

## Leaded Varistors

### Taping

#### Taping (leaded varistors)

All leaded varistors are available on tape.

Exception: S10K510 ... K680, S14K510 ... K1000, S20K385 ... K1000.

Tape packaging for lead spacing  $\boxed{e}$  = 5 fully conforms to IEC 60286-2, while for lead spacings  $\boxed{e}$  = 7,5 and 10 the taping mode is based on this standard.

The ordering tables on page 213 ff list disk types available on tape in detail, i. e. with complete type designation and ordering code. Taping mode and, if relevant, crimp style and lead spacing are coded in the type designation. For types not listed please contact EPCOS. Upon request parts with lead spacing  $\boxed{e}$  = 5 mm are available in Ammopack too.

#### Designation system for taping mode

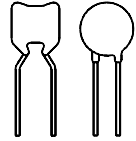
| Type designation bulk          | Taped, reel type                                                                      | Crimp style (if relevant)                                                             | Lead spacing (if relevant)                          |
|--------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|
| default = no extra designation | $\left. \begin{array}{l} G \\ G2 \\ G3 \\ G4 \\ G5 \end{array} \right\}$ see page 208 | $\left. \begin{array}{l} S \\ S2 \\ S3 \\ S4 \\ S5 \end{array} \right\}$ see page 212 | R5 Lead spacing differs from standard version<br>R7 |
|                                | Taped, Ammopack                                                                       |                                                                                       |                                                     |
|                                | $\left. \begin{array}{l} GA \\ G2A \end{array} \right\}$ see page 209                 |                                                                                       |                                                     |

#### Example SIOV-S10K250GS3R5

|              |                                                            |               |                                                                             |
|--------------|------------------------------------------------------------|---------------|-----------------------------------------------------------------------------|
| SIOV-S10K250 | G                                                          | S3            | R5                                                                          |
|              | Taped<br>Reel type I<br>Seating plane height<br>$H_0 = 16$ | Crimp style 3 | Lead spacing 5,0<br>(differs from LS 7,5<br>of standard version<br>S10K250) |

#### Example SIOV-S07K60G2AS2

|             |                                                         |               |   |
|-------------|---------------------------------------------------------|---------------|---|
| SIOV-S07K60 | G2A                                                     | S2            | — |
|             | Taped<br>Seating plane height<br>$H_0 = 18$<br>Ammopack | Crimp style 2 | — |



### Taping modes/reel types

Taped varistors have the letter “G” appended to the type designation.

The different tapes and matching reel types are identified by numbers as shown in the table on page 208.

Types with lead spacing  $\boxed{e}$  = 5, reel diameter 360 mm, have the code letter “G” while types with lead spacing  $\boxed{e}$  = 7,5 and 10 on 500-mm reels are identified by “G5”.

Furthermore types with lead spacing  $\boxed{e}$  = 5 are available in Ammopack, code letters “GA”.

Versions G2, G3 and G4 are special tapes on 360-mm reels resp. Ammopack: G2 denotes the seating plane height  $H_0 = 18$  for crimped versions. Tapes G3 and G4 are available on 360-mm reels in case the 500-mm reels are too big for your insertion machine.

### Crimp styles

Both crimped and straight leads are standard for taped disk varistors. The leads are differently crimped for technical reasons; the individual crimp styles are denoted by consecutive numbers (S, S2 ... S5) as shown in the dimensional drawings on page 212.

The crimp styles of the individual types can be seen from the type designation in the ordering tables.

Example straight leads: S10K250G5

Example crimped leads: S10K250G5S5

### Lead spacing

Type series SIOV-S10 is available with two different lead spacings:

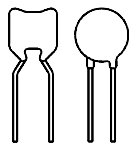
$\boxed{e}$  = 5,0 (wire  $\varnothing$  0,6 mm)

$\boxed{e}$  = 7,5 (wire  $\varnothing$  0,8 mm)

For taped varistors having a different lead spacing from their untaped equivalents, the actual  $\boxed{e}$  is appended to type designation.

Example: S10K250GS3R5

The standard lead spacing of series SIOV-S10 is  $\boxed{e}$  = 7,5. The version with  $\boxed{e}$  = 5,0 has the appendix “R5”.



