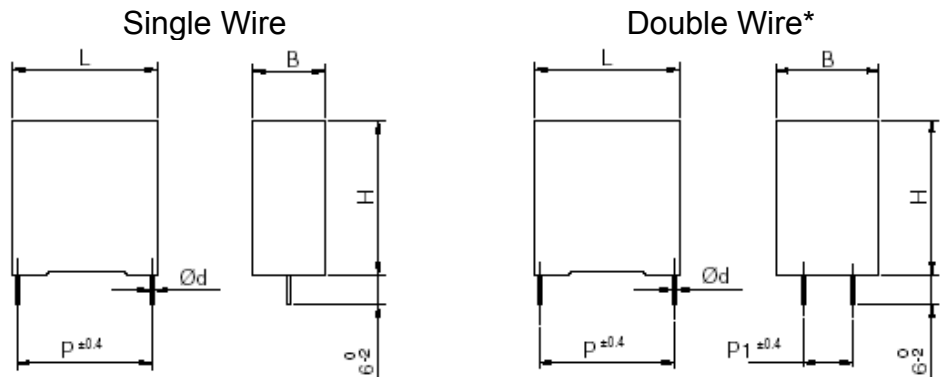


### BOX CAPACITOR SWITCHING APPLICATIONS

#### General Characteristics

- Self healing
- Low losses
- High ripple current
- High contact reliability
- Suitable for high frequency applications



#### TECHNICAL DATA

General technical data	VDE 0560 – IEC 61071 – EN 61071
Application class (DIN 40040)	GPD / LS
Temperature range (Case)	-40 to +85 °C
Max permissible ambient temperature (operation at rated power, rated current and natural cooling)	+ 70 °C
Capacitance tolerance code (15 <sup>th</sup> digit)	J = ±5%; K = ±10%
Peak non-repetitive max current	$I_{PK} \times 1.5$
Test voltage terminal to terminal $U_{TT}$	2 $U_N$ for 10 seconds
Test voltage terminal to case $U_{TC}$	3KV – 50Hz for 60 seconds
Dissipation factor (tg $\delta$ )	$\leq 5 \times 10^{-4}$ at 1kHz and 20°C
Permissible relative humidity	Annual average humidity should be $\leq 95\%$ ; however, on 30 days per year it can be continuously 100% and on the other days it can be occasionally 100%. Dewing not permitted
IEC climatic category	40 / 85 / 56 according to IEC 68-1
Capacitance deviation in the operating temperature range of -40 to +85 °C	$\pm 1.5\%$ max on capacitance value measured at +20°C
Change of capacitance versus operating time	-3% after 30,000 hours at $U_{RMS}$ or after 100,000 hours at $U_N$
Case components	Solvent resistant plastic case with epoxy resin sealing. Flame retardant execution (UL class 94 V0)
Terminals	Tinned copper 2 or 4 wires (see figure above)*
Installation	Any position
Life Expectancy	$\geq 30,000$ hours at $U_{RMS}$ ; $\geq 100,000$ hours at $U_N$
Failure quota	$300 / 10^9$ components hour

