

ALP/T 20/22 Series 85°C

RoHS
Compliant

- Solder tag (ALT) and DIN standard solder pin (ALP)
- Long Life 26000 hours at 85 °C (Ur, Ir applied)
- ALC snap-in should be considered for new designs

APPLICATION

It should be pointed out that the ALP, solder pin, ranges are an older design and as such should not be considered for any new applications. Details are incorporated here, primarily, for maintenance/replacement purposes.

BASIC DESIGN

The ALP/T20 features low ESR, high ripple current ratings and outstandingly good high frequency impedance.

The ALP/T22 has the same features as the ALP/T20 series but with a very high CV per unit volume.

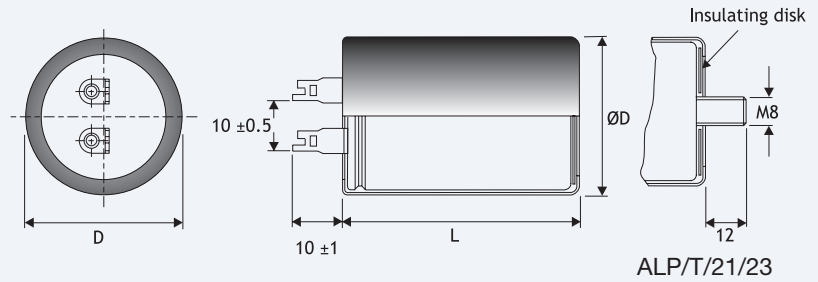
SPECIFICATION

| Standards | IEC 60384-4, DIN 41238, BS CECC 30301-033 (ALP/T20 only) | | | | | | | | | | | |
|--|--|--|------------|----|-------|----|-------|----|-------|----|-------|---|
| Capacitance range | 22 – 150000 µF | | | | | | | | | | | |
| Capacitance tolerance | -10 to +30% ALP/T 20 (except 200V ±20%) -20 to +20% ALP/T 22 | | | | | | | | | | | |
| Rated voltage U_R | 40 - 450 VDC | | | | | | | | | | | |
| Surge voltage U_S | 1.15 x U_R (for $U_R \leq 250$ VDC) 1.10 x U_R (for $U_R \geq 350$ VDC) | Test Condition: ≤ 30s surge, 1000 cycles @ 85°C | | | | | | | | | | |
| Leakage current I_L | = 0.006 x C_R x U_R (µA) or 6mA whichever is the smaller. Note, C_R is in µF. | Test Condition: U_R , 5mins., 20°C | | | | | | | | | | |
| Operational life time +85°C, U_R, I_R | <table border="1"> <thead> <tr> <th>Can Diameter</th> <th>Life (hrs)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>12000</td> </tr> <tr> <td>30</td> <td>15000</td> </tr> <tr> <td>35</td> <td>18000</td> </tr> <tr> <td>40</td> <td>26000</td> </tr> </tbody> </table> | Can Diameter | Life (hrs) | 25 | 12000 | 30 | 15000 | 35 | 18000 | 40 | 26000 | End of Life requirement: $\Delta C/C \leq \pm 10\%$ ESR $\leq 2 \times$ initial ESR value $I_L \leq$ initial specified limit |
| Can Diameter | Life (hrs) | | | | | | | | | | | |
| 25 | 12000 | | | | | | | | | | | |
| 30 | 15000 | | | | | | | | | | | |
| 35 | 18000 | | | | | | | | | | | |
| 40 | 26000 | | | | | | | | | | | |
| Shelf Life | 2000 hrs at 0V +85°C, or 30000 hrs at 0V +40°C | | | | | | | | | | | |
| Temperature range | -40 to +85°C (Operating) -55°C to +105°C (Storage) | | | | | | | | | | | |

SPECIFICATION

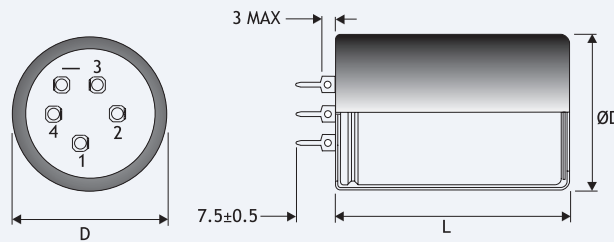
ALT Tag style

Designed for flying lead connection.

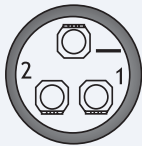


ALP Pin style

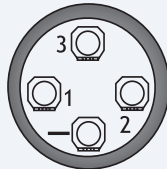
Designed for PCB mounting to DIN 41238.



