

Type 420C 85 °C, Long-Life, Inverter Grade, Radial Leaded

Best Value High Ripple Type Plug-in



Type 420C is the PC-mount version of the Type 520C screw terminal, computer grade capacitor and the 85 °C version of the Type 450C Inverter Grade capacitor. It delivers the ripple current capability and exceptional life needed for motor-drive bus capacitors and approaches the performance of the 450C at a lower cost. The extended cathode foil of the 420C assures cool operation and heat flow from the capacitor element to the can in all orientations.

Highlights

- For motor drives and UPS systems
- ESRs to 6.9 mΩ
- Printed-circuit mounting
- Thermal-Pak™ extended cathode construction

Specifications

- Operating Temperature:** -40 °C to 85 °C
Rated Voltage: 100 to 500 Vdc
Capacitance: 160 μF to 27,000 μF ± 20%
DC Leakage Current: ≤ 3 \sqrt{CV} μA, 4 mA max, 5 minutes
Cold Impedance: -20 °C multiple of 25 °C $Z \leq 3$
Ripple Current Multipliers: **Ambient Temperature**

45 °C	55 °C	65 °C	75 °C	85 °C
1.80	1.63	1.45	1.25	1.00

Frequency

	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz
1 3/8" & 1 3/4" Diameters							
100 to 350 V	0.91	0.93	1.00	1.06	1.08	1.09	1.09
400 to 500 V	0.82	0.86	1.00	1.14	1.20	1.23	1.23
2" Diameters							
100 to 350 V	0.92	0.94	1.00	1.05	1.07	1.08	1.08
400 to 500 V	0.82	0.86	1.00	1.14	1.20	1.23	1.27

EIA Ripple Life: 4000 h at full load at 85 °C per EIA IS-749

- Δ capacitance ± 20%
- ESR 200 % of limit
- DCL 100 % of limit

Life Test: 6,000 h at 85°C with rated voltage

- Δ Capacitance ±10%
- ESR 200% of limit
- DCL 100% of limit

Shelf Life Test: 500 h at 105 °C. Capacitance, ESR and DCL meet initial requirements

Vibration: 10 to 55 Hz, 0.06" and 10 g max, 2 h each plane

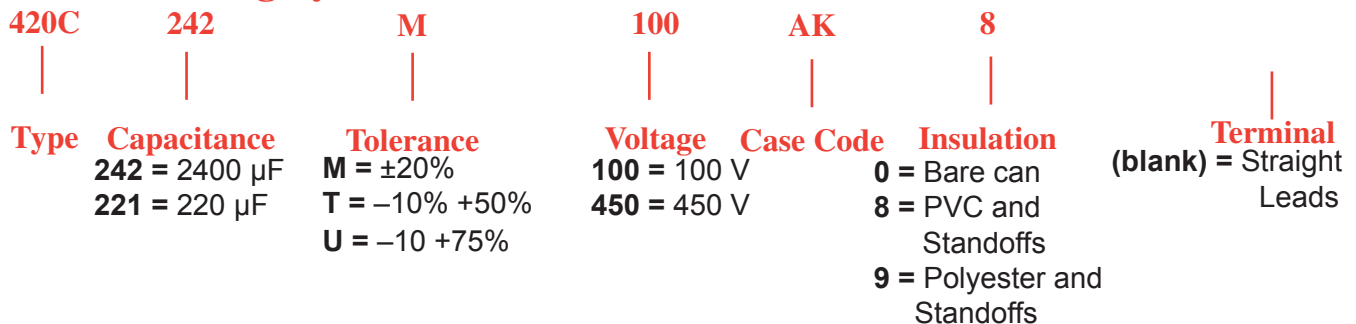
Type 420C 85 °C, Long-Life, Inverter Grade, Radial Leaded Outline Drawings



