



ULTRA COMPACT DESIGN

LONG LIFE TIME

SIH: SNAP IN, 2 PINS

SI4PH: SNAP IN, 4 PINS

### ■ FEATURES

- All internal contacts welded
- High CV product
- High reliability
- Ultra compact

### ■ APPLICATIONS

- HiFi
- Computer
- Industrial
- Tube amplifier

RoHS compliant  
REACH compliant

### ■ GENERAL SPECIFICATIONS

| Items                                       | Characteristics   |
|---|---|
| Rated capacitance range $C_R$               | 68... 150.000 $\mu\text{F}$   |
| Capacitance tolerance                       | $\pm 20\%$  |
| Rated voltage range U                       | 16 ... 450 V  |
| Surge voltage $U_S$                         | $U_R \leq 315 \text{ V}: U_S = 1,15 U_R$ ; $U_R > 315 \text{ V}: U_S = 1,10 U_R$  |
| Max. reverse voltage                        | 2 V   |
| Category temperature range                  | - 40°C ... + 105 °C   |
| Leakage current $I_L$ after 5 min @ $U_R$   | $\leq 0,008 * C_R [\mu\text{F}] * U_R [\text{V}] + 6 \mu\text{A} [\mu\text{A}]$   |
| Useful life 5000 h @ 105 °C ; $U_R$ ; $I_R$ | Requirements<br>$\Delta C/C \leq 30\%$ of initial value ; ESR $\leq 300\%$ of specified ;<br>limit $I_L \leq$ specified limit |
| Endurance test 2000 h @ 105 °C , $U_R$      | Requirements<br>$\Delta C/C \leq 20\%$ of initial value ; ESR $\leq 130\%$ of specified ;<br>limit $I_L \leq$ specified limit |
| Climatic category IEC 60068                 | 40/105/56   |
| Voltage proof of the external insulation    | $\geq 2500 \text{ V AC}$  |
| Sectional specification                     | IEC 60384-4   |

Different voltages and capacitance combinations are available on request. Also in small lots.

Stand: 05/2015



■ DRAWINGS FOR SERIES SIH AND SI4PH

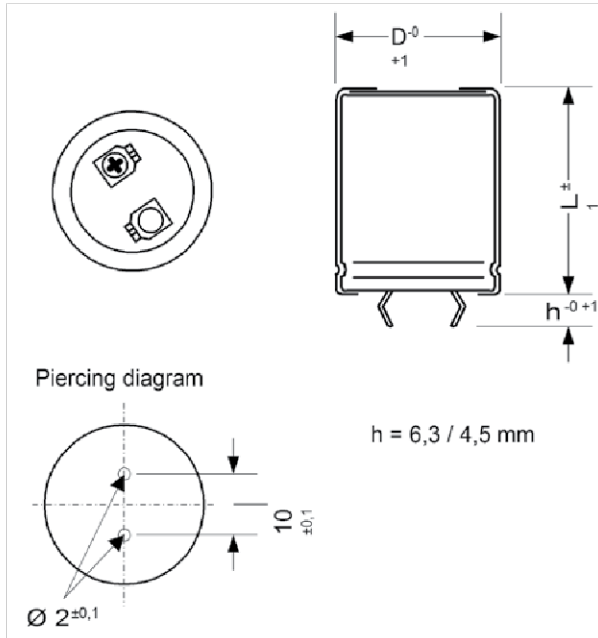


Fig1: SIH - Standard 2 pin snap in version and mounting hole dimensions (mm)

Case diameter 25 to 45 mm only

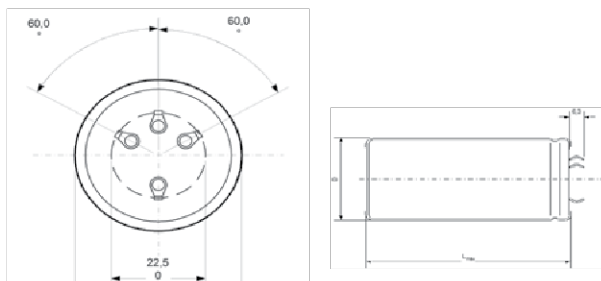
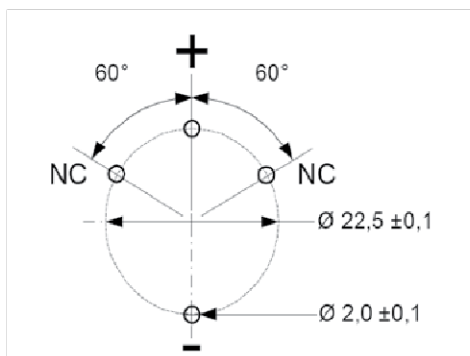


Fig2: SI4PH - Keyed polarity 4 pin snap in version (here with 6,3 mm claw. The 4,5 mm claw is also available) and mounting hole dimensions (mm)

Case diameter 35, 40, 45 mm only



NC terminals must be soldered to isolated pads or pads connected to the minus potential



