

**Aluminium Electrolytic - PCB Mounting - continued**

**ALP 22 Series – Long Life (PCB Mounting) - continued**

Operating temperature -40°C to +85°C DC leakage current 0.006CV + 4µA  
 Tolerance ±20% Operating life @ 85°C Life is dependent on case size dia.  
 PCB footprint to DIN 41238 Dia.

| µF                   | Ripple (A)      |                 | ESR max<br>mΩ @ 20°C<br>100Hz | Dimensions |      | Mfrs. List No. | Order Code |
|----------------------|-----------------|-----------------|-------------------------------|------------|------|----------------|------------|
|                      | @ 100Hz<br>85°C | @ 10kHz<br>85°C |                               | H          | Dia. |                |            |
| <b>16 Volt d.c.</b>  |                 |                 |                               |            |      |                |            |
| 47000                | 3.3             | 3.53            | 31                            | 55         | 40   | ALP22A473DD016 | 934-8204   |
| 10000                | 6.29            | 6.73            | 54                            | 45         | 25   | ALP22A103AB016 | 934-8115   |
| <b>40 Volt d.c.</b>  |                 |                 |                               |            |      |                |            |
| 10000                | 3.21            | 4.46            | 50                            | 45         | 35   | ALP22A103CB040 | 934-8123   |
| 22000                | 4.23            | 5.88            | 39                            | 55         | 40   | ALP22A223DD040 | 934-8166   |
| 4700                 | 4.23            | 5.88            | 57                            | 57         | 25   | ALP22A472AB040 | 934-8182   |
| <b>63 Volt d.c.</b>  |                 |                 |                               |            |      |                |            |
| 10000                | 3.65            | 5.07            | 42                            | 55         | 35   | ALP22A103CD063 | 934-8131   |
| 15000                | 4.97            | 6.91            | 30                            | 75         | 40   | ALP22A153DE063 | 934-8140   |
| 4700                 | 7.19            | 9.99            | 55                            | 45         | 30   | ALP22A472BB063 | 934-8190   |
| <b>200 Volt d.c.</b> |                 |                 |                               |            |      |                |            |
| 1000                 | 1.43            | 2.7             | 104                           | 55         | 40   | ALP22A102DD200 | 934-8093   |
| 2200                 | 3.34            | 6.31            | 48                            | 105        | 40   | ALP22A222DF200 | 934-8158   |
| <b>385 Volt d.c.</b> |                 |                 |                               |            |      |                |            |
| 1000                 | 0.67            | 1.26            | 151                           | 105        | 40   | ALP22A102DF385 | 934-8107   |
| 470                  | 2.37            | 4.48            | 324                           | 55         | 40   | ALP22A471DD385 | 934-8174   |

| 250 Volt d.c. |            | Price Each |        |        |        |    |
|---------------|------------|------------|--------|--------|--------|----|
| µF            | Order Code | 1+         | 25+    | 50+    | 100+   | +  |
| 330           | 119-8670   | 172.00     | 145.00 | 123.00 | 97.00  | -- |
| 470           | 119-8672   | 203.00     | 171.00 | 145.00 | 115.00 | -- |
| 680           | 119-8673   | 247.00     | 208.00 | 176.00 | 139.00 | -- |
| 820           | 119-8674   | 275.00     | 232.00 | 196.00 | 156.00 | -- |
| 1000          | 119-8675   | 339.00     | 285.00 | 242.00 | 192.00 | -- |
| 1500          | 119-8676   | 481.00     | 405.00 | 340.00 | 272.00 | -- |

| 400 Volt d.c.<br>µF | Ripple (A rms)<br>@ 120Hz 85°C | Dimensions |      | Mfrs. List No. | Order Code |
|---------------------|--------------------------------|------------|------|----------------|------------|
|                     |                                | H          | Dia. |                |            |
| 150                 | 1.16                           | 30         | 22   | EETUQ2G151BA   | 119-8677   |
| 220                 | 1.49                           | 30         | 25   | EETUQ2G221CA   | 119-8678   |
| 270                 | 1.67                           | 35         | 25   | EETUQ2G271CA   | 119-8679   |
| 330                 | 1.9                            | 40         | 25   | EETUQ2G331CA   | 119-8680   |
| 470                 | 2.39                           | 40         | 30   | EETUQ2G471DA   | 119-8681   |
| 680                 | 2.96                           | 45         | 35   | EETUQ2G681EA   | 119-8682   |
| 820                 | 3.25                           | 50         | 35   | EETUQ2G821EA   | 119-8684   |