Case Dimensions

Case Code	Inches						Millimeters					
	D ± .031	L MAX	C ± .015	S ± .031	E ± .031	F ± .015	D ± .78	L MAX	C ± .78	S ± .78	E ± .78	F ± .38
AK	1.375	1.75	0.50	0.175	0.25	0.55	34.93	44.45	12.70	4.45	6.35	13.97
AA	1.375	2.25	0.50	0.175	0.25	0.55	34.93	57.15	12.70	4.45	6.35	13.97
AH	1.375	2.75	0.50	0.175	0.25	0.55	34.98	69.85	12.70	4.45	6.35	13.97
AB	1.375	3.25	0.50	0.175	0.25	0.55	34.93	82.55	12.70	4.45	6.35	13.97
AJ	1.375	3.75	0.50	0.175	0.25	0.55	34.93	95.25	12.70	4.45	6.35	13.97
AC	1.375	4.25	0.50	0.175	0.25	0.55	34.93	107.95	12.70	4.45	6.35	13.97
AD	1.375	4.75	0.50	0.175	0.25	0.55	34.93	120.65	12.70	4.45	6.35	13.97
AE	1.375	5.25	0.50	0.175	0.25	0.55	34.93	133.35	12.70	4.45	6.35	13.97
AF	1.375	5.75	0.50	0.175	0.25	0.55	34.93	146.05	12.70	4.45	6.35	13.97
EA	1.75	2.25	0.70	0.375	0.35	0.90	44.45	57.15	17.78	9.53	8.89	22.86
EH	1.75	2.75	0.70	0.375	0.35	0.90	44.45	69.85	17.78	9.53	8.89	22.86
EB	1.75	3.25	0.70	0.375	0.35	0.90	44.45	82.55	17.78	9.53	8.89	22.86
EJ	1.75	3.75	0.70	0.375	0.35	0.90	44.45	95.25	17.78	9.53	8.89	22.86
EC	1.75	4.25	0.70	0.375	0.35	0.90	44.45	107.95	17.78	9.53	8.89	22.86
ED	1.75	4.75	0.70	0.375	0.35	0.90	44.45	120.65	17.78	9.53	8.89	22.86
EE	1.75	5.25	0.70	0.375	0.35	0.90	44.45	133.35	17.78	9.53	8.89	22.86
EF	1.75	5.75	0.70	0.375	0.35	0.90	44.45	146.05	17.78	9.53	8.89	22.86
BA	2.00	2.25	0.80	0.425	0.40	1.00	50.80	57.15	20.32	10.80	10.16	25.40
BH	2.00	2.75	0.80	0.425	0.40	1.00	50.80	69.85	20.32	10.80	10.16	25.40
BB	2.00	3.25	0.80	0.425	0.40	1.00	50.80	82.55	20.32	10.80	10.16	25.40
BJ	2.00	3.75	0.80	0.425	0.40	1.00	50.80	95.25	20.32	10.80	10.16	25.40
BC	2.00	4.25	0.80	0.425	0.40	1.00	50.80	107.95	20.32	10.80	10.16	25.40
BD	2.00	4.75	0.80	0.425	0.40	1.00	50.80	120.65	20.32	10.80	10.16	25.40
BE	2.00	5.25	0.80	0.425	0.40	1.00	50.80	133.25	20.32	10.80	10.16	25.40
BF	2.00	5.75	0.80	0.425	0.40	1.00	50.80	146.05	20.32	10.80	10.16	25.40

