C3R Film Capacitors

Low Height Safety Film DC-Link Capacitor for PCB

■ Structure

- ●Dielectric: Metallized Polypropylene Film
- ●Electrode: Special safety structure process metal vacuum evaporation layer
- ●Encapsulation: Flame retardant epoxy resin sealing, conforming to UL94 V－0
- ●Shell: Flame retardant PBT plastic shell, conforming to UL94 V－0
- ●Lead-wire: Tinned copper wire

■ Typical Application

●High-performance DC filter applications（E.g.: Inverters, Photovoltaic Inverters, LED Street Lighting, Industrial and High-end Power Supplies, Car Chargers, etc.)

■ Characteristics

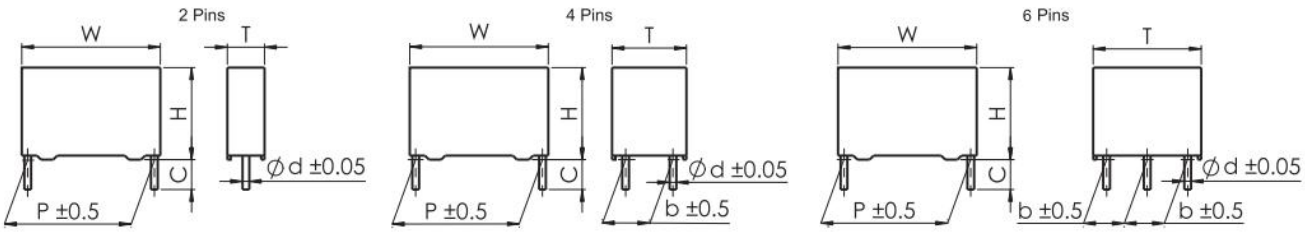
●Good appearance consistency, high ripple current resistance, low ESR and Ls, good self-healing property, strong humidity resistance; can withstand high pulse current; long lifetime; excellent overvoltage resistance.

■ Conform to RoHS standards

■ Technical Parameter

Reference Standards	GB/T17702（IEC 61071）
Climatic Category	40/85/56
Rated Voltage	500Vdc，700Vdc，1000Vdc，1200Vdc
Operating Temperature Range (Shell)	-40℃~105℃ （+85℃to +105℃: decreasing factor1.5%per℃ for U_R）
Capacitance Range	1.5μF ~ 100μF
Capacitance Tolerance	J（±5%）、 K（±10%）
Voltage Proof	1.5 U_R(10S, 20℃±5℃)
Insulation Resistance	≥10000S (20℃，100V, 1min)
Maximum Peak Current	$\hat{I}$ =C*dV/dt
Self-inductance	＜1nH (Lead-wire spacing / mm)
Expected Lifetime	≥100 000h@U_R θhs=70℃
Note: Products capacitance can be customized. Details specific parameters are according to Approval Sheet.	

■ Outline Drawing



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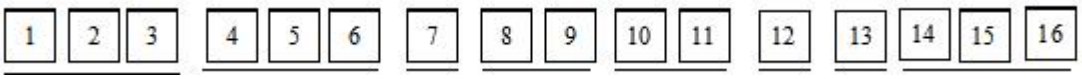
■ C3R Part Number System

The 16-digit part number is formed as follow:



Digit 1 to 3	Series Code: C3R DC-Link Capacitor PCB
Digit 4 to 6	Rated Capacitance Value: 104＝10×10^4 pF=0.1μF
Digit 7	Capacitance Tolerance: J=±5%、K=±10%
Digit 8 to 9	Rated Voltage: 2H=500Vdc、2S=700Vdc、2K=800Vdc、2L=900Vdc 3A=1000Vdc、3Y=1100Vdc、3M=1200Vdc
Digit 10 to 11	Dimensions Code: See The Dimension Comparison Table

Plastic Shell Code	Plastic Shell Dimensions W*T*H	Plastic Shell Code	Plastic Shell Dimensions W*T*H	Plastic Shell Code	Plastic Shell Dimensions W*T*H	Plastic Shell Code	Plastic Shell Dimensions W*T*H
N0	32*24*12	N4	57*33*15	N8	42*27*18	NC	42*30*24
N1	32*27*15	N5	57*45*15	N9	42*39*18	ND	42*39*24
N2	42*27*15	N6	57*62*15	NA	57*35*18	NE	57*39*24
N3	42*33*15	N7	42*24*18	NB	57*50*18	NF	57*70*24

Digit 12	Color Code: R - Gray; T - Black
Digit 13	Lead-Wire Diameter Code: 8=0.8; 1=1.0; 2=1.2
Digit 14 to 16	Lead-wire Forming Type Code:

