

## Capacitors

Type KEU1012

axial leads

### TECHNICAL DATA

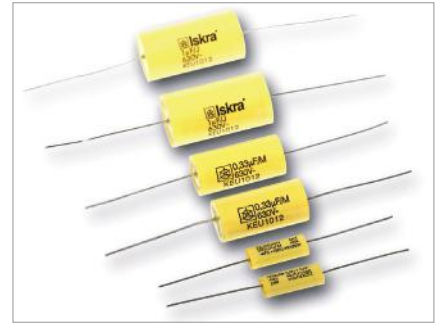
#### General technical data

|                          |  |
|--------------------------|--|
| Dielectric:              | polyester (polyethylene terephthalate) film  |
| Electrodes:              | vacuum metallized aluminum on dielectric   |
| Winding:                 | non-inductive construction, cylindrical shape  |
| Leads:                   | tinned copper wire   |
| Encapsulation:           | polyester film, ends sealed with epoxy resin   |
| Marking:                 | capacitance, tolerance, rated voltage (at larger dimensions also Iskra symbol, type designation) |
| Climatic category:       | 55/100/21, IEC 60068-1   |
| Temperature range:       | - 55 °C to + 100 °C  |
| Complies with standards: | IEC 60384-2  |

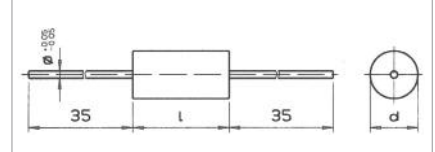
#### Electrical data

|   |  |
|---|--|
| Capacitance range:                        | 1000 pF to 10 μF   |
| Standard values of capacitance ( $C_R$ ): | range E6   |
| Capacitance tolerance:                    | ± 20 % (M), ± 10 % (K), and ± 5 % (J) on special request   |
| Rated voltage ( $U_R$ ):                  | 63 V DC, 100 V DC, 250 V DC, 400 V DC, 630 V DC, 1000 V DC   |
| Allowed alternative voltage up to 60 Hz:  | 440 V AC, 63 V AC, 160 V AC, 200 V AC, 220 V AC, 250 V AC  |
| Category voltage ( $U_C$ ):               | up to + 85 °C $U_C = U_R$ ;<br>from + 85 °C to + 100 °C voltage $U_R$ is lowered for 1,25 % per 1 °C |
| Test voltage:                             | 1,6 × $U_R$ , 2 s  |
| Dissipation factor ( $\tan\delta$ ):      | ≤ 80 × 10 <sup>-4</sup> at 1 kHz and 20 °C   |
| Self inductance                           | 10 nH/cm length of capacitor and leads   |
| Soldering on printed circuit board:       | temperature of soldering bath 270 °C max., soldering time 5 s max.                                   |
| Insulation resistance ( $R_i$ ) at 20 °C: |  |

| Rated capacitance $C_R$ (μF) | Min. $R_i$ or $R_i \times C_R$ between terminals |                     |
|------------------------------|--|---------------------|
|                              | $U_R > 100$ V DC                                 | $U_R \leq 100$ V DC |
| ≤ 0,33                       | 30000 MΩ   | 15000 MΩ            |
| > 0,33                       | 10000 s  | 5000 s              |



KEU1012 (dimensions in mm)



#### Diameter of leads:

| Capacitor length $l_{max}$ (mm) | Diameter of leads $\phi$ (mm) |
|---------------------------------|-------------------------------|
| 11; 14; 19                      | 0,6                           |
| 26,5; 31,5                      | 0,8                           |

#### Pulse loading (du/dt):

| $U_R$<br>(V DC) | $l_{max}$ (mm)               |    |    |      |      |
|-----------------|------------------------------|----|----|------|------|
|                 | 11                           | 14 | 19 | 26,5 | 31,5 |
|                 | Allowed pulse loading (V/μs) |    |    |      |      |
| 63              | 12                           | 9  | 6  | 3    | 2,5  |
| 100             | 18                           | 12 | 8  | 5    | 4    |
| 250             | 32                           | 22 | 14 | 9    | 7    |
| 400             | 55                           | 35 | 20 | 12   | 10   |
| 630             | 70                           | 45 | 32 | 17   | 13   |
| 1000            | -                            | 90 | 45 | 26   | 20   |