Part Numbering System



Type 420C 85 °C, Long-Life, Inverter Grade, Radial Leaded

Cap. (µF)	Catalog Part Number	ESR Max. 25 °C		Ripple Amps, 85 °C		Nominal Size D X L (in)
		120 Hz (µΩ)	20 kHz (µΩ)	120 Hz (A)	20 kHz (A)	
2200	420C222M300AD8	56.30	28.90	7.10	10.00	1 3/8 X 4 3/4
2500	420C252M300AE8	49.90	26.10	7.90	11.00	1 3/8 X 5 1/4
2500	420C252M300EJ8	50.90	24.90	7.90	11.30	1 3/4 X 3 3/4
2600	420C262M300BB8	54.70	27.10	7.90	11.30	2 X 3 1/4
2700	420C272M300AF8	45.00	23.90	8.80	12.10	1 3/8 X 5 3/4
350 Vdc (400 Vdc Surge)						
3000	420C302M300EC8	44.90	22.20	8.90	12.70	1 3/4 X 4 1/4
3200	420C322M300BJ8	44.70	22.30	9.80	13.90	2 X 3 3/4
3400	420C342M300ED8	39.00	19.60	10.10	14.30	1 3/4 X 4 3/4
3700	420C372M300BC8	38.50	19.20	10.70	15.10	2 X 4 1/4
3900	420C392M300EE8	34.70	17.70	11.40	15.90	1 3/4 X 5 1/4
4300	420C432M300BD8	33.30	17.00	11.80	16.60	2 X 4 3/4
4400	420C442M300EF8	31.30	16.20	12.80	17.80	1 3/4 X 5 3/4
5100	420C512M300BE8	28.60	14.90	13.20	18.30	2 X 5 1/4
5700	420C572M300BF8	26.00	13.80	14.40	19.70	2 X 5 3/4
450 Volts (500 Volts Surge)						
220	420C221M450AK8	383.00	171.00	1.90	2.80	1 3/8 X 1 3/4
330	420C331M450AA8	256.00	115.00	2.60	3.90	1 3/8 X 2 1/4
500	420C501M450AH8	178.00	80.30	3.20	4.80	1 3/8 X 2 3/4
570	420C571M450EA8	157.00	69.10	3.80	5.70	1 3/4 X 2 1/4
630	420C631M450AB8	137.00	62.20	4.00	5.90	1 3/8 X 3 1/4
700	420C701M450BA8	138.00	60.90	4.40	6.60	2 X 2 1/4
760	420C761M450EH8	116.00	50.10	4.70	7.20	1 3/4 X 2 3/4
760	420C761M450AJ8	111.00	51.10	4.60	6.80	1 3/8 X 3 3/4
910	420C911M450AC8	93.80	43.60	5.30	7.80	1 3/8 X 4 1/4
940	420C941M450BH8	99.10	43.30	5.60	8.50	2 X 2 3/4
1000	420C102M450EB8	88.80	38.80	5.80	8.80	1 3/4 X 3 1/4
1100	420C112M450AD8	81.40	38.20	5.90	8.70	1 3/8 X 4 3/4
1200	420C122M450EJ8	72.20	31.80	6.70	10.00	1 3/4 X 3 3/4
1200	420C122M450AE8	72.00	34.30	6.60	9.60	1 3/8 X 5 1/4
1300	420C132M450AF8	64.70	31.20	7.30	10.60	1 3/8 X 5 3/4
1300	420C132M450BB8	76.10	33.50	6.70	10.10	2 X 3 1/4
1500	420C152M450EC8	63.50	28.30	7.50	11.30	1 3/4 X 4 1/4
1600	420C162M450BJ8	62.00	27.60	8.30	12.50	2 X 3 3/4
1700	420C172M450ED8	55.10	24.80	8.50	12.70	1 3/4 X 4 3/4
1800	420C182M450BC8	53.30	23.60	9.10	13.60	2 X 4 1/4
1900	420C192M450EE8	48.80	22.20	9.60	14.20	1 3/4 X 5 1/4
2100	420C212M450BD8	46.10	20.80	10.10	15.00	2 X 4 3/4
2200	420C222M450EF8	43.90	20.30	10.80	15.90	1 3/4 X 5 3/4
2500	420C252M450BE8	39.30	18.20	11.30	16.60	2 X 5 1/4
2800	420C282M450BF8	35.50	16.60	12.30	17.90	2 X 5 3/4
