

TZ

series

- Snap-in type, 105°C10000 hours long life product.
- Long life. and high ripple current resistance.
- Suitable for computer equipment, inverter air conditioner etc.
- RoHS Compliance
- 基板自立 105°C10000小時長壽命品
- 耐高溫、高紋波。
- 適用於電腦設備、變頻空調等。



SPECIFICATIONS

| Items 項 目                                   | Characteristics 特性                                                                                                                                                                                                                                                                |                                         |         |      |      |      |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------|------|------|------|
| Capacitance Tolerance<br>靜電容量誤差             | ± 20%(M)                                                                                                                                                                                                                                                                          |                                         |         |      |      |      |
| Operating Temperature Range<br>適用溫度範圍       | -25 ~ +105℃                                                                                                                                                                                                                                                                       |                                         |         |      |      |      |
| Rated Voltage Range<br>額定電壓範圍               | 200 ~ 450VDC                                                                                                                                                                                                                                                                      |                                         |         |      |      |      |
| Leakage Current<br>洩漏電流                     | $I \leq 3\sqrt{CV}$ ( $\mu A$ ) or 5mA,which is smaller.( After 5 minutes application of DC rated voltage, at 20℃ )                                                                                                                                                               |                                         |         |      |      |      |
| Dissipation Factor<br>散逸因素( $\tan \delta$ ) | Measurement Frequency: 120Hz. Temperature: 20℃                                                                                                                                                                                                                                    |                                         |         |      |      |      |
|                                             | Rated Voltage(V)                                                                                                                                                                                                                                                                  | 160                                     | 200~400 | 420  | 450  | 500  |
|                                             | $\tan \delta$ (Max)                                                                                                                                                                                                                                                               | 0.15                                    | 0.15    | 0.15 | 0.20 | 0.20 |
| Temperature Stability<br>溫度特性               | Measurement Frequency: 120Hz.                                                                                                                                                                                                                                                     |                                         |         |      |      |      |
|                                             | Rated Voltage(V)                                                                                                                                                                                                                                                                  | 200~400V                                |         |      | 450V |      |
|                                             | Z(-25℃)/Z(20℃)                                                                                                                                                                                                                                                                    | 4                                       |         |      | 8    |      |
| Load Life 負荷壽命                              | The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied for 10,000 hours at 105℃.                                                                                          |                                         |         |      |      |      |
|                                             | Capacitance Change                                                                                                                                                                                                                                                                | Within ± 20% of the Initial Value       |         |      |      |      |
|                                             | $\tan \delta$                                                                                                                                                                                                                                                                     | 250% or less of Initial Specified Value |         |      |      |      |
|                                             | Leakage Current                                                                                                                                                                                                                                                                   | Initial Specified Value or less         |         |      |      |      |
| Shelf Life 放置壽命                             | The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4. |                                         |         |      |      |      |
|                                             | Capacitance Change                                                                                                                                                                                                                                                                | Within ± 15% of the Initial Value       |         |      |      |      |
|                                             | $\tan \delta$                                                                                                                                                                                                                                                                     | 150% or less of Initial Specified Value |         |      |      |      |
|                                             | Leakage Current                                                                                                                                                                                                                                                                   | Initial Specified Value or less         |         |      |      |      |
| Standards 參照標準                              | JIS C 5101-4-1 (IEC 60384)                                                                                                                                                                                                                                                        |                                         |         |      |      |      |

