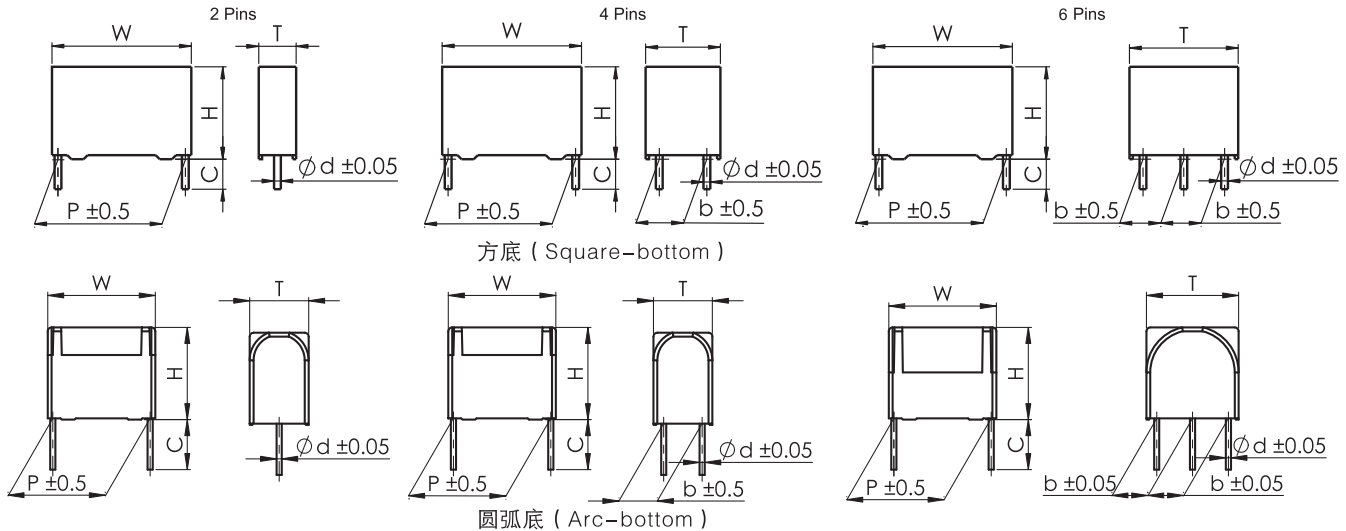




C3D(R)

低高度设计PCB用DC-Link电容器 Low building height DC-Link Capacitor for PCB

■ 外形图 Outline Drawing



■ 特点和应用场合

- 超薄型, 低高度, 安全膜设计
- 高耐纹波电流, 低ESR、L_s
- 塑料外壳封装(UL94 V-0), 树脂填充
- 良好的自愈特性
- 高性能直流滤波应用场合
(如: 变频器、光伏逆变器、LED路灯照明、工业和高端电源、车载充电器等)

■ Features and Applications

- Slim line, low building height, segmented metallized-film design
- High ripple current capability, low ESR, low L_s
- Plastic case (UL94 V-0), Filled with resin
- Self-healing property
- High performance DC filtering applications
(i.e. transducers, PV micro inverters, LED street lighting, industrial and high-end power supplies, on board chargers (EV/HEV))

■ 安全认证 Safety Approvals

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

■ 技术要求 Specifications

引用标准 Reference Standard	GB/T 17702 (IEC 61071)			
气候类别 Climatic Category	40/85/56			
工作温度范围 Operating Temperature Range	-40°C ~ 105°C (Θ _{hs} ≤ 105°C) Θ _{hs} =85°C ~105°C :decreasing factor 1.5% per°C for U _N (dc)			
额定电压 Voltage Range U _{N,85°C}	500V	700V	1 000V	1 200V
工作电压 Operating Voltage U _{OPDC, 105°C}	350V	490V	700V	840V
容量偏差 Capacitance Tolerance	J (± 5%), K (± 10%)			
容量范围 Capacitance Range	1.5μF ~ 100μF			
耐电压 Voltage Proof	1.5U _N (10s, 20°C ± 5°C)			
绝缘电阻 Insulation Resistance (IR × C _N)	≥ 10 000s (20°C, 100Vdc, 1min)			
自感 (L _s) Self Inductance(L _s)	< 1nH per mm of lead spacing			
最大峰值电流 Ĩ (A) Maximum peak current Ĩ (A)	Ĩ =C _N · dV/dt			
预期寿命 Expected lifetime	100 000h @ U _N , Θ _{hs} =70°C			