14th digit		15th to 16th digit	
Code	Content explanation	Code	Content explanation
1	4 Lead-wires b=15.0mm	35	Lead-wire Length L=3.5±0.5mm
2	4 lead-wires b=10.0mm	38	Lead-wire Length L=3.8±0.5mm
3	4 lead-wires b=12.7mm	40	Lead-wire Length L=4.0±0.5mm
4	4 lead-wires b=20.0mm	45	Lead-wire Length L=4.5±0.5mm
5	4 lead-wires b=20.3mm	50	Lead-wire Length L=5.0±0.5mm
6	4 lead-wires b=10.2mm	55	Lead-wire Length L=5.5±0.5mm
7	4 lead-wires b=5.10mm	60	Lead-wire Length L=6.0±0.5mm
8	4 lead-wires b=15.2mm	65	Lead-wire Length L=6.5±0.5mm
9	6 lead-wires b=20.3mm		

C3R Film Capacitors

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圣融达科技 SINCERITY TECHNOLOGY

■ Technical data

Un,85℃:500Vdc/Uop,105℃350Vdc												
Height (mm)	μF	Part number	Dimensions（mm）						dv/dt (V/us)	tan δ ×（10^{-4}）		ESR(mΩ) @10KHZ	Imax (A) 10KHZ@70℃
			W±1.0	T±1.0	H±1.0	P± 0.5	b± 0.5	d±0.05		1Khz	10Khz		
12	5	C3R505J2HN0**0==	32	24	12	27.5	-	0.8	20	10	85	20	3.8
	7	C3R705J2HN1**0==	32	27	15	27.5	-	0.8	20	10	85	14.5	4.8
15	10	C3R106J2HN2**6==	42	27	15	37.5	10.2	1.0	15	20	150	16.2	5.1
	15	C3R156J2HN3**6==	42	33	15	37.5	10.2	1.0	15	20	150	11.0	6.7
	20	C3R206J2HN4**5==	57	33	15	52.5	20.3	1.2	10	33	300	15.4	6.4
	30	C3R306J2HN5**5==	57	45	15	52.5	20.3	1.2	10	33	300	10.5	8.8
	50	C3R506J2HN6**9==	57	62	15	52.5	20.3	1.2	10	33	300	6.6	12.8
18	10	C3R106J2HN7**6==	42	24	18	37.5	10.2	1.0	15	20	150	16.2	5.1
	15	C3R156J2HN8**6==	42	27	18	37.5	10.2	1.0	15	20	150	11.0	6.4
	20	C3R206J2HN9**6==	42	39	18	37.5	10.2	1.0	15	20	150	8.4	8.4
	30	C3R306J2HNA**5==	57	35	18	52.5	20.3	1.2	11	33	300	20.8	5.8
	50	C3R506J2HNB**5==	57	50	18	52.5	20.3	1.2	11	33	300	12.8	8.5
24	20	C3R206J2HNC**6==	42	30	24	37.5	10.2	1.0	15	20	150	8.4	8.2
	30	C3R5306J2HND**6==	42	39	24	37.5	10.2	1.0	15	20	150	5.8	10.8
	50	C3R506J2HNE**5==	57	39	24	52.5	20.3	1.2	11	33	300	12.8	8.2
	100	C3R107J2HNF**9==	57	70	24	52.5	20.3	1.2	11	33	300	6.7	14.2

Un,85℃:700Vdc/Uop,105℃490Vdc												
Height (mm)	μF	Part number	Dimensions（mm）						dV/dt (V/us)	tan δ ×（10^{-4}）		ESR(mΩ) @10KHZ	I_{max} (A)
			W±1.0	T±1.0	H±1.0	P±0.5	b±0.5	d±0.05		1Khz	10Khz		
12	3	C3R305J2SN0**0==	32	24	12	27.5	-	0.8	25	10	65	25.1	3.3
15	5	C3R505J2SN1**0==	32	27	15	27.5	-	0.8	25	10	65	15.4	4.7
	7	C3R705J2SN2**6==	42	27	15	37.5	10.2	1.0	19	20	120	17.7	4.9
	10	C3R106J2SN3**6==	42	33	15	37.5	10.2	1.0	19	20	120	12.6	6.2
	15	C3R156J2SN4**5==	57	33	15	52.5	20.3	1.2	13	33	270	9.9	8.0
	20	C3R206J2SN5**5==	57	45	15	52.5	20.3	1.2	13	33	270	7.6	10.3
	30	C3R306J2SN6**9==	57	62	15	52.5	20.3	1.2	13	33	270	5.3	14.2
18	7	C3R705J2SN7**6==	42	24	18	37.5	10.2	1.0	19	20	120	17.5	5.0
	10	C3R106J2SN8**6==	42	27	18	37.5	10.2	1.0	19	20	120	12.4	6.3
	15	C3R156J2SN9**6==	42	39	18	37.5	10.2	1.0	19	20	120	8.6	8.3
	20	C3R206J2SNA**5==	57	35	18	52.5	20.3	1.2	13	33	270	10.1	8.3
	30	C3R306J2SNB**5==	57	50	18	52.5	20.3	1.2	13	33	270	7.0	11.6
24	15	C3R156J2SNC**6==	42	30	24	37.5	10.2	1.0	19	20	120	8.6	8.1
	20	C3R206J2SND**6==	42	39	24	37.5	10.2	1.0	19	20	120	6.6	10.1

