

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

420C	242	M	100	AK	8	
Type	Capacitance	Tolerance	Voltage	Case Code	Insulation	Terminal (blank) = Straight Leads
	242 = 2400 μF 221 = 220 μF	M = ±20% T = -10% +50% U = -10 +75%	100 = 100 V 450 = 450 V	0 = Bare can	8 = PVC and Standoffs 9 = Polyester and Standoffs	