产品编码说明 Part number code system

■ 18位产品代码如下：

The 15 digits part number is formed as follow:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
C	3	D															

第1~3位	型号代码 C3D	Digit 1 to 3	Series code C3D
第4~5位	直流额定电压 2H=500V 1V=700V 3A=1000V 3L=1200V	Digit 4 to 5	D.C. rated voltage 2H=500V 1V=700V 3A=1000V 3L=1200V
第6~8位	标称容量 举例：256=25 × 10 ⁶ pF=25.0μF	Digit 6 to 8	Rated capacitance value For example: 256=25 × 10 ⁶ pF=25.0μF
第9位	容量偏差 J= ± 5%,K= ± 10%	Digit 9	Capacitance tolerance J= ± 5%,K= ± 10%
第10位	引线间距P B=27.5 mm F=37.5 mm M=52.5 mm	Digit 10	Pitch B=27.5 mm F=37.5 mm M=52.5 mm
第11位	塑料外壳高度H A=12mm B=15mm C=18mm F=24mm	Digit 11	Height of plastic case A=12mm B=15mm C=18mm F=24mm
第12~15位	引线加工和包装代码	Digit 12 to 15	Lead form and packaging code
第16~18位	内部特征码	Digit 16 to 18	Internal use

■ Table 1 引线加工和包装代码lead form and packaging code

第 12 位 Digit 12		第 13 和第 14 位 Digit 13 and Digit 14		第 15 位 Digit 15	
代码 Code	说明 explanation	代码 Code	说明 explanation	代码 Code	说明 explanation
0	2 引线散装 Two pins(bulk)	C0	标准引线长度 5.5mm standard lead length 5.5mm	0	引线长度偏差 ± 1.0mm Length tolerance ± 1.0mm
1	4 引线散装 four pins(bulk) b=10.0mm				
2	4 引线散装 four pins(bulk) b=12.7mm				
3	4 引线散装 four pins(bulk) b=20.0mm				
4	4 引线散装 four pins(bulk) b=15.0mm				
A	4 引线散装 four pins(bulk) b=20.3mm				
B	4 引线散装 four pins(bulk) b=10.2mm				
C	4 引线散装 four pins(bulk) b=5.1mm				
D	4 引线散装 four pins(bulk) b=15.2mm				
G	6 引线散装 six pins(bulk) b=20.3mm				



C3D(R)

■ 技术参数 Technical data (mm)

U _{N,85°C} : 500Vdc													
HEIGHT (mm)	C _N (μF)	W ± 1.0	H ± 1.0	T ± 1.0	P ± 0.5	b ± 0.5	d ± 0.05	dV/dt (V/μs)	tan δ × (10 ⁻⁴)		ESR @ 10kHz (mΩ)	I _{max} (A)	Part number
									1kHz	10kHz			
12	★ 5	32	12	24	27.5	-	0.8	20	10	85	20.0	3.8	C3D2H505+BA0C00***
15	★ 7	32	15	27	27.5	-	0.8	20	10	85	14.5	4.8	C3D2H705+BB0C00***
	10	42	15	27	37.5	10.2	1.0	15	20	150	16.2	5.1	C3D2H106+FBBC00***
	★ 15	42	15	33	37.5	10.2	1.0	15	20	150	11.0	6.7	C3D2H156+FBBC00***
	★ 20	57	15	33	52.5	20.3	1.2	10	33	300	15.4	6.4	C3D2H206+MBAC00***
	★ 30	57	15	45	52.5	20.3	1.2	10	33	300	10.5	8.8	C3D2H306+MBAC00***
	★ 50 ^⑥	57	15	62	52.5	20.3	1.2	10	33	300	6.6	12.8	C3D2H506+MBGC00***
18	★ 10	42	18	24	37.5	10.2	1.0	15	20	150	16.2	5.1	C3D2H106+FCBC00***
	★ 15	42	18	27	37.5	10.2	1.0	15	20	150	11.0	6.4	C3D2H156+FCBC00***
	★ 20	42	18	39	37.5	10.2	1.0	15	20	150	8.4	8.4	C3D2H206+FCBC00***
	★ 30	57	18	35	52.5	20.3	1.2	11	33	300	20.8	5.8	C3D2H306+MCAC00***
	50	57	18	50	52.5	20.3	1.2	11	33	300	12.8	8.5	C3D2H506+MCAC00***
24	★ 20	42	24	30	37.5	10.2	1.0	15	20	150	8.4	8.2	C3D2H206+FFBC00***
	★ 30	42	24	39	37.5	10.2	1.0	15	20	150	5.8	10.8	C3D2H306+FFBC00***
	50	57	24	39	52.5	20.3	1.2	11	33	300	12.8	8.2	C3D2H506+MFAC00***
	★ 100 ^⑥	57	24	70	52.5	20.3	1.2	11	33	300	6.7	14.2	C3D2H107+MFGC00***

