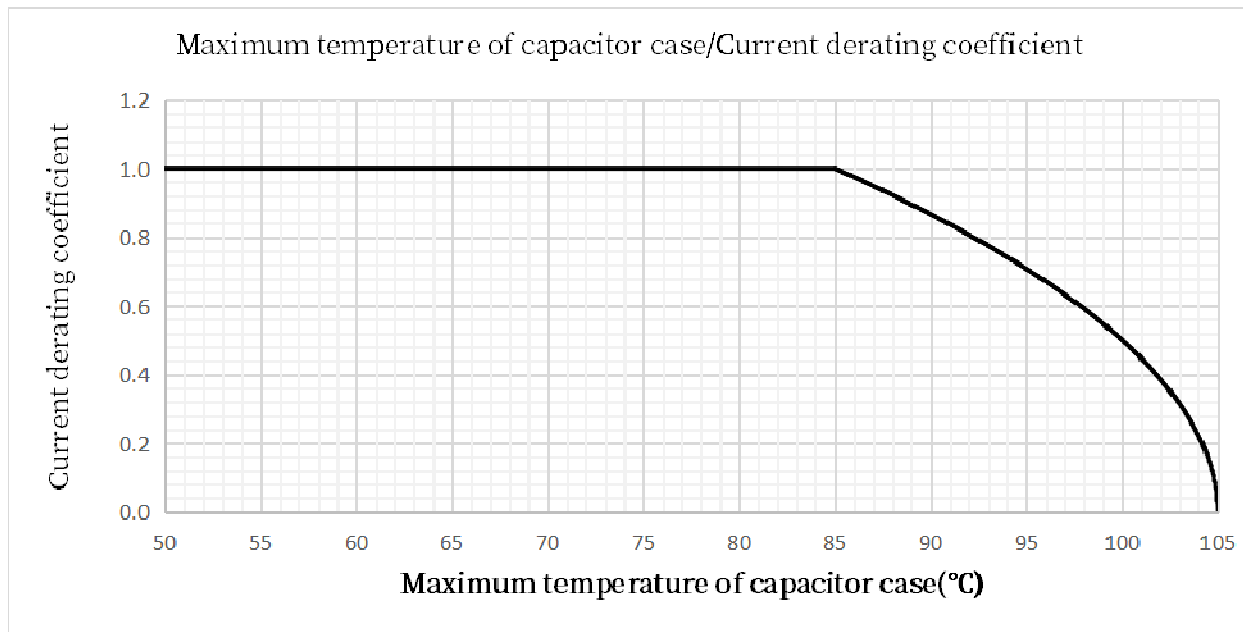
- 1.1  $U_N$  30% of on-load-dur.
- 1.15  $U_N$  30min/day
- 1.2  $U_N$  5min/day
- 1.3  $U_N$  1min/day
- 1.5  $U_N$  100ms every time, 1000 times during the whole life of the capacitor

## Lifetime expectancy (typical curve)



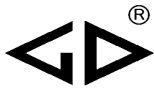
## ■ Current derating for film capacitors with altitude and temperature

- Altitude derating: When the altitude exceeds 4000m, the current derates by 3% for every 500m increase.
- Current derating curve with temperature:



Note:

- ▲ When the maximum temperature of capacitor case is lower than 85°C, the current coefficient is 1.
- ▲ When the temperature of the capacitor case rises, the derating shall be according to the above current derating coefficient.



## ■ Test Method And Performance

No.	Item	Performance	Testing Method IEC 61071
1	External inspection	Legible marking and finish as Specified Dimensions: see specific drawing	Check for finish, marking and overall dimensions
	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Robustness of terminations	There shall be no visible damage	Tensile $U_{a1}$ Wire diameter      load $d \leq 0.8\text{mm}$ 10N $0.8 \text{ mm} < d \leq 1.2\text{mm}$ 20N Bending $U_{b1}$ Wire diameter      load $d \leq 0.8 \text{ mm}$ 5N $0.8 \text{ mm} < d \leq 1.2 \text{ mm}$ 10N $4 \times 90^\circ$ , duration 2s to 3s
	Resistance to soldering heat	There shall be no visible damage.	Solder temperature: $260^\circ\text{C} \pm 5^\circ\text{C}$ Immersion time: $10\text{s} \pm 1\text{s}$
	Final measurements	$ \Delta C/C  \leq 0.5\%$ (relative to the initial value) Increase of tgδ: $\leq 0.005$	
2	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Vibration	There shall be no evidence damage	$f=10 \text{ Hz to } 55\text{Hz}$ $a=\pm 0.35\text{mm}$ Test duration per axis = 10 frequency cycles (3 axes offset from each other by $90^\circ\text{C}$ ), 1 octave/min, the total times are 135min for 3 axes.
	Impacts	There shall be no evidence damage	1 000times, Acceleration: $390\text{m/s}^2$ Pulse duration: 6ms
2	Final measurements	$ \Delta C/C  \leq 0.5\%$ (relative to the initial value) Increase of tgδ: $\leq 0.005$	
3	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Surge discharge test		Test voltage: $1.1U_{\text{NDC}}$ Number of discharges: 5 Time lapse every 2 min (10min total) Within 5 min after the surge discharge test, the capacitor shall be subjected to a voltage test between terminals: $1.5U_{\text{NDC}}$ , 60s
	Final measurements	$ \Delta C/C  \leq 1.0\%$ (relative to the initial value) tgδ: $\leq 1.2 \times \text{tg}\delta_0$ (the initial tgδ) + 0.0001	



