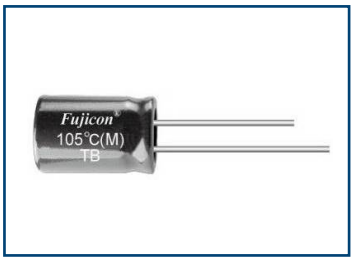
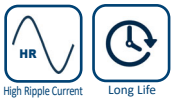
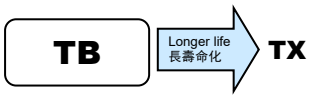
TB Series

HIGH RIPPLE CURRENT
高紋波電流品





- High ripple current
  高紋波電流
- Endurance 2000~5000 hours
  耐久性 2000~5000 小時
- Suitable for electronic ballast, power supply and LED lighting
  適用於電子鎮流器，電源和 LED 照明
- Comply with the RoHS & REACH
  符合 RoHS 與 REACH



☐ SPECIFICATIONS 特性表

Items 項目	Characteristics 主要特性
Category Temperature Range 工作溫度範圍	-25 ~ +105°C
Voltage Range 額定工作電壓範圍	160 ~ 450V
Capacitance Range 靜電容量範圍	2.2 ~ 180μF
Capacitance Tolerance 靜電容量允許偏差	±20% at 120Hz, 20°C
Leakage Current 漏電流	Leakage current ≤0.02CV + 25μA (after 5 minutes application of rated voltage at 20°C) or Leakage current ≤0.04CV + 100μA (after 1 minute application of rated voltage at 20°C) 漏電流 ≤0.02CV + 25μA（在 20°C 環境中施加額定工作電壓 5 分鐘後）或 漏電流 ≤0.04CV + 100μA（在 20°C 環境中施加額定工作電壓 1 分鐘後）
	C: Nominal capacitance (μF) 標稱靜電容量, V: Rated voltage (V) 額定電壓
Dissipation Factor (tan δ) 損耗角正切	Measurement frequency 測試頻率: 120Hz, Temperature 温度: 20°C

Rated Voltage (V) 額定工作電壓	160	200	250	350	400	450
tan δ (max.) 最大損耗角正切	0.15	0.15	0.15	0.20	0.20	0.20

Stability at Low Temperature
低溫特性

Measurement frequency 測試頻率: 120Hz

Rated Voltage (V) 額定工作電壓		160	200	250	350	400	450
Impedance Ratio 阻抗比	Z(-25°C) / Z(+20°C)	3	3	3	6	6	6

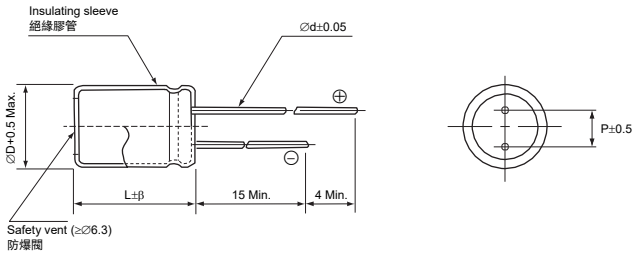
Endurance
耐久性

After an application of DC bias voltage plus the rated ripple current for 5000 hours (3000 hours for ∅8, 2000 hours for ∅6.3) at 105°C the peak voltage shall not exceed the rated DC voltage, capacitors meet the characteristics listed below.
在 105°C 環境下，在不超過額定電壓的範圍內重疊規定的紋波電流，施加 5000 小時（∅8 為 3000 小時，∅6.3 為 2000 小時）電壓後，電容器的特性符合下表規定。

Capacitance Change 靜電容量變化率	Within ±20% of initial measured value 初始值的±20%以內
Dissipation Factor 損耗角正切	≤200% of initial specified value 不大於規範值的 200%
Leakage Current 漏電流	≤initial specified value 不大於規範值

Shelf Life 高溫貯存特性	When the capacitors are restored to 20°C after leaving under no load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above. 在 105°C 環境中無負荷放置 1000 小時後, 待電容器恢復至 20°C 時進行測量, 電容器的特性符合高溫負荷特性中所列的規定值。
Marking 標識	Printed with white colour on black sleeve (PVC) or printed with white colour on green sleeve (PET). 黑色膠管白字印刷（PVC）或綠色膠管白字印刷（PET）。

☐ DRAWING & DIMENSIONS 外形圖及尺寸 (Unit: mm)