U _{N,85°C} : 700Vdc													
HEIGHT (mm)	C _N (μF)	W ± 1.0	H ± 1.0	T ± 1.0	P ± 0.5	b ± 0.5	d ± 0.05	dV/dt (V/μs)	tan δ × (10 ⁻⁴)		ESR @ 10kHz (mΩ)	I _{max} (A)	Part number
									1kHz	10kHz			
12	★ 3	32	12	24	27.5	-	0.8	25	10	65	25.1	3.3	C3D1V305+BA0C00***
15	★ 5	32	15	27	27.5	-	0.8	25	10	65	15.4	4.7	C3D1V505+BB0C00***
	7	42	15	27	37.5	10.2	1.0	19	20	120	17.7	4.9	C3D1V705+FBBC00***
	★ 10	42	15	33	37.5	10.2	1.0	19	20	120	12.6	6.2	C3D1V106+FBBC00***
	★ 15	57	15	33	52.5	20.3	1.2	13	33	270	9.9	8.0	C3D1V156+MBAC00***
	★ 20	57	15	45	52.5	20.3	1.2	13	33	270	7.6	10.3	C3D1V206+MBAC00***
	★ 30 ^⑥	57	15	62	52.5	20.3	1.2	13	33	270	5.3	14.2	C3D1V306+MBGC00***
18	★ 7	42	18	24	37.5	10.2	1.0	19	20	120	17.7	4.8	C3D1V705+FCBC00***
	★ 10	42	18	27	37.5	10.2	1.0	19	20	120	12.6	6.0	C3D1V106+FCBC00***
	★ 15	42	18	39	37.5	10.2	1.0	19	20	120	8.6	8.3	C3D1V156+FCBC00***
	★ 20	57	18	35	52.5	20.3	1.2	13	33	270	10.1	8.3	C3D1V206+MCAC00***
	30	57	18	50	52.5	20.3	1.2	13	33	270	7.0	11.6	C3D1V306+MCAC00***
24	★ 15	42	24	30	37.5	10.2	1.0	19	20	120	8.6	8.1	C3D1V156+FFBC00***
	★ 20	42	24	39	37.5	10.2	1.0	19	20	120	6.6	10.1	C3D1V206+FFBC00***
	★ 30	57	24	39	52.5	20.3	1.2	13	33	270	7.0	11.0	C3D1V306+MFAC00***
	★ 50 ^⑥	57	24	70	52.5	20.3	1.2	13	33	270	4.5	17.3	C3D1V506+MFGC00***

■ 技术参数 Technical data (mm)