Dimensional data: KEU1012

| Capacitance<br>( $\mu\text{F}$ ) | Rated voltage $U_R$ |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|----------------------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                  | 63 V DC             |                   | 100 V DC          |                   | 250 V DC          |                   | 400 V DC          |                   | 630 V DC          |                   | 1000 V DC         |                   |
|                                  | $d_{\text{max.}}$   | $l_{\text{max.}}$ | $d_{\text{max.}}$ | $l_{\text{max.}}$ | $d_{\text{max.}}$ | $l_{\text{max.}}$ | $d_{\text{max.}}$ | $l_{\text{max.}}$ | $d_{\text{max.}}$ | $l_{\text{max.}}$ | $d_{\text{max.}}$ | $l_{\text{max.}}$ |
|                                  | (mm)                |                   | (mm)              |                   | (mm)              |                   | (mm)              |                   | (mm)              |                   | (mm)              |                   |
| 0,001                            |                     |                   |                   |                   |                   |                   |                   |                   | 5                 | 11                | 5                 | 14                |
| 0,0015                           |                     |                   |                   |                   |                   |                   |                   |                   | 5                 | 11                | 5                 | 14                |
| 0,0022                           |                     |                   |                   |                   |                   |                   |                   |                   | 5                 | 11                | 5                 | 14                |
| 0,0033                           |                     |                   |                   |                   |                   |                   |                   |                   | 5                 | 11                | 5,5               | 14                |
| 0,0047                           |                     |                   |                   |                   |                   |                   |                   |                   | 5                 | 11                | 6                 | 14                |
| 0,0068                           |                     |                   |                   |                   |                   |                   |                   |                   | 5,5               | 11                | 7                 | 14                |
| 0,01                             |                     |                   |                   |                   |                   |                   | 5                 | 11                | 5                 | 14                | 6                 | 19                |
| 0,015                            |                     |                   |                   |                   |                   |                   | 5                 | 11                | 5,5               | 14                | 6,5               | 19                |
| 0,022                            |                     |                   |                   |                   |                   |                   | 5                 | 11                | 6,5               | 14                | 7,5               | 19                |
| 0,033                            |                     |                   |                   |                   |                   |                   | 5,5               | 11                | 6                 | 19                | 8,5               | 19                |
| 0,047                            |                     |                   |                   |                   | 5                 | 11                | 5,5               | 14                | 6,5               | 19                | 10                | 19                |
| 0,068                            |                     |                   | 5                 | 11                | 5,5               | 11                | 6                 | 14                | 7,5               | 19                | 9                 | 26,5              |
| 0,1                              |                     |                   | 5                 | 11                | 5,5               | 14                | 7                 | 14                | 9                 | 19                | 10,5              | 26,5              |
| 0,15                             | 5                   | 11                | 5                 | 11                | 6                 | 14                | 6,5               | 19                | 8,5               | 26,5              | 11,5              | 31,5              |
| 0,22                             | 5                   | 11                | 6                 | 11                | 7                 | 14                | 7,5               | 19                | 10                | 26,5              | 13,5              | 31,5              |
| 0,33                             | 5,5                 | 11                | 6                 | 14                | 6,5               | 19                | 9                 | 19                | 12                | 26,5              | 16                | 31,5              |
| 0,47                             | 6                   | 14                | 6,5               | 14                | 7,5               | 19                | 8,5               | 26,5              | 12,5              | 31,5              | 18,5              | 31,5              |
| 0,68                             | 6                   | 14                | 7,5               | 14                | 8,5               | 19                | 10                | 26,5              | 14,5              | 31,5              |                   |                   |
| 1                                | 7                   | 14                | 7                 | 19                | 8,5               | 26,5              | 10,5              | 31,5              | 17,5              | 31,5              |                   |                   |
| 1,5                              | 6,5                 | 19                | 8,5               | 19                | 10                | 26,5              | 12,5              | 31,5              |                   |                   |                   |                   |
| 2,2                              | 7,5                 | 19                | 9,5               | 19                | 11                | 31,5              | 15                | 31,5              |                   |                   |                   |                   |
| 3,3                              | 9                   | 19                | 9,5               | 26,5              | 13                | 31,5              | 18                | 31,5              |                   |                   |                   |                   |
| 4,7                              | 9                   | 26,5              | 11                | 26,5              | 15                | 31,5              |                   |                   |                   |                   |                   |                   |
| 6,8                              | 10                  | 26,5              | 12                | 31,5              | 18                | 31,5              |                   |                   |                   |                   |                   |                   |
| 10                               | 10,5                | 31,5              | 14                | 31,5              | 21                | 31,5              |                   |                   |                   |                   |                   |                   |

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