## ■ ELECTRICAL DATA AND ORDERING CODE FOR SERIES SIH

| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[µF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code       |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|------------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH...   |
|                               |                             |                            |                                     |   | 4 Pins: SI4PH... |
| 16                            | 5600                        | 22x25                      | 85                                  | 1,6   | 56201622025      |
|                               | 6800                        | 22x30                      | 70                                  | 1,9   | 68201622030      |
|                               | 10000                       | 22x35                      | 48                                  | 2,4   | 10301622035      |
|                               | 10000                       | 25x30                      | 48                                  | 2,4   | 10301625030      |
|                               | 12000                       | 22x40                      | 40                                  | 2,7   | 12301622040      |
|                               | 12000                       | 25x35                      | 40                                  | 2,8   | 12301625035      |
|                               | 15000                       | 25x40                      | 32                                  | 3,3   | 15301625040      |
|                               | 15000                       | 30x30                      | 32                                  | 3,3   | 15301630030      |
|                               | 18000                       | 25x45                      | 27                                  | 3,8   | 18301625045      |
|                               | 18000                       | 25x50                      | 27                                  | 4,0   | 18301625050      |
|                               | 18000                       | 30x35                      | 27                                  | 3,8   | 18301630035      |
|                               | 18000                       | 35x30                      | 27                                  | 4,0   | 18301635030      |
|                               | 22000                       | 30x40                      | 22                                  | 4,4   | 22301630040      |
|                               | 22000                       | 35x35                      | 22                                  | 4,6   | 22301635035      |
|                               | 27000                       | 30x45                      | 18                                  | 5,1   | 27301630045      |
|                               | 27000                       | 30x50                      | 18                                  | 5,3   | 27301630050      |
|                               | 27000                       | 35x40                      | 18                                  | 5,3   | 27301635040      |
|                               | 33000                       | 35x45                      | 14                                  | 6,2   | 33301635045      |
|                               | 39000                       | 30x70                      | 12                                  | 7,2   | 39301630070      |
|                               | 39000                       | 35x50                      | 12                                  | 7,0   | 39301635050      |
|                               | 47000                       | 40x50                      | 10                                  | 8,1   | 47301640050      |
|                               | 56000                       | 35x80                      | 9                                   | 10,0  | 56301635080      |
|                               | 56000                       | 40x50                      | 9                                   | 8,8   | 56301640050      |
|                               | 68000                       | 40x60                      | 7                                   | 10,4  | 68301640060      |
|                               | 82000                       | 35x100                     | 6                                   | 13,3  | 82301635100      |
| 82000                         | 40x80                       | 6                          | 12,7                                | 82301640080                                   |                  |
| 82000                         | 45x60                       | 6                          | 11,4                                | 82301645060                                   |                  |
| 100000                        | 45x80                       | 5                          | 14,0                                | 10401645080                                   |                  |
| 120000                        | 40x100                      | 4                          | 16,9                                | 12401640100                                   |                  |
| 150000                        | 45x100                      | 3                          | 18,8                                | 15401645100                                   |                  |
| 25                            | 3900                        | 22x25                      | 114                                 | 1,4   | 39202522025      |
|                               | 5600                        | 22x30                      | 80                                  | 1,7   | 56202522030      |
|                               | 6800                        | 22x35                      | 66                                  | 2,0   | 68202522035      |
|                               | 6800                        | 25x30                      | 66                                  | 2,1   | 68202525030      |
|                               | 8200                        | 22x40                      | 54                                  | 2,3   | 82202522040      |
|                               | 8200                        | 25x35                      | 54                                  | 2,4   | 82202525035      |
|                               | 10000                       | 25x40                      | 45                                  | 2,8   | 10302525040      |
|                               | 10000                       | 30x30                      | 45                                  | 2,8   | 10302530030      |
|                               | 12000                       | 25x45                      | 37                                  | 3,2   | 12302525045      |
|                               | 12000                       | 30x35                      | 37                                  | 3,2   | 12302530035      |
|                               | 15000                       | 25x50                      | 30                                  | 3,7   | 15302525050      |
|                               | 15000                       | 30x40                      | 30                                  | 3,7   | 15302530040      |
|                               | 15000                       | 35x30                      | 30                                  | 3,7   | 15302535030      |
|                               | 18000                       | 30x45                      | 26                                  | 4,2   | 18302530045      |
|                               | 18000                       | 30x50                      | 26                                  | 4,4   | 18302530050      |
|                               | 18000                       | 35x35                      | 26                                  | 4,2   | 18302535035      |
|                               | 22000                       | 35x40                      | 21                                  | 4,9   | 22302535040      |
|                               | 22000                       | 35x45                      | 21                                  | 5,1   | 22302535045      |

| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[µF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code       |             |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|------------------|-------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH...   |             |
|                               |                             |                            |                                     |   | 4 Pins: SI4PH... |             |
| 25                            | 27000                       | 30x70                      | 17                                  | 6,1   | 27302530070      |             |
|                               | 27000                       | 35x50                      | 17                                  | 5,9   | 27302535050      |             |
|                               | 33000                       | 35x60                      | 14                                  | 7,0   | 33302535060      |             |
|                               | 39000                       | 40x50                      | 12                                  | 7,5   | 39302540050      |             |
|                               | 47000                       | 35x80                      | 10                                  | 9,3   | 47302535080      |             |
|                               | 47000                       | 40x60                      | 10                                  | 8,8   | 47302540060      |             |
|                               | 56000                       | 35x100                     | 8                                   | 11,2  | 56302535100      |             |
|                               | 56000                       | 45x60                      | 8                                   | 9,6   | 56302545060      |             |
|                               | 68000                       | 40x80                      | 7                                   | 11,8  | 68302540080      |             |
|                               | 68000                       | 40x100                     | 7                                   | 12,9  | 68302540100      |             |
|                               | 82000                       | 45x80                      | 6                                   | 12,9  | 82302545080      |             |
|                               | 100000                      | 45x100                     | 5                                   | 15,6  | 10402545100      |             |
|                               | 40                          | 1500                       | 22x25                               | 255   | 0,9              | 15204022025 |
|                               |                             | 2200                       | 22x30                               | 174   | 1,2              | 22204022030 |
|                               |                             | 2700                       | 22x35                               | 142   | 1,4              | 27204022035 |
| 2700                          |                             | 25x30                      | 142                                 | 1,4   | 27204025030      |             |
| 3300                          |                             | 22x40                      | 116                                 | 1,6   | 33204022040      |             |
| 3300                          |                             | 25x35                      | 116                                 | 1,7   | 33204025035      |             |
| 3900                          |                             | 25x40                      | 98                                  | 1,9   | 39204025040      |             |
| 3900                          |                             | 30x30                      | 98                                  | 1,9   | 39204030030      |             |
| 4700                          |                             | 25x45                      | 81                                  | 2,2   | 47204025045      |             |
| 4700                          |                             | 30x35                      | 81                                  | 2,2   | 47204030035      |             |
| 5600                          |                             | 25x50                      | 68                                  | 2,5   | 56204025050      |             |
| 5600                          |                             | 30x40                      | 68                                  | 2,5   | 56204030040      |             |
| 5600                          |                             | 35x30                      | 68                                  | 2,5   | 56204035030      |             |
| 6800                          |                             | 30x45                      | 56                                  | 2,8   | 68204030045      |             |
| 6800                          |                             | 35x35                      | 56                                  | 2,9   | 68204035035      |             |
| 8200                          |                             | 30x50                      | 47                                  | 3,2   | 82204030050      |             |
| 8200                          |                             | 35x40                      | 47                                  | 3,3   | 82204035040      |             |
| 8200                          |                             | 35x45                      | 47                                  | 3,4   | 82204035045      |             |
| 10000                         |                             | 35x50                      | 38                                  | 3,9   | 10304035050      |             |
| 12000                         |                             | 30x70                      | 32                                  | 4,5   | 12304030070      |             |
| 12000                         |                             | 35x60                      | 32                                  | 4,6   | 12304035060      |             |
| 15000                         |                             | 40x50                      | 25                                  | 5,1   | 15304040050      |             |
| 18000                         |                             | 35x80                      | 21                                  | 6,4   | 18304035080      |             |
| 18000                         |                             | 40x60                      | 21                                  | 6,0   | 18304040060      |             |
| 22000                         |                             | 35x100                     | 17                                  | 7,7   | 22304035100      |             |
| 22000                         | 40x80                       | 17                         | 7,4                                 | 22304040080                                   |                  |             |
| 22000                         | 45x60                       | 17                         | 6,6                                 | 22304045060                                   |                  |             |
| 27000                         | 40x100                      | 14                         | 8,9                                 | 27304040100                                   |                  |             |
| 27000                         | 45x80                       | 14                         | 8,2                                 | 27304045080                                   |                  |             |
| 39000                         | 45x100                      | 10                         | 10,7                                | 39304045100                                   |                  |             |
| 63                            | 1200                        | 22x25                      | 239                                 | 0,9   | 12206322025      |             |
|                               | 1500                        | 22x30                      | 191                                 | 1,1   | 15206322030      |             |
|                               | 1800                        | 22x35                      | 159                                 | 1,3   | 18206322035      |             |
|                               | 1800                        | 25x30                      | 159                                 | 1,3   | 18206325030      |             |
|                               | 2200                        | 22x40                      | 130                                 | 1,5   | 22206322040      |             |
|                               | 2200                        | 25x35                      | 130                                 | 1,6   | 22206325035      |             |



| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[μF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code     |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|----------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH... |
| 63                            | 2700                        | 25x40                      | 106                                 | 1,8   | 27206325040    |
|                               | 2700                        | 30x30                      | 106                                 | 1,8   | 27206330030    |
|                               | 3300                        | 25x45                      | 87                                  | 2,1   | 33206325045    |
|                               | 3300                        | 30x35                      | 87                                  | 2,1   | 33206330035    |
|                               | 3900                        | 25x50                      | 73                                  | 2,4   | 39206325050    |
|                               | 3900                        | 30x40                      | 73                                  | 2,4   | 39206330040    |
|                               | 3900                        | 35x30                      | 73                                  | 2,4   | 39206335030    |
|                               | 4700                        | 30x45                      | 61                                  | 2,7   | 47206330045    |
|                               | 4700                        | 35x35                      | 61                                  | 2,8   | 47206335035    |
|                               | 5600                        | 30x50                      | 51                                  | 3,1   | 56206330050    |
|                               | 6800                        | 35x45                      | 42                                  | 3,6   | 68206335045    |
|                               | 8200                        | 30x70                      | 35                                  | 4,3   | 82206330070    |
|                               | 10000                       | 35x60                      | 29                                  | 4,9   | 10306335060    |
|                               | 10000                       | 40x50                      | 29                                  | 4,8   | 10306340050    |
|                               | 12000                       | 35x80                      | 24                                  | 6,0   | 12306335080    |
|                               | 12000                       | 40x60                      | 24                                  | 5,6   | 12306340060    |
|                               | 15000                       | 45x60                      | 19                                  | 6,3   | 15306345060    |
|                               | 18000                       | 35x100                     | 16                                  | 8,1   | 18306335100    |
|                               | 18000                       | 40x80                      | 16                                  | 7,7   | 18306340080    |
|                               | 22000                       | 40x100                     | 13                                  | 9,3   | 22306340100    |
| 22000                         | 45x80                       | 13                         | 8,5                                 | 22306345080                                   |                |
| 27000                         | 45x100                      | 11                         | 10,3                                | 27306345100                                   |                |
| 80                            | 680                         | 22x25                      | 468                                 | 0,7   | 68108022025    |
|                               | 820                         | 22x30                      | 388                                 | 0,8   | 82108022030    |
|                               | 1200                        | 22x35                      | 265                                 | 1,0   | 12208022035    |
|                               | 1200                        | 25x30                      | 265                                 | 1,0   | 12208025030    |
|                               | 1500                        | 22x40                      | 212                                 | 1,2   | 15208022040    |
|                               | 1500                        | 25x35                      | 212                                 | 1,2   | 15208025035    |
|                               | 1800                        | 25x40                      | 177                                 | 1,4   | 18208025040    |
|                               | 1800                        | 30x30                      | 177                                 | 1,4   | 18208030030    |
|                               | 2200                        | 25x45                      | 145                                 | 1,6   | 22208025045    |
|                               | 2200                        | 25x50                      | 145                                 | 1,7   | 22208025050    |
|                               | 2200                        | 30x35                      | 145                                 | 1,6   | 22208030035    |
|                               | 2200                        | 35x30                      | 145                                 | 1,7   | 22208035030    |
|                               | 2700                        | 30x40                      | 118                                 | 1,9   | 27208030040    |
|                               | 2700                        | 30x45                      | 118                                 | 2,0   | 27208030045    |
|                               | 2700                        | 35x35                      | 118                                 | 2,0   | 27208035035    |
|                               | 3300                        | 30x50                      | 97                                  | 2,3   | 33208030050    |
|                               | 3300                        | 35x40                      | 97                                  | 2,3   | 33208035040    |
|                               | 3900                        | 35x45                      | 82                                  | 2,6   | 39208035045    |
|                               | 4700                        | 35x50                      | 68                                  | 3,0   | 47208035050    |
|                               | 5600                        | 30x70                      | 57                                  | 3,4   | 56208030070    |
|                               | 5600                        | 35x60                      | 57                                  | 3,5   | 56208035060    |
|                               | 5600                        | 40x50                      | 57                                  | 3,4   | 56208040050    |
|                               | 6800                        | 35x80                      | 47                                  | 4,3   | 68208035080    |
|                               | 6800                        | 40x60                      | 47                                  | 4,0   | 68208040060    |
|                               | 10000                       | 35x100                     | 32                                  | 5,7   | 10308035100    |
|                               | 10000                       | 45x60                      | 32                                  | 4,9   | 10308045060    |
|                               | 12000                       | 40x80                      | 27                                  | 6,0   | 12308040080    |
|                               | 12000                       | 45x80                      | 27                                  | 6,0   | 12308045080    |

| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[μF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code     |             |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|----------------|-------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH... |             |
| 80                            | 15000                       | 40x100                     | 21                                  | 7,3   | 15308040100    |             |
|                               | 18000                       | 45x100                     | 18                                  | 8,0   | 18308045100    |             |
| 100                           | 560                         | 22x25                      | 284                                 | 0,9   | 56110022025    |             |
|                               | 1000                        | 22x35                      | 159                                 | 1,3   | 10210022035    |             |
|                               | 1000                        | 25x30                      | 159                                 | 1,3   | 10210025030    |             |
|                               | 1200                        | 22x40                      | 133                                 | 1,5   | 12210022040    |             |
|                               | 1200                        | 25x35                      | 133                                 | 1,5   | 12210025035    |             |
|                               | 1500                        | 25x40                      | 106                                 | 1,8   | 15210025040    |             |
|                               | 1500                        | 30x30                      | 106                                 | 1,8   | 15210030030    |             |
|                               | 1800                        | 25x45                      | 88                                  | 2,1   | 18210025045    |             |
|                               | 1800                        | 25x50                      | 88                                  | 2,2   | 18210025050    |             |
|                               | 1800                        | 35x30                      | 88                                  | 2,2   | 18210035030    |             |
|                               | 2200                        | 30x40                      | 72                                  | 2,4   | 22210030040    |             |
|                               | 2200                        | 30x45                      | 72                                  | 2,5   | 22210030045    |             |
|                               | 2200                        | 35x35                      | 72                                  | 2,5   | 22210035035    |             |
|                               | 2700                        | 30x50                      | 59                                  | 2,9   | 27210030050    |             |
|                               | 2700                        | 35x40                      | 59                                  | 2,9   | 27210035040    |             |
|                               | 3300                        | 35x45                      | 48                                  | 3,4   | 33210035045    |             |
|                               | 3900                        | 30x70                      | 41                                  | 4,0   | 39210030070    |             |
|                               | 3900                        | 35x50                      | 41                                  | 3,8   | 39210035050    |             |
|                               | 4700                        | 35x60                      | 34                                  | 4,5   | 47210035060    |             |
|                               | 4700                        | 40x50                      | 34                                  | 4,4   | 47210040050    |             |
|                               | 5600                        | 35x80                      | 28                                  | 5,5   | 56210035080    |             |
|                               | 5600                        | 40x60                      | 28                                  | 5,1   | 56210040060    |             |
|                               | 8200                        | 35x100                     | 19                                  | 7,3   | 82210035100    |             |
|                               | 8200                        | 40x80                      | 19                                  | 7,0   | 82210040080    |             |
|                               | 8200                        | 45x60                      | 19                                  | 6,2   | 82210045060    |             |
|                               | 10000                       | 45x80                      | 16                                  | 7,7   | 10310045080    |             |
|                               | 12000                       | 40x100                     | 13                                  | 9,2   | 12310040100    |             |
|                               | 15000                       | 45x100                     | 11                                  | 10,3  | 15310045100    |             |
|                               | 160                         | 270                        | 22x25                               | 413   | 0,7            | 27116022025 |
|                               |                             | 390                        | 22x30                               | 286   | 0,9            | 39116022030 |
|                               |                             | 470                        | 22x35                               | 237   | 1,1            | 47116022035 |
|                               |                             | 470                        | 25x30                               | 237   | 1,1            | 47116025030 |
| 560                           |                             | 22x40                      | 199                                 | 1,2   | 56116022040    |             |
| 560                           |                             | 25x35                      | 199                                 | 1,3   | 56116025035    |             |
| 680                           |                             | 25x40                      | 164                                 | 1,5   | 68116025040    |             |
| 680                           |                             | 30x30                      | 164                                 | 1,4   | 68116030030    |             |
| 820                           |                             | 25x45                      | 136                                 | 1,6   | 82116025045    |             |
| 820                           |                             | 30x35                      | 136                                 | 1,7   | 82116030035    |             |
| 1000                          |                             | 25x50                      | 111                                 | 1,9   | 10216025050    |             |
| 1000                          |                             | 30x40                      | 111                                 | 1,9   | 10216030040    |             |
| 1000                          |                             | 35x30                      | 111                                 | 1,9   | 10216035030    |             |
| 1200                          |                             | 30x45                      | 93                                  | 2,2   | 12216030045    |             |
| 1200                          |                             | 35x35                      | 93                                  | 2,2   | 12216035035    |             |
| 1500                          |                             | 30x50                      | 74                                  | 2,6   | 15216030050    |             |
| 1500                          |                             | 35x40                      | 74                                  | 2,6   | 15216035040    |             |
| 1800                          |                             | 35x45                      | 62                                  | 3,0   | 18216035045    |             |
| 1800                          | 35x50                       | 62                         | 3,1                                 | 18216035050                                   |                |             |
| 2200                          | 30x70                       | 51                         | 3,6                                 | 22216030070                                   |                |             |



| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[μF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code       |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|------------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH...   |
|                               |                             |                            |                                     |   | 4 Pins: SI4PH... |
| 160                           | 2200                        | 35x60                      | 51                                  | 3,7   | 22216035060      |
|                               | 2700                        | 40x50                      | 41                                  | 4,0   | 27216040050      |
|                               | 3300                        | 35x80                      | 34                                  | 5,0   | 33216035080      |
|                               | 3300                        | 40x60                      | 34                                  | 4,7   | 33216040060      |
|                               | 3900                        | 35x100                     | 29                                  | 6,2   | 39216035100      |
|                               | 3900                        | 45x60                      | 29                                  | 5,2   | 39216045060      |
|                               | 4700                        | 40x80                      | 24                                  | 6,3   | 47216040080      |
|                               | 5600                        | 40x100                     | 20                                  | 7,5   | 56216040100      |
|                               | 5600                        | 45x80                      | 20                                  | 6,9   | 56216045080      |
|                               | 6800                        | 45x100                     | 16                                  | 8,3   | 68216045100      |
| 250                           | 180                         | 22x25                      | 531                                 | 0,6   | 18125022025      |
|                               | 220                         | 22x30                      | 434                                 | 0,7   | 22125022030      |
|                               | 270                         | 22x35                      | 354                                 | 0,9   | 27125022035      |
|                               | 330                         | 25x30                      | 290                                 | 1,0   | 33125025030      |
|                               | 390                         | 22x40                      | 245                                 | 1,1   | 39125022040      |
|                               | 390                         | 25x35                      | 245                                 | 1,1   | 39125025035      |
|                               | 470                         | 25x40                      | 203                                 | 1,3   | 47125025040      |
|                               | 470                         | 30x30                      | 203                                 | 1,3   | 47125030030      |
|                               | 560                         | 25x45                      | 171                                 | 1,5   | 56125025045      |
|                               | 560                         | 30x35                      | 171                                 | 1,5   | 56125030035      |
|                               | 560                         | 35x30                      | 171                                 | 1,6   | 56125035030      |
|                               | 680                         | 25x50                      | 141                                 | 1,7   | 68125025050      |
|                               | 680                         | 30x40                      | 141                                 | 1,7   | 68125030040      |
|                               | 820                         | 30x45                      | 117                                 | 2,0   | 82125030045      |
|                               | 820                         | 30x50                      | 117                                 | 2,1   | 82125030050      |
|                               | 820                         | 35x35                      | 117                                 | 2,0   | 82125035035      |
|                               | 1000                        | 35x40                      | 96                                  | 2,3   | 10225035040      |
|                               | 1200                        | 35x45                      | 80                                  | 2,6   | 12225035045      |
|                               | 1200                        | 35x50                      | 80                                  | 2,7   | 12225035050      |
|                               | 1500                        | 30x70                      | 64                                  | 3,2   | 15225030070      |
|                               | 1500                        | 35x60                      | 64                                  | 3,3   | 15225035060      |
|                               | 1800                        | 35x80                      | 53                                  | 4,0   | 18225035080      |
|                               | 1800                        | 40x50                      | 53                                  | 3,5   | 18225040050      |
|                               | 1800                        | 40x60                      | 53                                  | 3,8   | 18225040060      |
|                               | 2700                        | 35x100                     | 35                                  | 5,4   | 27225035100      |
|                               | 2700                        | 40x80                      | 35                                  | 5,2   | 27225040080      |
|                               | 2700                        | 45x60                      | 35                                  | 4,6   | 27225045060      |
|                               | 3300                        | 40x100                     | 29                                  | 6,3   | 33225040100      |
| 3300                          | 45x80                       | 29                         | 5,7                                 | 33225045080                                   |                  |
| 4700                          | 45x100                      | 20                         | 7,4                                 | 47225045100                                   |                  |
| 350                           | 100                         | 22x25                      | 955                                 | 0,5   | 10135022025      |
|                               | 120                         | 22x30                      | 796                                 | 0,6   | 12135022030      |
|                               | 180                         | 22x35                      | 531                                 | 0,7   | 18135022035      |
|                               | 180                         | 22x40                      | 531                                 | 0,8   | 18135022040      |
|                               | 180                         | 25x30                      | 531                                 | 0,7   | 18135025030      |
|                               | 220                         | 25x35                      | 434                                 | 0,9   | 22135025035      |
|                               | 270                         | 25x40                      | 354                                 | 1,0   | 27135025040      |
|                               | 270                         | 30x30                      | 354                                 | 1,0   | 27135030030      |
|                               | 330                         | 25x45                      | 290                                 | 1,2   | 33135025045      |
|                               | 330                         | 30x35                      | 290                                 | 1,1   | 33135030035      |