∅D	6.3	8 (L≤11.5)	8 (L≥16)	10	13	16	18
P	2.5	3.5		5.0		7.5	
∅d	0.5		0.6			0.8	
β	1.5				2.0		

☐ FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT 紋波電流頻率補償系數

Frequency 頻率		120Hz	1KHz	10KHz	100KHz
Coefficient 系數	2.2 ~ 5.6μF	0.20	0.40	0.80	1.00
	6.8 ~ 15μF	0.30	0.60	0.90	1.00
	22μF ~ 180μF	0.40	0.70	0.90	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5~10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced. 鋁電解電容器在疊加紋波電流後會引起發熱，溫度每上升 5~10°C 壽命會減半。若要保持長壽命性能，請在使用過程中適當降低紋波電流。

Note: All design and specifications are for reference only and is subject to change without prior notice. If any doubt about safety for your application, please contact us immediately for technical assistance before purchase.
注：以上所提供的設計及特性參數僅供參考，任何修改不作預先通知。如果在使用上有疑問，請在採購前與我們聯繫，以便提供技術上的協助。

CAT.2026/V2.1

TB Series

□ DIMENSIONS & STANDARD RATINGS 規格尺寸及標準參數

WV / Parameter 參數 / μF		160 (2C)		200 (2D)		250 (2E)	
		Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流	Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流	Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流
2.2	2R2	6.3 × 11.5	60	6.3 × 11.5	65	8 × 11.5	70
3.3	3R3	8 × 11.5	72	8 × 11.5	95	8 × 11.5	75
4.7	4R7	8 × 11.5	80	8 × 11.5	98	8 × 11.5	98
5.6	5R6	8 × 11.5	84	8 × 11.5	102	8 × 16	100
6.8	6R8	8 × 11.5	90	8 × 16 (10 × 12)	102 (108)	8 × 16	102
8.2	8R2	8 × 11.5	100	10 × 12	112	10 × 16	112
10	100	8 × 11.5	206	10 × 12	210	10 × 16	230
15	150	10 × 12	235	10 × 16	255	10 × 20	265
22	220	10 × 16	245	10 × 20	285	10 × 20 (13 × 21)	290 (300)
33	330	10 × 20	265	13 × 21	300	13 × 21	345
47	470	10 × 20 (13 × 21)	285 (300)	13 × 21	345	13 × 21 (13 × 25)	390 (410)
68	680	13 × 21	330	13 × 25	385	16 × 25	485
100	101	13 × 25	380	16 × 25	465	16 × 31	510

WV / Parameter 參數 / μF		350 (2V)		400 (2G)		450 (2W)	
		Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流	Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流	Case size ØD×L (mm) 尺寸	Ripple current (mA rms) 105°C, 100KHz 紋波電流
2.2	2R2	8 × 11.5	65	8 × 11.5	72	8 × 11.5	85
3.3	3R3	10 × 12	100	10 × 12	105	10 × 12	110
4.7	4R7	10 × 12	115	8 × 11.5 (10 × 12)	75 (120)	10 × 12	130
5.6	5R6	10 × 12	135	10 × 16	150	10 × 16	160
6.8	6R8	10 × 16	155	10 × 16	165	10 × 16	175
8.2	8R2	10 × 16	190	10 × 20	205	10 × 20	230
10	100	10 × 20	230	10 × 20	230	10 × 20	270
15	150	13 × 21	275	13 × 21	285	13 × 21	350
22	220	13 × 21	345	13 × 21 (13 × 25)	350 (390)	13 × 25	420
33	330	13 × 25	410	13 × 25 (16 × 20)	420 (480)	16 × 25	505
47	470	16 × 25	485	16 × 25	505	18 × 25	610
68	680	16 × 31	580	18 × 25	610	16 × 31 (18 × 31)	732 (732)
100	101	16 × 35	695	18 × 31 (18 × 35)	732 (845)	18 × 35 (18 × 40)	845 (875)
180	181	18 × 35	825				

- Please refer to page 21 “Taping Specifications” & page 23 “Lead Forming & Cutting” about the taped or formed product spec. 編帶與引線成型標準請查閱第 21 頁“編帶標準”及第 23 頁“引線成型與剪腳”。
- Please refer to page 22 “Packaging Specifications” for the minimum package quantity. 最小包裝數量請查閱第 22 頁“包裝標準”。
- Please refer to page 18 for the Part Number System. 產品編碼規則請查閱第 18 頁。

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