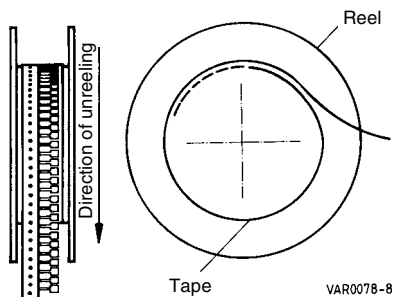
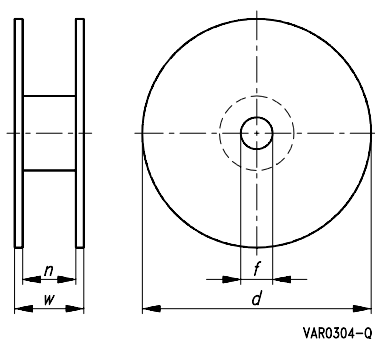
## Leaded Varistors

### Taping

#### Assignment of taping mode to reel type

| Taping mode     | Reel type | Seating plane height $H_0$<br>for crimped types<br>mm | Seating plane height $H$<br>for uncrimped types<br>mm |
|-----------------|-----------|-------------------------------------------------------|-------------------------------------------------------|
| G <sup>1)</sup> | I         | 16                                                    | 18                                                    |
| G2              | I         | 18                                                    | —                                                     |
| G3              | II        | 16                                                    | 18                                                    |
| G4              | II        | 18                                                    | —                                                     |
| G5              | III       | 16                                                    | 18                                                    |
| GA              | Ammopack  | 16                                                    | 18                                                    |
| G2A             | Ammopack  | 18                                                    | —                                                     |

Taping modes G2, G3, G4, GA and G2A: delivery upon request.

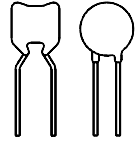


#### Reel dimensions (in mm)

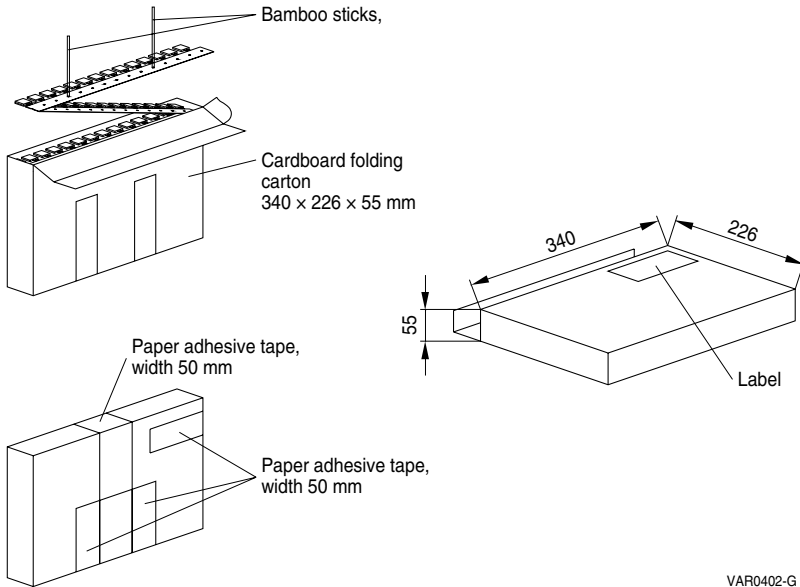
| Reel type | $d$      | $f$        | $n$        | $w$     |
|-----------|----------|------------|------------|---------|
| I         | 360 max. | $31 \pm 1$ | approx. 45 | 54 max. |
| II        | 360 max. | $31 \pm 1$ | approx. 55 | 64 max. |
| III       | 500 max. | $23 \pm 1$ | approx. 59 | 72 max. |

If reel type III is not compatible with insertion equipment because of its large diameter, type series S10 and S14 can be supplied on reel II upon request (taping mode G3).

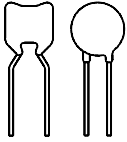
1) "1" is omitted.



