CTB Series

- **Standard Series at 105℃**
- **Load life 1,000 to 2,000 hours at 105℃**

◆ SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-55 ~ +105℃
Working Voltage Range	4 ~ 100Vdc
Capacitance Range	0.1 ~ 6,800 μF
Capacitance Tolerance	±20% (at 25℃ and 120Hz)
Dissipation Factor (tanδ) (at 25℃, 120Hz)	See table below
Leakage Current	(Φ 4~ Φ 10) I=0.01CV or 3μA whichever is greater impress the rated voltage for 2 minutes (Φ 12.5) I=0.03CV or 4μA whichever is greater impress the rated voltage for 1 minute I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V)
Low Temperature Characteristics Impedance Ratio(MAX)	See table below
Endurance	The following specifications shall be satisfied when the capacitor are restored to 25℃ after subjected to DC voltage with the rated voltage is applied for 2,000 hours (Φ 4~6.3×5.8,8×6.5 for 1,000 hours) at 105℃.
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25℃ after exposing them for 1,000 hours at 105℃without voltage applied.
Others	Conforms to JIS-C-5101-18-2 (1999)

Rated Voltage (V)		4	6.3	10	16	25	35	50	63	100
tanδ(Max)	Φ4 ~ Φ10	0.35	0.30	0.24	0.20	0.16	0.14	0.14	0.12	0.12
	Φ12.5	0.42	0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.12

When nominal capacitance exceeds 1,000uF, add 0.02 to the value above for each 1,000uF increase.

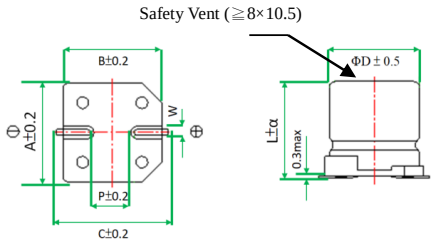
Rated voltage (V)		4	6.3	10	16	25	35	50~63	100
Φ4~Φ10	Z(-25℃)/Z(+20℃)	7	4	3	2	2	2	2	3
	Z(-55℃)/Z(+20℃)	15	8	6	4	4	3	3	4
Φ12.5	Z(-25℃)/Z(+20℃)	7	5	4	3	2	2	2	2
	Z(-55℃)/Z(+20℃)	17	12	10	8	5	4	3	3

(at 120Hz)

Capacitance change	≦ ±20% of the initial value (≦ ±30% of the initial value of 4V or less)
Dissipation factor(tanδ)	≦ 200% of the specified value
Leakage current	≦ specified value

Capacitance change	≦ ±20% of the initial value (≦ ±30% of the initial value of 4V or less)
Dissipation factor(tanδ)	≦ 200% of the specified value
Leakage current	≦ 200% of the specified value

◆ DIMENSIONS (mm)



Code	Size	ΦD	L	α	A	B	C	W	P
0458	4×5.8	4.0	5.8	+0.4 -0.1	4.3	4.3	5.0	0.5~0.8	1.0
0558	5×5.8	5.0	5.8	+0.4 -0.1	5.3	5.3	5.9	0.5~0.8	1.5
6358	6.3×5.8	6.3	5.8	+0.4 -0.1	6.6	6.6	7.3	0.5~0.8	2.1
6377	6.3×7.7	6.3	7.7	±0.3	6.6	6.6	7.3	0.5~0.8	2.1
0865	8×6.5	8.0	6.5	±0.3	8.3	8.3	8.8	0.5~0.8	2.2
08A5	8×10.5	8.0	10.5	±0.5	8.3	8.3	9.1	0.8~1.2	3.1
10A5	10×10.5	10.0	10.5	±0.5	10.3	10.3	11	0.8~1.2	4.6
10C5	10×12.5	10.0	12.5	±0.5	10.3	10.3	11	0.8~1.2	4.6
12D5	12.5×13.5	12.5	13.5	±1.0	12.8	12.8	13.8	0.8~1.2	4.6
1216	12.5×16	12.5	16.0	±1.0	12.8	12.8	13.8	0.8~1.2	4.6