Frequency Coefficient of Permissible Ripple Current

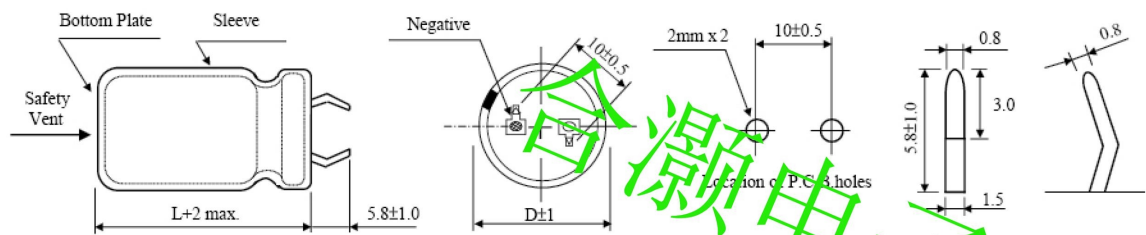
| Rated Voltage (V) | Frequency (Hz) |      |      |      |      |      |
|-------------------|----------------|------|------|------|------|------|
|                   | 50             | 120  | 300  | 1K   | 10K  | 50K  |
| 200~250           | 0.81           | 1.00 | 1.17 | 1.32 | 1.45 | 1.50 |
| 400~450           | 0.77           | 1.00 | 1.16 | 1.30 | 1.41 | 1.43 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

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DIMENSIONS(mm)



STANDARD RATINGS

D×L(mm) ; R.C.(A rms) at 105°C 120Hz

| Cap<br>(μF) | V<br>(Code) | 200   |      | 250   |      | 400   |      | 450   |      |
|-------------|-------------|-------|------|-------|------|-------|------|-------|------|
|             | Item        | D x L | R.C. | D x L | R.C. | D x L | R.C. | D x L | R.C. |
| 220         |             |       |      |       |      | 30x35 | 1.01 | 30x40 | 1.05 |
|             |             |       |      |       |      |       |      | 35x30 | 1.03 |
| 270         |             |       |      |       |      | 30x40 | 1.20 | 30x45 | 1.20 |
|             |             |       |      |       |      | 35x30 | 1.15 | 35x35 | 1.15 |
| 330         |             |       |      |       |      | 30x45 | 1.30 | 30x50 | 1.32 |
|             |             |       |      |       |      | 35x35 | 1.28 | 35x40 | 1.35 |
|             |             |       |      |       |      | 40x30 | 1.28 |       |      |
| 390         |             |       |      | 30x30 | 1.31 | 30x50 | 1.45 | 35x45 | 1.50 |
|             |             |       |      |       |      | 35x40 | 1.45 |       |      |
| 470         |             |       |      | 30x35 | 1.42 | 35x45 | 1.61 | 35x50 | 1.65 |
|             |             |       |      |       |      | 40x35 | 1.60 |       |      |
| 560         |             | 30x30 | 1.51 | 35x30 | 1.60 | 35x50 | 1.80 | 40x60 | 2.00 |
|             |             |       |      |       |      | 40x40 | 1.80 |       |      |
| 680         |             | 30x35 | 1.65 | 30x45 | 1.78 | 40x50 | 2.05 |       |      |
|             |             |       |      | 35x35 | 1.78 |       |      |       |      |
| 820         | 30x40       | 2.02  |      | 30x50 | 2.05 | 40x60 | 2.35 |       |      |
|             |             |       |      | 35x40 | 2.02 |       |      |       |      |
|             | 35x30       |       |      | 40x30 | 1.98 |       |      |       |      |
| 1000        | 30x45       | 2.21  |      | 35x45 | 2.20 |       |      |       |      |
|             | 35x35       |       |      | 40x35 | 2.30 |       |      |       |      |
|             | 40x30       | 2.15  |      |       |      |       |      |       |      |
| 1200        | 35x40       | 2.38  |      | 35x50 | 2.58 |       |      |       |      |
|             | 40x35       | 2.45  |      | 40x40 | 2.55 |       |      |       |      |
| 1500        | 35x50       | 2.85  |      | 40x50 | 2.98 |       |      |       |      |
|             | 40x40       | 2.80  |      |       |      |       |      |       |      |
| 1800        | 40x50       | 3.25  |      | 40x60 | 3.40 |       |      |       |      |