\*Double wire—1.2mm only

## BOX CAPACITOR SWITCHING APPLICATIONS

### Peak Voltage Table

Un	250V	400V	600V	700V	850V
Umax	400V	600V	800V	1000V	1200V

### GENERAL CHARACTERISTICS

C $\mu$ F	UN V-	URMS V-	dv/dt V/ $\mu$ s	IPK A	ESR max @ 100kHz (m $\Omega$ )			IRMS (100kHz) @ 70°C (A)			DIMENSIONS (mm)					Part Number
					d=0.8 2 wires	d=1.2 2 wires	d=1.2 4 wires	d=0.8 2 wires	d=1.2 2 wires	d=1.2 4 wires	B	H	L	P	P1	
1	250	160	30	30	23.3	22.6	-	5	5	-	10	20	32	27.5	-	C4ATDB-4100-0-
2.2	250	160	30	66	11.8	11.0	-	7	8	-	10	20	32	27.5	-	C4ATDB-4220-0-
2.5	250	160	30	75	10.8	9.9	-	7	8	-	10	20	32	27.5	-	C4ATDB-4250-0-
3.3	250	160	30	99	8.7	7.8	-	7	10	-	13	22	32	27.5	-	C4ATDB-4330-0-
5	250	160	30	150	6.8	5.8	-	7	12	-	14	28	32	27.5	-	C4ATDB-4500-0-
6.8	250	160	30	204	6.0	4.8	-	7	12	-	18	33	32	27.5	-	C4ATDB-4680-0-
10	250	160	30	300	5.2	4.0	3.1	7	12	20	18	33	32	27.5	10.2	C4ATDB-5100-0-
20	250	160	20	400	5.5	4.2	3.1	7	12	22	28	37	42.5	37.5	10.2	C4ATDB-5200-0-
25	250	160	20	500	5.2	3.8	2.7	7	12	22	28	37	42.5	37.5	20.3	C4ATDB-5250-0-
30	250	160	20	600	5.3	3.7	2.6	7	12	22	30	45	42.5	37.5	20.3	C4ATDB-5300-0-
33	250	160	20	660	5.3	3.7	2.5	7	12	22	30	45	42	37.5	20.3	C4ATDB-5330-0-
40	250	160	15	600	5.7	4.2	3.1	7	12	22	30	45	57.5	52.5	20.3	C4ATDB-5400-0-
50	250	160	15	750	5.7	4.1	2.8	7	12	22	35	50	57.5	52.5	20.3	C4ATDB-5500-0-
60	250	160	15	900	5.7	3.9	2.6	7	12	22	35	50	57.5	52.5	20.3	C4ATDB-5600-0-
0.68	400	250	45	31	12.5	11.7	-	7	7	-	10	20	32	27.5	-	C4ATFB-3680-0-
1	400	250	45	45	9.4	8.5	-	7	9	-	10	20	32	27.5	-	C4ATFB-4100-0-
1.5	400	250	45	68	7.1	6.2	-	7	12	-	13	22	32	27.5	-	C4ATFB-4150-0-
2	400	250	45	90	5.9	5.0	-	7	12	-	15	24.5	32	27.5	-	C4ATFB-4200-0-
2.2	400	250	45	99	5.8	4.8	-	7	12	-	15	24.5	32	27.5	-	C4ATFB-4220-0-
2.5	400	250	45	113	5.5	4.4	-	7	12	-	15	24.5	32	27.5	-	C4ATFB-4250-0-
3	400	250	45	135	5.3	4.1	-	7	12	-	18	33	32	27.5	-	C4ATFB-4300-0-
3.3	400	250	45	149	5.1	3.9	-	7	12	-	18	33	32	27.5	-	C4ATFB-4330-0-
4	400	250	45	180	4.9	3.6	2.7	7	12	22	18	33	32	27.5	10.2	C4ATFB-4400-0-
5	400	250	45	225	4.7	3.4	2.4	7	12	22	22	37	32	27.5	10.2	C4ATFB-4500-0-
6.8	400	250	30	204	5.2	4.0	3.0	7	12	22	28	37	42.5	37.5	10.2	C4ATFB-4680-0-
10	400	250	30	300	4.8	3.5	2.4	7	12	22	28	37	42.5	37.5	20.3	C4ATFB-5100-0-
15	400	250	30	450	5.0	3.3	2.1	7	12	22	30	45	42	37.5	20.3	C4ATFB-5150-0-
20	400	250	20	400	6.6	4.9	3.7	7	12	22	30	45	57.5	52.5	20.3	C4ATFB-5200-0-
25	400	250	20	500	6.3	4.6	3.3	7	12	22	35	50	57.5	52.5	20.3	C4ATFB-5250-0-
0.47	600	330	60	28	13.8	13.1	-	7	7	-	10	20	32	27.5	-	C4ATHB-3470-0-
0.68	600	330	60	41	10.5	9.6	-	7	8	-	10	20	32	27.5	-	C4ATHB-3680-0-
1	600	330	60	60	8.0	7.0	-	7	12	-	13	22	32	27.5	-	C4ATHB-4100-0-
2	600	330	60	120	5.8	4.6	3.7	7	12	19	18	33	32	27.5	10.2	C4ATHB-4200-0-