| 400 Volt d.c. |            | Price Each |        |        |        |    |
|---------------|------------|------------|--------|--------|--------|----|
| µF            | Order Code | 1+         | 25+    | 50+    | 100+   | +  |
| 150           | 119-8677   | 195.00     | 164.00 | 139.00 | 110.00 | -- |
| 220           | 119-8678   | 240.00     | 202.00 | 172.00 | 136.00 | -- |
| 270           | 119-8679   | 273.00     | 230.00 | 195.00 | 154.00 | -- |
| 330           | 119-8680   | 311.00     | 262.00 | 222.00 | 176.00 | -- |
| 470           | 119-8681   | 419.00     | 352.00 | 299.00 | 237.00 | -- |
| 680           | 119-8682   | 577.00     | 486.00 | 408.00 | 326.00 | -- |
| 820           | 119-8684   | 668.00     | 563.00 | 473.00 | 378.00 | -- |

| 450 Volt d.c.<br>µF | Ripple (A rms)<br>@ 120Hz 85°C | Dimensions |      | Mfrs. List No. | Order Code |
|---------------------|--------------------------------|------------|------|----------------|------------|
|                     |                                | H          | Dia. |                |            |
| 100                 | 0.93                           | 25         | 22   | EETUQ2W101BA   | 119-8685   |
| 150                 | 1.19                           | 30         | 25   | EETUQ2W151CA   | 119-8686   |
| 220                 | 1.55                           | 40         | 25   | EETUQ2W221CA   | 119-8687   |
| 330                 | 2.01                           | 40         | 30   | EETUQ2W331DA   | 119-8688   |
| 470                 | 2.53                           | 40         | 35   | EETUQ2W471EA   | 119-8689   |
| 560                 | 2.82                           | 50         | 30   | EETUQ2W561DA   | 119-8690   |

| 450 Volt d.c. |            | Price Each |        |        |        |    |
|---------------|------------|------------|--------|--------|--------|----|
| µF            | Order Code | 1+         | 25+    | 50+    | 100+   | +  |
| 100           | 119-8685   | 188.00     | 158.00 | 134.00 | 106.00 | -- |
| 150           | 119-8686   | 230.00     | 193.00 | 164.00 | 130.00 | -- |
| 220           | 119-8687   | 286.00     | 241.00 | 204.00 | 162.00 | -- |
| 330           | 119-8688   | 416.00     | 351.00 | 297.00 | 236.00 | -- |
| 470           | 119-8689   | 547.00     | 460.00 | 387.00 | 309.00 | -- |
| 560           | 119-8690   | 606.00     | 510.00 | 428.00 | 343.00 | -- |

Capacitors

15

| µF                   | Order Code | Price Each |          |          |          |    |
|----------------------|------------|------------|----------|----------|----------|----|
|                      |            | 1+         | 10+      | 50+      | 100+     | +  |
| <b>16 Volt d.c.</b>  |            |            |          |          |          |    |
| 47000                | 934-8204   | 676.00     | 607.00   | 541.00   | 419.00   | -- |
| 10000                | 934-8115   | 327.00     | 293.00   | 262.00   | 204.00   | -- |
| <b>40 Volt d.c.</b>  |            |            |          |          |          |    |
| 10000                | 934-8123   | 514.00     | 462.00   | 411.00   | 319.00   | -- |
| 22000                | 934-8166   | 902.00     | 811.00   | 722.00   | 559.00   | -- |
| 4700                 | 934-8182   | 354.00     | 318.00   | 284.00   | 220.00   | -- |
| <b>63 Volt d.c.</b>  |            |            |          |          |          |    |
| 10000                | 934-8131   | 804.00     | 723.00   | 643.00   | 499.00   | -- |
| 15000                | 934-8140   | 1,143.00   | 1,026.00 | 914.00   | 708.00   | -- |
| 4700                 | 934-8190   | 481.00     | 431.00   | 385.00   | 298.00   | -- |
| <b>200 Volt d.c.</b> |            |            |          |          |          |    |
| 1000                 | 934-8093   | 709.00     | 654.00   | 604.00   | 468.00   | -- |
| 2200                 | 934-8158   | 1,234.00   | 1,135.00 | 1,052.00 | 813.00   | -- |
| <b>385 Volt d.c.</b> |            |            |          |          |          |    |
| 1000                 | 934-8107   | 1,678.00   | 1,508.00 | 1,342.00 | 1,039.00 | -- |
| 470                  | 934-8174   | 942.00     | 847.00   | 755.00   | 585.00   | -- |

**Aluminium Electrolytic - Snap In**

**TSUQ Series - 85°C (PCB Mounting Snap-In) Miniature Can Size**



- General purpose snap-in electrolytic
- Highly miniaturised can size
- 30% smaller than TSUP series
- 2000 hrs life expectancy @ 85°C