### Ammopack dimensions



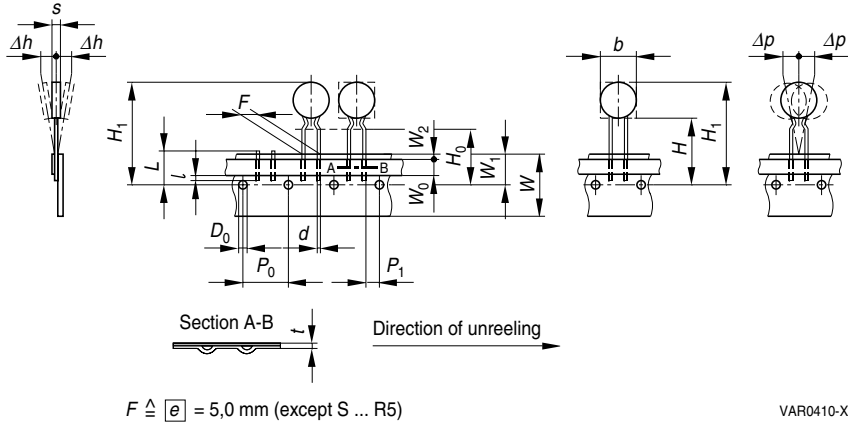
VAR0402-G



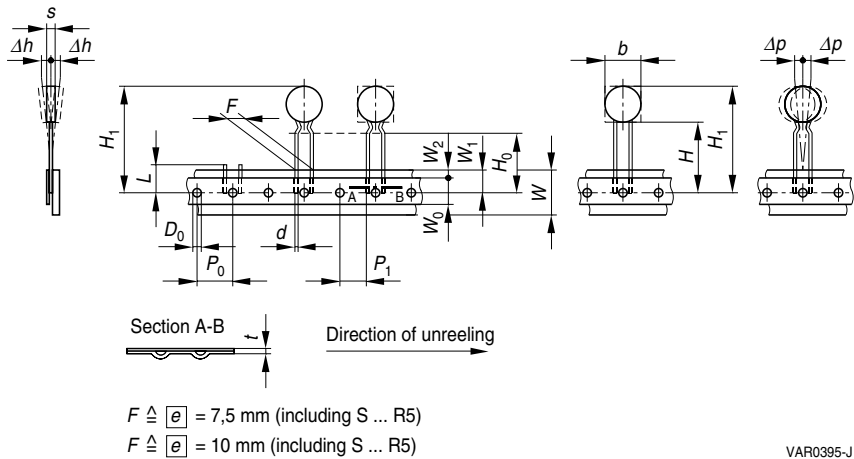
## Leaded Varistors

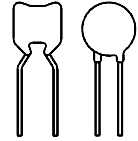
### Taping

#### Taping in accordance with IEC 60286-2



#### Taping based on IEC 60286-2




**Tape dimensions (in mm)**

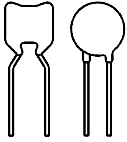
| Sym-<br>bol | $\overline{e} = 5,0$ | Tolerance     | $\overline{e} = 7,5$ | Tolerance      | $\overline{e} = 10,0$ | Tolerance      | Remarks                                   |
|-------------|----------------------|---------------|----------------------|----------------|-----------------------|----------------|-------------------------------------------|
| $b$         |                      | max.          |                      | max.           |                       | max.           | see tables<br>on page 169 ff              |
| $s$         |                      | max.          |                      | max.           |                       | max.           |                                           |
| $d$         | 0,6 <sup>1)</sup>    | $\pm 0,05$    | 0,8                  | $\pm 0,05$     | 1,0                   | $\pm 0,05$     |                                           |
| $P_0$       | 12,7                 | $\pm 0,3$     | 12,7 <sup>2)</sup>   | $\pm 0,3$      | 12,7                  | $\pm 0,3$      | $\pm 1$ mm/20<br>sprocket holes           |
| $P_1$       | 3,85                 | $\pm 0,7$     | 8,95                 | $\pm 0,8$      | 7,7                   | $\pm 0,8$      |                                           |
| $F$         | 5,0                  | $+ 0,6/- 0,1$ | 7,5                  | $\pm 0,8$      | 10,0                  | $\pm 0,8$      |                                           |
| $\Delta h$  | 0                    | $\pm 2,0$     | depends on s         |                | depends on s          |                | measured at<br>top of compo-<br>nent body |
| $\Delta p$  | 0                    | $\pm 1,3$     | 0                    | $\pm 2,0$      | 0                     | $\pm 2,0$      |                                           |
| $W$         | 18,0                 | $\pm 0,5$     | 18,0                 | $\pm 0,5$      | 18,0                  | $\pm 0,5$      |                                           |
| $W_0$       | 5,5                  | min.          | 11,0                 | min.           | 11,0                  | min.           | Peel-off<br>force $\geq 5$ N              |
| $W_1$       | 9,0                  | $\pm 0,5$     | 9,0                  | $+ 0,75/- 0,5$ | 9,0                   | $+ 0,75/- 0,5$ |                                           |
| $W_2$       | 3,0                  | max.          | 3,0                  | max.           | 3,0                   | max.           |                                           |
| $H$         | 18,0                 | $+ 2,0/- 0$   | 18,0                 | $+ 2,0/- 0$    | 18,0                  | $+ 2,0/- 0$    |                                           |
| $H_0$       | 16,0<br>(18,0)       | $\pm 0,5$     | 16,0<br>(18,0)       | $\pm 0,5$      | 16,0                  | $\pm 0,5$      | 3)<br>4)                                  |
| $H_1$       | 32,2                 | max.          | 45,0                 | max.           | 45,0                  | max.           |                                           |
| $D_0$       | 4,0                  | $\pm 0,2$     | 4,0                  | $\pm 0,2$      | 4,0                   | $\pm 0,2$      | without lead                              |
| $t$         | 0,9                  | max.          | 0,9                  | max.           | 0,9                   | max.           |                                           |
| $L$         | 11,0                 | max.          | 11,0                 | max.           | 11,0                  | max.           |                                           |
| $l$         | 4,0                  | max.          |                      |                |                       |                |                                           |