◆ MARKING

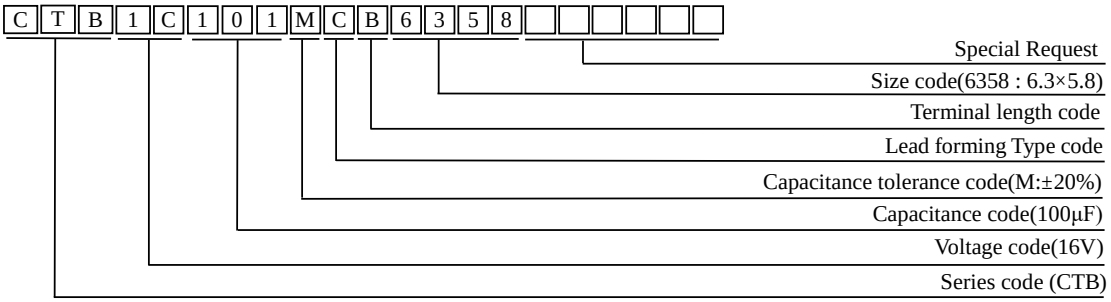
≤ 4 Φ

5~6.3 Φ

≥ 8 Φ

CTB Series

◆ **PART NUMBER SYSTEM (Example : 16V 100μF)**



◆ **STANDARD RATINGS**

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mArms/ 105℃, 120Hz)	Part Number
4 (0G)	33	4×5.8	18	CTB0G330MCB0458
	33	5×5.8	30	CTB0G330MCB0558
	47	4×5.8	24	CTB0G470MCB0458
	47	5×5.8	36	CTB0G470MCB0558
	100	5×5.8	43	CTB0G101MCB0558
	100	6.3×5.8	60	CTB0G101MCB6358
	150	6.3×5.8	52	CTB0G151MCB6358
	220	6.3×5.8	57	CTB0G221MCB6358
	330	6.3×7.7	100	CTB0G331MCB6377
	470	6.3×7.7	105	CTB0G471MCB6377
	680	8×10.5	210	CTB0G681MCB08A5
	1000	8×10.5	230	CTB0G102MCB08A5
	1500	10×10.5	315	CTB0G152MCB10A5
	2200	10×10.5	340	CTB0G222MCB10A5
	2200	10×12.5	440	CTB0G222MCB10C5
	3300	10×12.5	490	CTB0G332MCB10C5
	4700	12.5×13.5	600	CTB0G472MCB12D5
	6800	12.5×16	650	CTB0G682MCB1216
6.3 (0J)	22	4×5.8	22	CTB0J220MCB0458
	33	4×5.8	22	CTB0J330MCB0458
	33	5×5.8	27	CTB0J330MCB0558
	47	4×5.8	25	CTB0J470MCB0458
	47	5×5.8	33	CTB0J470MCB0558
	100	5×5.8	39	CTB0J101MCB0558
	100	6.3×5.8	50	CTB0J101MCB6358
	150	6.3×5.8	55	CTB0J151MCB6358
	220	6.3×5.8	67	CTB0J221MCB6358
	220	6.3×7.7	105	CTB0J221MCB6377
	330	6.3×7.7	105	CTB0J331MCB6377
	470	6.3×7.7	120	CTB0J471MCB6377
	470	8×10.5	210	CTB0J471MCB08A5
	680	8×10.5	210	CTB0J681MCB08A5
	1000	8×10.5	230	CTB0J102MCB08A5
	1000	10×10.5	300	CTB0J102MCB10A5
	1500	10×10.5	315	CTB0J152MCB10A5
	1500	10×12.5	450	CTB0J152MCB10C5
	2200	10×12.5	500	CTB0J222MCB10C5
	2200	12.5×13.5	620	CTB0J222MCB12D5
	3300	12.5×13.5	660	CTB0J332MCB12D5
	3300	12.5×16	700	CTB0J332MCB1216
10 (1A)	4.7	4×5.8	13	CTB1A4R7MCB0458
	10	4×5.8	18	CTB1A100MCB0458
	22	4×5.8	20	CTB1A220MCB0458