Lead pitch=10  
Mounting hole dia.=2.0

Operating temperature -40°C to +85°C (160 to 250V d.c.) Tolerance ±20%  
 -40°C to +85°C (400 to 450V d.c.) DC leakage current 3√CV µA

| 160 Volt d.c.<br>µF | Ripple (A rms)<br>@ 120Hz 85°C | Dimensions |      | Mfrs. List No. | Order Code |
|---------------------|--------------------------------|------------|------|----------------|------------|
|                     |                                | H          | Dia. |                |            |
| 1000                | 3                              | 30         | 25   | EETUQ2C102CA   | 119-8665   |
| 1500                | 3.73                           | 40         | 25   | EETUQ2C152CA   | 119-8666   |
| 2200                | 4.78                           | 40         | 30   | EETUQ2C222DA   | 119-8667   |
| 2700                | 5.45                           | 40         | 35   | EETUQ2C272EA   | 119-8668   |
| 3900                | 6                              | 50         | 35   | EETUQ2C392EA   | 119-8669   |

| 160 Volt d.c. |            | Price Each |        |        |        |    |
|---------------|------------|------------|--------|--------|--------|----|
| µF            | Order Code | 1+         | 25+    | 50+    | 100+   | +  |
| 1000          | 119-8665   | 208.00     | 175.00 | 148.00 | 118.00 | -- |
| 1500          | 119-8666   | 275.00     | 232.00 | 196.00 | 156.00 | -- |
| 2200          | 119-8667   | 368.00     | 310.00 | 263.00 | 208.00 | -- |
| 2700          | 119-8668   | 445.00     | 374.00 | 314.00 | 251.00 | -- |
| 3900          | 119-8669   | 579.00     | 487.00 | 409.00 | 327.00 | -- |

| 250 Volt d.c.<br>µF | Ripple (A rms)<br>@ 120Hz 85°C | Dimensions |      | Mfrs. List No. | Order Code |
|---------------------|--------------------------------|------------|------|----------------|------------|
|                     |                                | H          | Dia. |                |            |
| 330                 | 1.75                           | 30         | 22   | EETUQ2E331BA   | 119-8670   |
| 470                 | 2.11                           | 30         | 25   | EETUQ2E471CA   | 119-8672   |
| 680                 | 2.5                            | 35         | 25   | EETUQ2E681CA   | 119-8673   |
| 820                 | 2.77                           | 40         | 25   | EETUQ2E821CA   | 119-8674   |
| 1000                | 3.32                           | 35         | 30   | EETUQ2E102DA   | 119-8675   |
| 1500                | 4.04                           | 40         | 35   | EETUQ2E152EA   | 119-8676   |

**LLS Series – 85°C (PCB Mounting Snap-In)**



Lead pitch = 10  
Lead length = 4  
Mounting hole dia = 2.0

- General purpose miniature snap-in
- 4mm long terminals
- 3000 hrs life expectancy at 85°C
- Supersedes LQ series

Operating Temperature -40°C to +85°C (16 to 200V dc)  
 -25°C to +85°C (400 to 450V dc)

Tolerance ±20%  
DC Leakage current ≤3√CV µA  
Useful life @ 85°C 3000hrs

| µF                  | Ripple (A) @<br>120Hz, 85°C | Dimensions |      | Mfrs. List No. | Order Code |
|---------------------|-----------------------------|------------|------|----------------|------------|
|                     |                             | H          | Dia. |                |            |
| <b>16 Volt d.c.</b> |                             |            |      |                |            |
| 10000               | 2.89                        | 30         | 22   | LLS1C103MELZ   | 881-3175   |
| <b>25 Volt d.c.</b> |                             |            |      |                |            |
| 15000               | 4.1                         | 40         | 25   | LLS1E153MELA   | 881-3183   |
| 22000               | 5.33                        | 40         | 30   | LLS1E223MELB   | 881-3477   |
| <b>35 Volt d.c.</b> |                             |            |      |                |            |
| 4700                | 2.43                        | 25         | 25   | LLS1V472MELA   | 881-3191   |
| 6800                | 2.89                        | 30         | 25   | LLS1V682MELA   | 881-3205   |
| 10000               | 3.65                        | 40         | 25   | LLS1V103MELA   | 881-3213   |
| 4700                | 2.46                        | 30         | 22   | LLS1V472MELZ   | 881-3485   |
| <b>50 Volt dc</b>   |                             |            |      |                |            |
| 4700                | 3.01                        | 25         | 30   | LLS1H472MELB   | 881-3221   |
| 10000               | 4.92                        | 35         | 35   | LLS1H103MELC   | 881-3230   |
| <b>63 Volt dc</b>   |                             |            |      |                |            |
| 2200                | 2.3                         | 25         | 25   | LLS1J222MELA   | 881-3248   |
| 2200                | 2.35                        | 30         | 22   | LLS1J222MELZ   | 881-3493   |
| 3300                | 2.74                        | 30         | 25   | LLS1J332MELA   | 881-3256   |
| 4700                | 3.59                        | 40         | 25   | LLS1J472MELA   | 881-3264   |
| 4700                | 3.54                        | 30         | 30   | LLS1J472MELB   | 881-3272   |
| 6800                | 4.55                        | 40         | 30   | LLS1J682MELB   | 881-3507   |
| 10000               | 5.75                        | 40         | 35   | LLS1J103MELC   | 881-3515   |