2.2	600	330	60	132	5.6	4.4	3.4	7	12	19	18	33	32	27.5	10.2	C4ATHB-4220-0-
3	600	330	60	180	5.2	3.8	2.9	7	12	22	22	37	32	27.5	10.2	C4ATHB-4300-0-
3.3	600	330	60	198	5.1	3.7	2.7	7	12	22	22	37	32	37.5	10.2	C4ATHB-4330-0-
5	600	330	40	200	5.5	4.1	3.1	7	12	22	28	37	42.5	37.5	10.2	C4ATHB-4500-0-
6.8	600	330	40	272	5.2	3.8	2.7	7	12	22	30	45	42	37.5	20.3	C4ATHB-4680-0-
9	600	330	40	360	5.2	3.6	2.4	7	12	22	30	45	42	37.5	20.3	C4ATHB-4900-0-
10	600	330	30	300	7.7	6.2	5.0	7	12	22	30	45	57.5	52.5	20.3	C4ATHB-5100-0-
15	600	330	30	450	6.9	5.2	3.9	7	12	22	35	50	57.5	52.5	20.3	C4ATHB-5150-0-
0.33	700	400	80	27	14.6	13.8	-	7	7	-	10	20	32	27.5	-	C4ATJB-3330-0-
0.47	700	400	80	38	10.9	10.1	-	7	9	-	13	22	32	27.5	-	C4ATJB-3470-0-
0.68	700	400	80	54	8.4	7.5	-	7	12	-	15	24.5	32	27.5	-	C4ATJB-3680-0-
1	700	400	80	80	6.9	5.7	4.9	7	12	16	18	33	32	27.5	10.2	C4ATJB-4100-0-
1.5	700	400	80	120	5.9	4.6	3.7	7	12	20	22	37	32	27.5	10.2	C4ATJB-4150-0-
2	700	400	80	160	5.5	4.1	3.1	7	12	22	22	37	32	27.5	10.2	C4ATJB-4200-0-
2.2	700	400	60	132	6.6	5.4	4.5	7	12	22	28	37	42.5	37.5	10.2	C4ATJB-4220-0-
3	700	400	60	180	6.0	4.6	3.7	7	12	22	28	37	42.5	37.5	10.2	C4ATJB-4300-0-
3.3	700	400	60	198	5.7	4.4	3.4	7	12	22	28	37	42.5	37.5	20.3	C4ATJB-4330-0-
4	700	400	60	240	5.8	4.2	3.1	7	12	22	30	45	42	37.5	20.3	C4ATJB-4400-0-
5	700	400	60	300	5.6	4.0	2.8	7	12	22	30	45	42	37.5	20.3	C4ATJB-4500-0-
6	700	400	40	240	8.8	7.3	6.3	7	12	22	30	45	57.5	52.5	20.3	C4ATJB-4600-0-
6.8	700	400	40	272	8.5	6.9	5.7	7	12	22	30	45	57.5	52.5	20.3	C4ATJB-4680-0-
8	700	400	40	320	8.0	6.3	5.1	7	12	22	35	50	57.5	52.5	20.3	C4ATJB-4800-0-
9	700	400	40	360	7.8	6.0	4.7	7	12	22	35	50	57.5	52.5	20.3	C4ATJB-4900-0-
0.1	850	450	210	21	22.5	21.8	-	6	6	-	10	20	32	27.5	-	C4ATMB-3100-0-
0.15	850	450	210	32	15.7	14.9	-	7	7	-	10	20	32	27.5	-	C4ATMB-3150-0-
0.22	850	450	210	46	11.4	10.6	-	7	8	-	10	20	32	27.5	-	C4ATMB-3220-0-
0.33	850	450	210	69	8.5	7.6	-	7	10	-	13	22	32	27.5	-	C4ATMB-3330-0-
0.47	850	450	210	99	6.9	5.9	-	7	12	-	15	24.5	32	27.5	-	C4ATMB-3470-0-
0.68	850	450	210	143	5.9	4.8	3.9	7	12	18	18	33	32	27.5	10.2	C4ATMB-3680-0-
1	850	450	210	210	5.2	4.0	3.0	7	12	22	28	37	42.5	37.5	10.2	C4ATMB-4100-0-
1.5	850	450	140	210	5.6	4.3	3.3	7	12	22	28	37	42.5	37.5	10.2	C4ATMB-4150-0-
2.2	850	450	140	308	5.0	3.7	2.7	7	12	22	28	37	42.5	37.5	10.2	C4ATMB-4220-0-
3.3	850	450	140	462	5.1	3.5	2.3	7	12	22	30	45	42	37.5	20.3	C4ATMB-4330-0-
4.7	850	450	90	423	5.4	3.8	2.7	7	12	22	30	45	57.5	52.5	20.3	C4ATMB-4470-0-
6	850	450	90	540	5.4	3.7	2.4	7	12	22	35	50	57.5	52.5	20.3	C4ATMB-4600-0-

Single wire = U; double wire = W  
 Wire diameter: 0.8mm = A1; 1.2mm = A3  
 (A1 not recommended for 4 wire)  
 Tolerance: J ( $\pm$ 5%); K ( $\pm$ 10%)