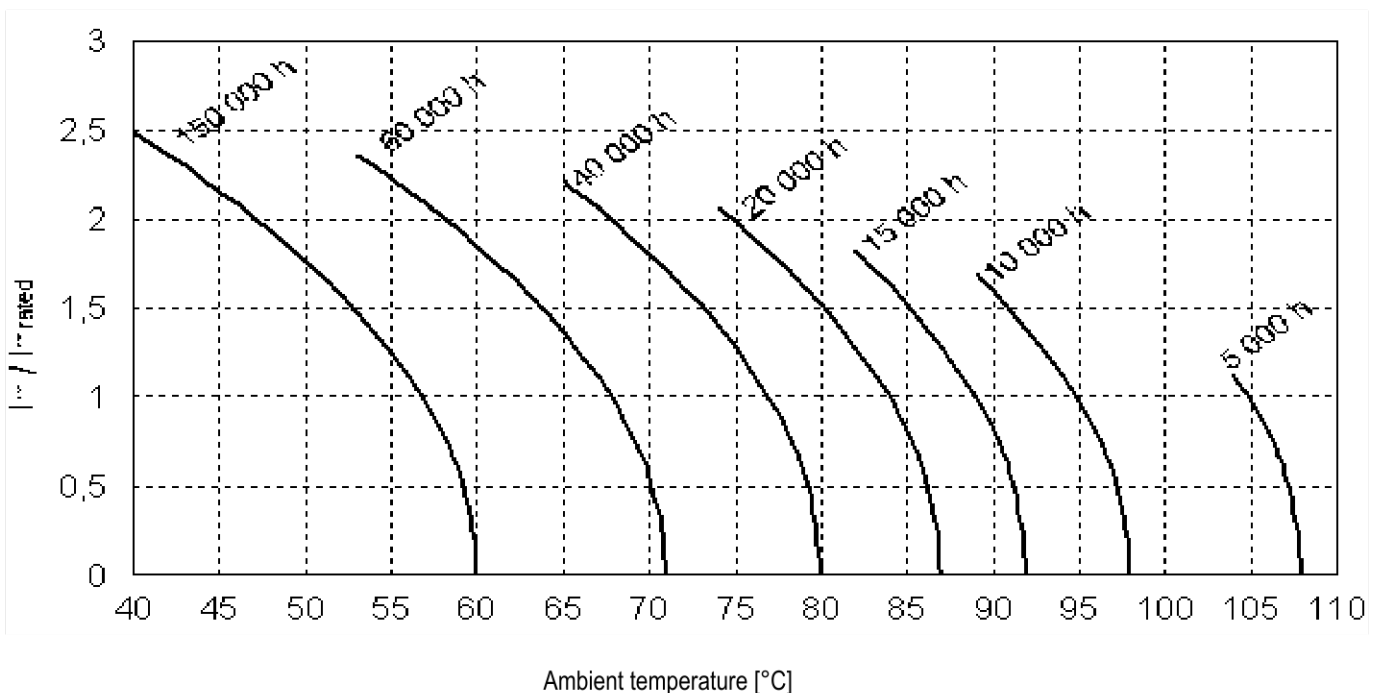
| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[μF] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[mΩ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code       |             |
|-------------------------------|-----------------------------|----------------------------|-------------------------------------|---|------------------|-------------|
|                               |                             |                            |                                     |   | 2 Pins: SIH...   |             |
|                               |                             |                            |                                     |   | 4 Pins: SI4PH... |             |
| 350                           | 330                         | 35x30                      | 290                                 | 1,2   | 33135035030      |             |
|                               | 390                         | 25x50                      | 245                                 | 1,3   | 39135025050      |             |
|                               | 390                         | 30x40                      | 245                                 | 1,3   | 39135030040      |             |
|                               | 470                         | 30x45                      | 203                                 | 1,5   | 47135030045      |             |
|                               | 470                         | 35x35                      | 203                                 | 1,5   | 47135035035      |             |
|                               | 560                         | 30x50                      | 171                                 | 1,7   | 56135030050      |             |
|                               | 560                         | 35x40                      | 171                                 | 1,7   | 56135035040      |             |
|                               | 560                         | 35x45                      | 171                                 | 1,8   | 56135035045      |             |
|                               | 680                         | 35x50                      | 141                                 | 2,1   | 68135035050      |             |
|                               | 820                         | 30x70                      | 117                                 | 2,3   | 82135030070      |             |
|                               | 820                         | 35x60                      | 117                                 | 2,4   | 82135035060      |             |
|                               | 820                         | 40x50                      | 117                                 | 2,4   | 82135040050      |             |
|                               | 1200                        | 35x80                      | 80                                  | 3,3   | 12235035080      |             |
|                               | 1200                        | 40x60                      | 80                                  | 3,1   | 12235040060      |             |
|                               | 1500                        | 35x100                     | 64                                  | 4,0   | 15235035100      |             |
|                               | 1500                        | 45x60                      | 64                                  | 3,4   | 15235045060      |             |
|                               | 1800                        | 40x80                      | 53                                  | 4,2   | 18235040080      |             |
|                               | 1800                        | 40x100                     | 53                                  | 4,6   | 18235040100      |             |
|                               | 1800                        | 45x80                      | 53                                  | 4,2   | 18235045080      |             |
|                               | 2700                        | 45x100                     | 35                                  | 5,6   | 27235045100      |             |
|                               | 400                         | 82                         | 22x25                               | 1554  | 0,4              | 82040022025 |
|                               |                             | 120                        | 22x30                               | 1062  | 0,5              | 12140022030 |
| 150                           |                             | 22x35                      | 849                                 | 0,6   | 15140022035      |             |
| 150                           |                             | 25x30                      | 849                                 | 0,6   | 15140025030      |             |
| 180                           |                             | 22x40                      | 708                                 | 0,7   | 18140022040      |             |
| 180                           |                             | 25x35                      | 708                                 | 0,7   | 18140025035      |             |
| 220                           |                             | 25x40                      | 579                                 | 0,8   | 22140025040      |             |
| 220                           |                             | 30x30                      | 579                                 | 0,8   | 22140030030      |             |
| 270                           |                             | 25x45                      | 472                                 | 0,9   | 27140025045      |             |
| 270                           |                             | 25x50                      | 472                                 | 0,9   | 27140025050      |             |
| 270                           |                             | 30x35                      | 472                                 | 0,9   | 27140030035      |             |
| 270                           |                             | 35x30                      | 472                                 | 0,9   | 27140035030      |             |
| 330                           |                             | 30x40                      | 386                                 | 1,0   | 33140030040      |             |
| 330                           |                             | 35x35                      | 386                                 | 1,1   | 33140035035      |             |
| 390                           |                             | 30x45                      | 327                                 | 1,2   | 39140030045      |             |
| 390                           |                             | 30x50                      | 327                                 | 1,2   | 39140030050      |             |
| 390                           |                             | 35x40                      | 327                                 | 1,2   | 39140035040      |             |
| 470                           |                             | 35x45                      | 271                                 | 1,4   | 47140035045      |             |
| 560                           |                             | 30x70                      | 227                                 | 1,7   | 56140030070      |             |
| 560                           |                             | 35x50                      | 227                                 | 1,6   | 56140035050      |             |
| 680                           |                             | 35x60                      | 187                                 | 1,9   | 68140035060      |             |
| 680                           |                             | 40x50                      | 187                                 | 1,9   | 68140040050      |             |
| 820                           |                             | 35x80                      | 155                                 | 2,3   | 82140035080      |             |
| 820                           |                             | 40x60                      | 155                                 | 2,2   | 82140040060      |             |
| 1200                          |                             | 35x100                     | 106                                 | 3,1   | 12240035100      |             |
| 1200                          |                             | 40x80                      | 106                                 | 3,0   | 12240040080      |             |
| 1200                          |                             | 45x60                      | 106                                 | 2,7   | 12240045060      |             |
| 1500                          |                             | 40x100                     | 85                                  | 3,6   | 15240040100      |             |
| 1500                          | 45x80                       | 85                         | 3,3                                 | 15240045080                                   |                  |             |
| 2200                          | 45x100                      | 58                         | 4,4                                 | 22240045100                                   |                  |             |



| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[ $\mu$ F] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[m $\Omega$ ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code                         |
|-------------------------------|-----------------------------------|----------------------------|--|---|------------------------------------|
|                               |                                   |                            |  |   | 2 Pins: SIH...<br>4 Pins: SI4PH... |
| 450                           | 68                                | 22x25                      | 1639   | 0,4   | 68045022025                        |
|                               | 82                                | 22x30                      | 1359   | 0,4   | 82045022030                        |
|                               | 100                               | 22x35                      | 1115   | 0,5   | 10145022035                        |
|                               | 120                               | 22x40                      | 929  | 0,6   | 12145022040                        |
|                               | 120                               | 25x30                      | 929  | 0,6   | 12145025030                        |
|                               | 150                               | 25x35                      | 743  | 0,7   | 15145025035                        |
|                               | 150                               | 25x40                      | 743  | 0,7   | 15145025040                        |
|                               | 180                               | 25x45                      | 619  | 0,8   | 18145025045                        |
|                               | 180                               | 30x30                      | 619  | 0,7   | 18145030030                        |
|                               | 180                               | 30x35                      | 619  | 0,8   | 18145030035                        |
|                               | 220                               | 25x50                      | 507  | 0,9   | 22145025050                        |
|                               | 220                               | 30x40                      | 507  | 0,9   | 22145030040                        |
|                               | 220                               | 35x30                      | 507  | 0,9   | 22145035030                        |
|                               | 270                               | 30x45                      | 413  | 1,0   | 27145030045                        |
|                               | 270                               | 35x35                      | 413  | 1,1   | 27145035035                        |

| Rated voltage<br>$U_R$<br>[V] | Rated cap.<br>$C_R$<br>[ $\mu$ F] | Case size<br>D x L<br>[mm] | Typ. ESR<br>100 Hz,<br>20°C<br>[m $\Omega$ ] | Ripple current<br>IR~<br>100 Hz,<br>105°C [A] | Order code                         |
|-------------------------------|-----------------------------------|----------------------------|--|---|------------------------------------|
|                               |                                   |                            |  |   | 2 Pins: SIH...<br>4 Pins: SI4PH... |
| 450                           | 330                               | 30x50                      | 338  | 1,2   | 33145030050                        |
|                               | 330                               | 35x40                      | 338  | 1,2   | 33145035040                        |
|                               | 390                               | 35x45                      | 286  | 1,4   | 39145035045                        |
|                               | 470                               | 30x70                      | 237  | 1,6   | 47145030070                        |
|                               | 470                               | 35x50                      | 237  | 1,6   | 47145035050                        |
|                               | 560                               | 35x60                      | 199  | 1,9   | 56145035060                        |
|                               | 560                               | 40x50                      | 199  | 1,8   | 56145040050                        |
|                               | 680                               | 35x80                      | 164  | 2,3   | 68145035080                        |
|                               | 680                               | 40x60                      | 164  | 2,1   | 68145040060                        |
|                               | 820                               | 35x100                     | 136  | 2,8   | 82145035100                        |
|                               | 820                               | 45x60                      | 136  | 2,4   | 82145045060                        |
|                               | 1000                              | 40x80                      | 111  | 2,9   | 10245040080                        |
|                               | 1200                              | 40x100                     | 93   | 3,5   | 12245040100                        |
|                               | 1200                              | 45x80                      | 93   | 3,2   | 12245045080                        |
|                               | 1500                              | 45x100                     | 74   | 3,9   | 15245045100                        |

## ■ USEFUL LIFE AS A FUNCTION OF AMBIENT TEMPERATURE AND ACTUAL RIPPLE CURRENT



Stand: 05/2015