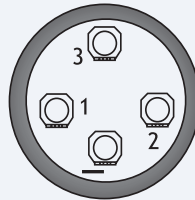
ALP Pin and mounting configurations



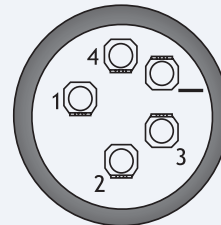
Ø 25 mm



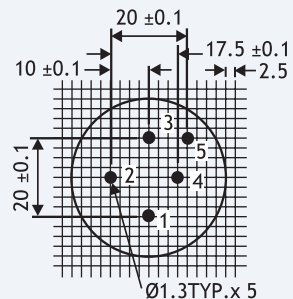
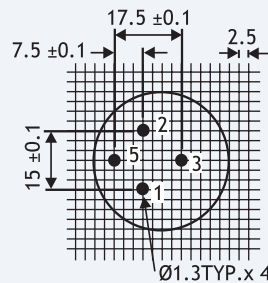
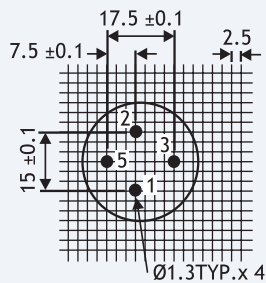
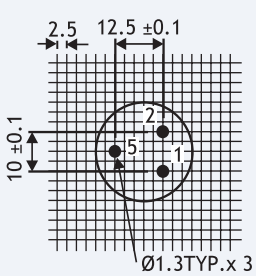
Ø 30 mm



Ø 35 mm



Ø 40 mm



Printed circuit board hole positions, viewed from component side.

Connections: Hole 1 represents +ve, Hole 5 represents -ve. Terminals 2,3 and 4 may be at negative terminal potential due to the presence of electrolyte. They are intended for mechanical connections only. It is recommended that they are soldered to the printed circuit board. Additional dummy pins are provided for stability. Note that the case and dummy pins may be at negative terminal potential.

Dimensions (sleeved) mm

| Case Code | D ±1 | L ±2 | Mounting Clip for Alt Style | Weight grams nom. |
|-----------|------|------|-----------------------------|-------------------|
| AA | 25 | 35 | V2/H1 | 30 |
| AB | 25 | 45 | V2/H1 | 39 |
| BB | 30 | 45 | - | 50 |
| CB | 35 | 45 | V3/H2 | 65 |
| CD | 35 | 55 | V3/H2 | 75 |
| DB | 40 | 45 | V9 | 80 |
| DD | 40 | 55 | V9 | 95 |
| DE | 40 | 75 | V9 | 125 |
| DF | 40 | 105 | V9 | 170 |

Can size (mm) / rating data - ALP/T20 series

| Cap µF | Rated Voltage U _R | | | | | | |
|-----------|------------------------------|---------------|---------------|---------------|---------------|---------------|--------|
| | 40 | 63 | 100 | 200 | 250 | 400 | 450 |
| 22 | | | | | | | 25x35 |
| 33 | | | | | | | 25x35 |
| 47 | | | | | | 25x35 | 25x35 |
| 68 | | | | | | 25x45 | 25x45 |
| 100 | | | | | 25x35 | 30x45 | 30x45 |
| 150 | | | | 25x35 | 25x45 | 35x45 | 35x55 |
| 220 | | | | 25x45 | 30x45 | 35x55 / 40x45 | 40x55 |
| 330 | | | | 30x45 | 35x45 | 40x55 | 40x75 |
| 470 | | | 25x35 | 35x45 | 35x55 / 40x45 | 40x75 | 40x105 |
| 680 | | | 25x45 | 35x55 / 40x45 | 40x55 | 40x105 | |
| 1000 | | 25x35 | 30x45 | 40x55 | 40x75 | | |
| 1500 | 25x35 | 25x45 | 35x45 | 40x75 | 40x105 | | |
| 2200 | 25x45 | 30x45 | 35x55 / 40x45 | 40x105 | | | |
| 3300 | 30x45 | 35x45 | 40x55 | | | | |
| 4700 | 35x45 | 35x55 / 40x45 | 40x75 | | | | |
| 6800 | 35x55 / 40x45 | 40x55 | 40x105 | | | | |
| 10000 | 40x55 | 40x75 | | | | | |
| 15000 | 40x75 | 40x105 | | | | | |
| 22000 | 40x105 | | | | | | |

Can size (mm) / rating data - ALP/T22 series

| Cap µF | Rated Voltage U _R | | | | | | |
|-----------|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 40 | 63 | 100 | 200 | 250 | 385 | 450 |
| 47 | | | | | | | 25x35 |
| 68 | | | | | | 25x35 | 25x45 |
| 100 | | | | | 25x35 | 25x45 | 30x45 |
| 150 | | | | 25x35 | 25x45 | 30x45 | 35x45 |
| 220 | | | | 25x45 | 30x45 | 35x45 | 35x55 / 40x45 |
| 330 | | | | 30x45 | 35x45 | 35x55 / 40x45 | 40x55 |
| 470 | | | | 35x45 | 35x55 / 40x45 | 40x55 | 40x75 |
| 680 | | | 25x35 | 35x55 / 40x45 | 40x55 | 40x75 | 40x105 |
| 1000 | | | 25x45 | 40x55 | 40x75 | 40x105 | |
| 1500 | | | 30x45 | 40x75 | 40x105 | | |
| 2200 | | 25x35 | 35x45 | 40x105 | | | |
| 3300 | 25x35 | 25x45 | 35x55 / 40x45 | | | | |
| 4700 | 25x45 | 30x45 | 40x55 | | | | |
| 6800 | 30x45 | 35x45 | 40x75 | | | | |
| 10000 | 35x45 | 35x55 / 40x55 | 40x105 | | | | |
| 15000 | 35x55 / 40x45 | 40x75 | | | | | |
| 22000 | 40x55 | 40x105 | | | | | |
| 33000 | 40x75 | | | | | | |
| 47000 | 40x105 | | | | | | |

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