	30	C3R306J2SNE**5==	57	39	24	52.5	20.3	1.2	13	33	270	7.0	11.0
	50	C3R705J2SNF**9==	57	70	24	52.5	20.3	1.2	13	33	270	4.5	17.3

Un,85℃:1000Vdc/UOP,105℃700Vdc													
Height (mm)	μF	Part number	Dimensions（mm）						dV/dt (V/us)	tan δ ×（10^{-4}）		ESR(mΩ) @10KHZ	I_{max} (A)
			W±1.0	T±1.0	H±1.0	P±0.5	b±0.5	d±0.05		1Khz	10Khz		
12	2	C3R205J3AN0**0==	32	24	12	27.5	-	0.8	33	10	65	27.2	3.2
15	5	C3R505J3AN2**6==	42	27	15	37.5	10.2	1.0	25	10	65	18.1	4.8
	7	C3R705J3AN3**6==	42	33	15	37.5	10.2	1.0	25	20	120	13.1	6.1
	10	C3R106J3AN4**5==	57	33	15	52.5	20.3	1.2	17	20	120	17.5	6.0
	15	C3R156J3AN5**5==	57	45	15	52.5	20.3	1.2	17	33	270	11.8	8.3
	20	C3R206J3AN6**9==	57	62	15	52.5	20.3	1.2	17	33	270	9.0	10.8
18	3	C3R305J3AN7**6==	42	24	18	37.5	10.2	1.0	25	20	120	29.6	3.7
	5	C3R505J3AN8**6==	42	27	18	37.5	10.2	1.0	25	20	120	18.1	5.0
	7	C3R705J3AN9**6==	42	39	18	37.5	10.2	1.0	25	20	120	13.1	6.8
	10	C3R106J3AN9**6==	42	39	18	37.5	10.2	1.0	25	20	120	9.3	8.0
	15	C3R156J3ANB**5==	57	50	18	52.5	20.3	1.2	17	33	270	9.9	9.7
	20	C3R206J3ANB**5==	57	50	18	52.5	20.3	1.2	17	33	270	7.6	11.1
24	7	C3R705J3ANC**6==	42	30	24	37.5	10.2	1.0	25	20	120	13.1	6.5
	10	C3R106J3AND**6==	42	39	24	37.5	10.2	1.0	25	20	120	9.3	8.4
	15	C3R156J3ANE**5==	57	39	24	52.5	20.3	1.2	17	33	270	11.8	8.4
	20	C3R206J3ANE**5==	57	39	24	52.5	20.3	1.2	17	33	270	7.6	10.5
	30	C3R306J3ANF**9==	57	70	24	52.5	20.3	1.2	17	33	270	5.3	15.9

Un,85℃:1000Vdc/UOP,105℃700Vdc													
Height (mm)24	μF	Part number	Dimensions（mm）						dV/dt (V/us)	tan δ ×（10^{-4}）		ESR(mΩ) @10KHZ	I_{max} (A)
			W±1.0	T±1.0	H±1.0	P±0.5	b±0.5	d±0.05		1Khz	10Khz		
12	1.5	C3R155J3MN0**0==	32	24	12	27.5	-	0.8	40	7	55	28.9	3.1
15	3	C3R305J3MN2**6==	42	27	15	37.5	10.2	1.0	31	7	55	23.9	4.2
	4	C3R405J3MN3**6==	42	33	15	37.5	10.2	1.0	31	13	100	18.1	5.2
	6	C3R605J3MN4**5==	57	33	15	52.5	20.3	1.2	20	13	100	23.2	5.2
	9	C3R905J3MN5**5==	57	45	15	52.5	20.3	1.2	20	24	200	15.7	7.2
	12	C3R126J3MN6**9==	57	62	15	52.5	20.3	1.2	20	24	200	11.9	9.4
18	3	C3R305J3MN7**6==	42	24	18	37.5	10.2	1.0	31	13	100	23.9	4.2
	4	C3R405J3MN8**6==	42	27	18	37.5	10.2	1.0	31	13	100	18.1	5.0
	7	C3R705J3MN9**6==	42	39	18	37.5	10.2	1.0	31	13	100	10.6	7.5
	13	C3R136J3MNB**5==	57	18	18	52.5	20.3	1.2	20	24	200	9.2	10.0
24	6	C3R605J3MNC**6==	42	30	24	37.5	10.2	1.0	31	13	100	12.3	6.7

	15	C3R156J3MNE**5==	57	39	24	52.5	20.3	1.2	20	24	200	8.1	10.2
	25	C3R256J3MNF**9==	57	70	24	52.5	20.3	1.2	20	24	200	5.1	16.1

Note：

1. “#” indicates for internal recognition code.
2. “= =” indicates for lead-wire Forming Type code, see table 1.
3. “Imax” test conditions: the effective value of the ambient temperature is 70°C, the frequency is 100KHz, and the shell temperature reaches 85°C.
4. “ESR”are both typical value test data.