# C3D(R)

No.	Item	Performance	Testing Method IEC 61071
4	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Self-healing		Voltage: 1.5U <sub>NDC</sub> Duration: 10s If fewer than five clearing occur during this time, the voltage shall be increased slowly until five clearings have occurred since the start of the test or until the voltage has reached 2.5U <sub>NDC</sub> If fewer than five clearings have occurred when the voltage has reached 2.5U <sub>NDC</sub> , for a time of 10s, the test shall be finished.
		$ \Delta C/C  \leq 0.5\%$ (relative to the initial value) tgδ: $\leq 1.1 \times \text{tg}\delta_0(\text{the initial tg}\delta) + 0.0001$	
5	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Change of temperature	There shall be no evidence of deterioration	Test: Na $\theta_A = -40^\circ\text{C}, \theta_B = +85^\circ\text{C}$ 5 cycles, Duration: t=30min
	Final measurements	$ \Delta C/C  \leq 2.0\%$ (relative to the initial value) Increase of tgδ: $\leq 0.015$	
6	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Damp heat, steady state	There shall be no evidence of deterioration.	Temperature: 40°C ±2°C Humidity: 93±3 %RH Duration: 56 days
	Voltage test between terminals	There shall be no permanent puncturing or flashover.	1.5U <sub>NDC</sub> , 60s
	Voltage test between terminals and case	There shall be no permanent puncturing or flashover.	2 000VAC, 10s
	Final measurements	$ \Delta C/C  \leq 2.0\%$ (relative to the initial value) Increase of tgδ: $\leq 0.015$	
7	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Thermal stability test	Throughout the last 6h, the temperature of the case near of the top rise shall not increase by more than 1°C	Temperature: ambient temperature Test current: 1.1I <sub>rms</sub> Test frequency: 10kHz Test time: 48h During the last 6h, the temperature of the case near of the top rise shall be measured per 1.5h.
	Final measurements	$ \Delta C/C  \leq 2.0\%$ (relative to the initial value) tgδ: $\leq 1.2 \times \text{tg}\delta_0(\text{the initial tg}\delta) + 0.015$	



















No.	Item	Performance	Testing Method IEC 61071
8	Initial measurements	Capacitance at 1kHz tgδ at 10kHz	
	Endurance		Measuring procedure: (1) 1.3U <sub>NDC</sub> , 85°C, 500h  (2) Charging and discharging: Times: 1 000 dv/dt: according to the technical data  (3) 1.3U <sub>NDC</sub> , 85°C, 500h
	Final measurements	$ \Delta C/C  \leq 3.0\%$ (relative to the initial value) Increase of tgδ: $\leq 0.015$	



# C3D(R)

## ■ Marking(For Example)

Including TUV	Without TUV
 C3D 1100VDC 30 $\mu$ F $\pm$ 10% SH 40/85/56 P30001  E256238  EN61071	 C3D 1100VDC 30 $\mu$ F $\pm$ 10% SH 40/85/56 P30001  E256238
 C3D P30001 1100VDC 30 $\mu$ F $\pm$ 10% 40/85/56 SH  E256238  EN61071	 C3D P30001 1100VDC 30 $\mu$ F $\pm$ 10% 40/85/56 SH  E256238
 C3D 800VDC 3.0 $\mu$ F $\pm$ 10% 40/85/56 SH 305K800  E256238  EN61071 <b>and</b> P10001	/

	Brand	C3D	Type
1100VDC 800VDC 800	Rated voltage	30.0 $\mu$ F $\pm$ 10% 3.0 $\mu$ F $\pm$ 10% 305K	Rated capacitance and tolerance
SH	Self-healing capacitor	40/85/56	Climate category
P30001 P10001	Lot No.		UL Approved
	TUV Approved	E256238	UL Approved File No.
EN61071	TUV apply standard		

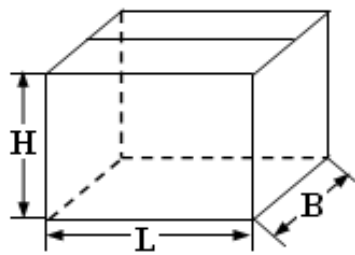




# C3D(R)

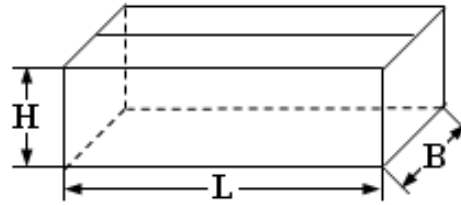
## ■ Packing box sizes(mm)(example)

1. Out packing box for bulk



L:375±5  
B:375±5  
H:265±5

2. Inner packing box for bulk



L:355±3  
B:175±3  
H:118±3

## ■ Storage conditions

▲ It must be noted that the solderability of the terminals may be deteriorated when stored in an atmosphere filled with moisture, dust, or a reactive oxidizing gas.(hydrogen chloride, hydrogen sulfide, sulfuric acid,etc.)

▲ It shouldn't be located in particularly high temperature and high humidity, it must submit to the following conditions(unchanging primal package):

Temperature: -40°C to 35°C

Humidity: Average per year ≤70%RH;

For 30 full days randomly distributed throughout the year ≤80%RH

Storage time for tinned lead wire: (from the date marked on the capacitor's body or the label glued to the package) :

Bulk(packed with plastic bag): ≤24 months ;

Taping and line up: ≤12 months

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