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mArms/ 105℃, 120Hz)	Part Number
10 (1A)	22	5×5.8	25	CTB1A220MCB0558
	33	4×5.8	22	CTB1A330MCB0458
	33	5×5.8	30	CTB1A330MCB0558
	47	5×5.8	30	CTB1A470MCB0558
	47	6.3×5.8	41	CTB1A470MCB6358
	100	5×5.8	39	CTB1A101MCB0558
	100	6.3×5.8	53	CTB1A101MCB6358
	150	6.3×5.8	62	CTB1A151MCB6358
	220	6.3×5.8	85	CTB1A221MCB6358
	220	6.3×7.7	105	CTB1A221MCB6377
	220	8×6.5	105	CTB1A221MCB0865
	330	6.3×7.7	105	CTB1A331MCB6377
	330	8×10.5	196	CTB1A331MCB08A5
	470	8×10.5	210	CTB1A471MCB08A5
	470	10×10.5	260	CTB1A471MCB10A5
	680	10×10.5	270	CTB1A681MCB10A5
	1000	10×10.5	315	CTB1A102MCB10A5
	1500	10×12.5	460	CTB1A152MCB10C5
	2200	12.5×13.5	680	CTB1A222MCB12D5
16 (1C)	33	6.3×5.8	40	CTB1C330MCB6358
	47	5×5.8	31	CTB1C470MCB0558
	47	6.3×5.8	48	CTB1C470MCB6358
	100	6.3×5.8	60	CTB1C101MCB6358
	100	6.3×7.7	120	CTB1C101MCB6377
	100	8×6.5	120	CTB1C101MCB0865
	150	6.3×7.7	95	CTB1C151MCB6377
	220	6.3×7.7	105	CTB1C221MCB6377
	220	8×6.5	85	CTB1C221MCB0865
	220	8×10.5	150	CTB1C221MCB08A5
	330	8×10.5	195	CTB1C331MCB08A5
	470	8×10.5	230	CTB1C471MCB08A5
	470	10×10.5	295	CTB1C471MCB10A5
	680	10×10.5	315	CTB1C681MCB10A5
	1000	10×10.5	340	CTB1C102MCB10A5
	1000	10×12.5	390	CTB1C102MCB10C5
	1000	12.5×13.5	500	CTB1C102MCB12D5
	1500	12.5×13.5	550	CTB1C152MCB12D5
	2200	12.5×16	750	CTB1C222MCB1216
25V (1E)	4.7	4×5.8	13	CTB1E4R7MCB0458
	10	4×5.8	14	CTB1E100MCB0458
	10	5×5.8	20	CTB1E100MCB0558
	22	5×5.8	25	CTB1E220MCB0558
	22	6.3×5.8	36	CTB1E220MCB6358

CTB Series

◆ **STANDARD RATINGS**

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mArms/ 105℃, 120Hz)	Part Number
25V (1E)	33	5×5.8	29	CTB1E330MCB0558
	33	6.3×5.8	44	CTB1E330MCB6358
	47	6.3×5.8	48	CTB1E470MCB6358
	100	6.3×7.7	91	CTB1E101MCB6377
	100	8×6.5	91	CTB1E101MCB0865
	150	6.3×7.7	100	CTB1E151MCB6377
	150	8×10.5	140	CTB1E151MCB08A5
	220	8×10.5	175	CTB1E221MCB08A5
	330	8×10.5	220	CTB1E331MCB08A5
	330	10×10.5	240	CTB1E331MCB10A5
	470	10×10.5	280	CTB1E471MCB10A5
	560	10×10.5	320	CTB1E561MCB10A5
	680	10×12.5	400	CTB1E681MCB10C5
	1000	12.5×13.5	580	CTB1E102MCB12D5
	1500	12.5×16	850	CTB1E152MCB1216
35 (1V)	3.3	4×5.8	13	CTB1V3R3MCB0458
	4.7	4×5.8	14	CTB1V4R7MCB0458
	10	4×5.8	14	CTB1V100MCB0458
	10	5×5.8	21	CTB1V100MCB0558
	22	6.3×5.8	38	CTB1V220MCB6358
	33	6.3×5.8	42	CTB1V330MCB6358
	33	8×6.5	70	CTB1V330MCB0865
	47	6.3×5.8	50	CTB1V470MCB6358
	47	6.3×7.7	70	CTB1V470MCB6377
	100	6.3×7.7	84	CTB1V101MCB6377
	100	8×10.5	120	CTB1V101MCB08A5
	150	8×10.5	155	CTB1V151MCB08A5
	220	8×10.5	190	CTB1V221MCB08A5
	220	10×10.5	220	CTB1V221MCB10A5
	330	10×10.5	245	CTB1V331MCB10A5
	470	10×10.5	280	CTB1V471MCB10A5
	470	10×12.5	375	CTB1V471MCB10C5
	470	12.5×13.5	520	CTB1V471MCB12D5
	680	10×12.5	395	CTB1V681MCB10C5
	680	12.5×13.5	530	CTB1V681MCB12D5
	1000	12.5×16	600	CTB1V102MCB1216
50 (1H)	0.1	4×5.8	0.7	CTB1HR10MCB0458
	0.22	4×5.8	1.6	CTB1HR22MCB0458
	0.33	4×5.8	2.5	CTB1HR33MCB0458
	0.47	4×5.8	3.5	CTB1HR47MCB0458
	1	4×5.8	7	CTB1H010MCB0458
	2.2	4×5.8	11	CTB1H2R2MCB0458
	3.3	4×5.8	13	CTB1H3R3MCB0458
	4.7	4×5.8	13	CTB1H4R7MCB0458
	4.7	5×5.8	16	CTB1H4R7MCB0558
	10	6.3×5.8	24	CTB1H100MCB6358
	22	6.3×5.8	42	CTB1H220MCB6358
	22	6.3×7.7	51	CTB1H220MCB6377
	22	8×6.5	70	CTB1H220MCB0865
	33	6.3×7.7	60	CTB1H330MCB6377
	47	6.3×7.7	63	CTB1H470MCB6377