U _{N,85°C} : 1 000Vdc													
HEIGHT (mm)	C _N (μF)	W ± 1.0	H ± 1.0	T ± 1.0	P ± 0.5	b ± 0.5	d ± 0.05	dV/dt (V/μs)	tan δ × (10 ⁻⁴)		ESR @ 10kHz (mΩ)	I _{max} (A)	Part number
									1kHz	10kHz			
12	★ 2	32	12	24	27.5	–	0.8	33	10	65	27.2	3.2	C3D3A205+BA0C00***
15	5	42	15	27	37.5	10.2	1.0	25	10	65	18.1	4.8	C3D3A505+FBBC00***
	★ 7	42	15	33	37.5	10.2	1.0	25	20	120	13.1	6.1	C3D3A705+FBBC00***
	★ 10	57	15	33	52.5	20.3	1.2	17	20	120	17.5	6.0	C3D3A106+MBAC00***
	★ 15	57	15	45	52.5	20.3	1.2	17	33	270	11.8	8.3	C3D3A156+MBAC00***
	★ 20 ^⑥	57	15	62	52.5	20.3	1.2	17	33	270	9.0	10.8	C3D3A206+MBGC00***
18	★ 3	42	18	24	37.5	10.2	1.0	25	20	120	29.6	3.7	C3D3A305+FCBC00***
	★ 5	42	18	27	37.5	10.2	1.0	25	20	120	18.1	5.0	C3D3A505+FCBC00***
	★ 7	42	18	39	37.5	10.2	1.0	25	20	120	13.1	6.8	C3D3A705+FCBC00***
	★ 10	42	18	39	37.5	10.2	1.0	25	20	120	9.3	8.0	C3D3A106+FCBC00***
	15	57	18	50	52.5	20.3	1.2	17	33	270	9.9	9.7	C3D3A156+MCAC00***
	20	57	18	50	52.5	20.3	1.2	17	33	270	7.6	11.1	C3D3A206+MCAC00***
24	★ 7	42	24	30	37.5	10.2	1.0	25	20	120	13.1	6.5	C3D3A705+FFBC00***
	★ 10	42	24	39	37.5	10.2	1.0	25	20	120	9.3	8.4	C3D3A106+FFBC00***
	★ 15	57	24	39	52.5	20.3	1.2	17	33	270	11.8	8.4	C3D3A156+MFAC00***
	★ 20	57	24	39	52.5	20.3	1.2	17	33	270	7.6	10.5	C3D3A206+MFAC00***
	★ 30 ^⑥	57	24	70	52.5	20.3	1.2	17	33	270	5.3	15.9	C3D3A306+MFGC00***

U _{N,85°C} : 1 200Vdc													
HEIGHT (mm)	C _N (μF)	W ± 1.0	H ± 1.0	T ± 1.0	P ± 0.5	b ± 0.5	d ± 0.05	dV/dt (V/μs)	tan δ × (10 ⁻⁴)		ESR @ 10kHz (mΩ)	I _{max} (A)	Part number
									1kHz	10kHz			
12	★ 1.5	32	12	24	27.5	–	0.8	40	7	55	28.9	3.1	C3D3L155+BA0C00***
15	3	42	15	27	37.5	10.2	1.0	31	7	55	23.9	4.2	C3D3L305+FBBC00***
	★ 4	42	15	33	37.5	10.2	1.0	31	13	100	18.1	5.2	C3D3L405+FBBC00***
	★ 6	57	15	33	52.5	20.3	1.2	20	13	100	23.2	5.2	C3D3L605+MBAC00***
	★ 9	57	15	45	52.5	20.3	1.2	20	24	200	15.7	7.2	C3D3L905+MBAC00***
	★ 12 ^⑥	57	15	62	52.5	20.3	1.2	20	24	200	11.9	9.4	C3D3L126+MBGC00***
18	★ 3	42	18	24	37.5	10.2	1.0	31	13	100	23.9	4.2	C3D3L305+FCBC00***
	★ 4	42	18	27	37.5	10.2	1.0	31	13	100	18.1	5.0	C3D3L405+FCBC00***
	★ 7	42	18	39	37.5	10.2	1.0	31	13	100	10.6	7.5	C3D3L705+FCBC00***
	13	57	18	50	52.5	20.3	1.2	20	24	200	9.2	10.0	C3D3L136+MCAC00***
24	★ 6	42	24	30	37.5	10.2	1.0	31	13	100	12.3	6.7	C3D3L605+FFBC00***
	★ 15	57	24	39	52.5	20.3	1.2	20	24	200	8.1	10.2	C3D3L156+MFAC00***
	★ 25 ^⑥	57	24	70	52.5	20.3	1.2	20	24	200	5.1	16.1	C3D3L256+MFGC00***

- 备注: 1. “+”表示容量偏差。“+”=capacitance tolerance code, J=±5%,K=±10%,M=±20%。
 2. 当“b=10.0mm”时,第12位代码为“1”;当“b=20.0mm”时,第12位代码为“3”。
 When the b=10.0mm, the digit 12 is “1”; When the b=20.0mm, the digit 12 is “3”.
 3. “I_{max}”是在f=10kHz, Θ_{amb}=70°C, ΔΘ_{case}=15.0°C的最大电流有效值。
 “I_{max}”=Maximum rms current at 10kHz, Θ_{amb}=70°C, ΔΘ_{case}=15.0°C。
 4. “⑥”表示6引线。“⑥”means 6 pins.
 5. “★”表示外壳为圆弧底。“★”=Arc-bottom of the outer shell.