500 Vdc (550 Vdc Surge)						
160	420C161M500AK8	416.00	151.00	1.80	3.00	1 3/8 X 1 3/4
240	420C241M500AA8	278.00	101.00	2.50	4.20	1 3/8 X 2 1/4
350	420C351M500AH8	193.00	70.50	3.10	5.10	1 3/8 X 2 3/4
370	420C371M500EA8	248.00	140.00	3.50	5.60	1 3/4 X 2 1/4
460	420C461M500AB8	148.00	54.50	3.80	6.30	1 3/8 X 3 1/4
480	420C481M500BA8	197.00	118.00	4.10	6.50	2 X 2 1/4
540	420C541M500EH8	172.00	97.80	4.50	7.20	1 3/4 X 2 3/4
570	420C571M500AJ8	121.00	44.60	4.40	7.30	1 3/8 X 3 3/4
670	420C671M500BH8	137.00	82.30	5.40	8.30	2 X 2 3/4
670	420C671M500AC8	137.00	79.30	5.10	8.30	1 3/8 X 4 1/4
710	420C711M500EB8	132.00	75.50	5.50	8.80	1 3/4 X 3 1/4
750	420C751M500AD8	88.40	33.30	5.70	9.30	1 3/8 X 4 3/4
880	420C881M500EJ8	108.00	61.90	6.40	10.10	1 3/4 X 3 3/4
890	420C891M500BB8	105.00	63.70	6.40	10.00	2 X 3 1/4
890	420C891M500AE8	78.20	29.70	6.30	10.30	1 3/8 X 5 1/4
1000	420C102M500EC8	90.90	52.70	7.20	11.40	1 3/4 X 4 1/4
1000	420C102M500AF8	70.30	27.00	7.00	11.40	1 3/8 X 5 3/4
1100	420C112M500BJ8	85.80	52.20	8.00	12.30	2 X 3 3/4
1200	420C122M500ED8	78.90	46.10	8.10	12.80	1 3/4 X 4 3/4
1300	420C132M500BC8	72.60	44.60	8.70	13.40	2 X 4 1/4
1400	420C142M500EE8	69.90	41.30	9.10	14.30	1 3/4 X 5 1/4
1500	420C152M500EF8	62.90	37.50	10.30	16.10	1 3/4 X 5 3/4
1500	420C152M500BD8	63.10	39.10	9.70	14.80	2 X 4 3/4
1800	420C182M500BE8	54.50	34.20	10.80	16.40	2 X 5 1/4
2000	420C202M500BF8	49.20	31.30	11.70	17.80	2 X 5 3/4
400 Vdc (450 Vdc Surge)						
290	420C291M400AK8	341.00	155.00	2.00	2.90	1 3/8 X 1 3/4
440	420C441M400AA8	228.00	104.00	2.80	4.10	1 3/8 X 2 1/4
600	420C601M400AH8	158.00	73.00	3.40	5.00	1 3/8 X 2 3/4
740	420C741M400EA8	141.00	63.90	4.00	5.90	1 3/4 X 2 1/4
830	420C831M400AB8	122.00	56.60	4.20	6.20	1 3/8 X 3 1/4
920	420C921M400BA8	124.00	56.80	4.60	6.90	2 X 2 1/4
1000	420C102M400EH8	104.00	46.20	5.00	7.50	1 3/4 X 2 3/4
1000	420C102M400AJ8	98.90	46.50	4.90	7.10	1 3/8 X 3 3/4
1200	420C122M400BH8	89.30	40.30	5.90	8.80	2 X 2 3/4
1200	420C122M400AC8	83.60	39.80	5.60	8.10	1 3/8 X 4 1/4
1300	420C132M400EB8	79.50	35.80	6.10	9.20	1 3/4 X 3 1/4
1400	420C142M400AD8	72.60	35.00	6.30	9.10	1 3/8 X 4 3/4
1600	420C162M400AE8	64.30	31.40	7.00	10.00	1 3/8 X 5 1/4
1600	420C162M400EJ8	64.70	29.40	7.00	10.40	1 3/4 X 3 3/4
1700	420C172M400BB8	68.60	31.30	7.10	10.50	2 X 3 1/4
1800	420C182M400AF8	57.80	28.70	7.80	11.00	1 3/8 X 5 3/4
1900	420C192M400EC8	57.00	26.20	7.90	11.70	1 3/4 X 4 1/4
2000	420C202M400BJ8	55.90	25.70	8.80	13.00	2 X 3 3/4