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mArms/ 105℃, 120Hz)	Part Number
50 (1H)	47	8×10.5	120	CTB1H470MCB08A5
	100	8×10.5	140	CTB1H101MCB08A5
	100	10×10.5	170	CTB1H101MCB10A5
	150	10×10.5	170	CTB1H151MCB10A5
	220	10×10.5	220	CTB1H221MCB10A5
	220	10×12.5	280	CTB1H221MCB10C5
	330	10×12.5	295	CTB1H331MCB10C5
	330	12.5×13.5	420	CTB1H331MCB12D5
	470	12.5×16	420	CTB1H471MCB1216
63 (1J)	0.1	4×5.8	0.7	CTB1JR10MCB0458
	0.22	4×5.8	1.6	CTB1JR22MCB0458
	0.33	4×5.8	2.5	CTB1JR33MCB0458
	0.47	4×5.8	3.5	CTB1JR47MCB0458
	1	4×5.8	7	CTB1J010MCB0458
	2.2	4×5.8	11	CTB1J2R2MCB0458
	3.3	5×5.8	13	CTB1J3R3MCB0558
	4.7	5×5.8	16	CTB1J4R7MCB0558
	10	6.3×5.8	24	CTB1J100MCB6358
	10	6.3×7.7	39	CTB1J100MCB6377
	10	8×6.5	25	CTB1J100MCB0865
	22	6.3×7.7	49	CTB1J220MCB6377
	22	8×10.5	98	CTB1J220MCB08A5
	33	8×10.5	112	CTB1J330MCB08A5
	47	8×10.5	119	CTB1J470MCB08A5
	47	10×10.5	160	CTB1J470MCB10A5
	56	8×10.5	120	CTB1J560MCB08A5
	56	10×10.5	165	CTB1J560MCB10A5
	100	10×10.5	196	CTB1J101MCB10A5
	100	10×12.5	210	CTB1J101MCB10C5
	100	12.5×13.5	270	CTB1J101MCB12D5
	150	10×12.5	225	CTB1J151MCB10C5
	220	12.5×13.5	470	CTB1J221MCB12D5
	330	12.5×16	510	CTB1J331MCB1216
100 (2A)	1	4×5.8	7	CTB2A010MCB0458
	2.2	6.3×5.8	14	CTB2A2R2MCB6358
	3.3	6.3×5.8	20	CTB2A3R3MCB6358
	3.3	6.3×7.7	32	CTB2A3R3MCB6377
	3.3	8×6.5	30	CTB2A3R3MCB0865
	4.7	6.3×5.8	21	CTB2A4R7MCB6358
	4.7	6.3×7.7	35	CTB2A4R7MCB6377
	10	6.3×7.7	35	CTB2A100MCB6377
	10	8×10.5	77	CTB2A100MCB08A5
	22	8×10.5	84	CTB2A220MCB08A5
	22	10×10.5	126	CTB2A220MCB10A5
	33	10×10.5	133	CTB2A330MCB10A5
	47	10×10.5	140	CTB2A470MCB10A5
	47	10×12.5	160	CTB2A470MCB10C5
	47	12.5×13.5	250	CTB2A470MCB12D5
	68	10×12.5	180	CTB2A680MCB10C5
	68	12.5×13.5	300	CTB2A680MCB12D5
	100	12.5×13.5	380	CTB2A101MCB12D5

CTB Series

◆ **RIPPLE CURRENT MULTIPLIERS**

Frequency Multipliers

Size	Cap(μF)	Frequency (Hz)				
		50	120	300	1K	10K~
Φ4~Φ10	0.1~68	0.70	1.00	1.17	1.36	1.50
	100~3300	0.85	1.00	1.08	1.20	1.30
Φ12.5	~68	0.75	1.00	1.35	1.57	2.00
	100~680	0.80	1.00	1.23	1.34	1.50
	1000~6800	0.85	1.00	1.10	1.13	1.15