1) SHCV 0,5

2) Taping with  $P_0 = 15,0$  mm upon request

3) Applies only to uncrimped types

4) Applies only to crimped types ( $H_0 = 18$  upon request)

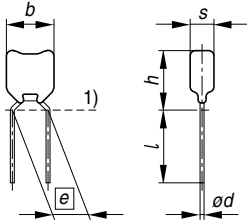


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### Taping

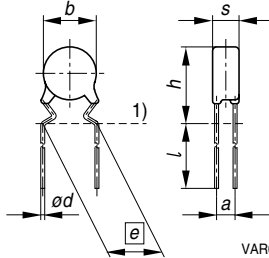
#### Standard crimp styles

##### Crimp style S2<sup>2)</sup>



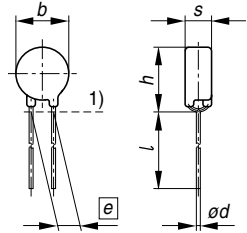
VAR0403-O

##### Crimp style S2



VAR0411-F

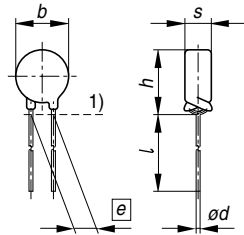
##### Crimp style S3



VAR0396-R

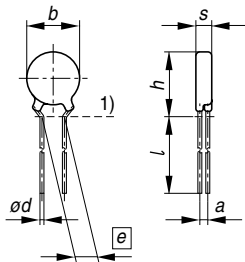
1) Seating plane according to IEC 60717

##### Crimp style S4



1) Seating plane according to IEC 60717  
VAR0404-W

##### Crimp style S5



1) Seating plane according to IEC 60717  
VAR0412-N

| Type                        | $e$<br>mm | $h_{max}$<br>mm |
|-----------------------------|-----------|-----------------|
| SIOV-                       |           |                 |
| S05K11 ... 175(E2)S2        | 5,0       | 10,0            |
| S05K210 ... 460(E2)S3       | 5,0       | 10,0            |
| S07K11 ... 175(E2)S2        | 5,0       | 12,0            |
| S07K210 ... 460(E2)S3       | 5,0       | 12,0            |
| S10K11 ... 300(E2)S5        | 7,5       | 15,5            |
| S10K320 ... 460(E2)(S3)(S5) | 7,5       | 16,5            |
| S10K510(E2)(S3)(S5)         | 7,5       | 17,5            |
| S10 ... AUTOS5              | 7,5       | 17,0            |
| S10 ... AUTOD1S5            | 7,5       | 16,0            |
| S10K11 ... 175(E2)S4R5      | 5,0       | 16,5            |
| S10K210 ... 460(E2)S3R5     | 5,0       | 16,5            |
| S14K11 ... 300(E2)S5        | 7,5       | 20,0            |
| S14K320 ... 460(E2)(S3)(S5) | 7,5       | 20,0            |
| S14K510(E2)(S3)(S5)         | 7,5       | 21,5            |
| S14 ... AUTOS5              | 7,5       | 21,0            |
| S14 ... AUTOD1S5            | 7,5       | 20,0            |
| S20K11 ... 320(E2)(E3)S5    | 10,0      | 27,0            |
| S20K385 ... 510(E2)S5       | 10,0      | 27,5            |

Missing dimensions are shown on page 169 ff.

2) "1" is omitted.



# Leaded Varistors

## Taping

| Type | Ordering code | Crimp style | Pieces/reel I |
|------|---------------|-------------|---------------|
|------|---------------|-------------|---------------|

### Type series SIOV-S05, straight leads $e = 5,0$

|               |                 |   |      |
|---------------|-----------------|---|------|
| SIOV-S05K11G  | B72205S0110K111 | — | 1500 |
| SIOV-S05K14G  | B72205S0140K111 | — | 1500 |
| SIOV-S05K17G  | B72205S0170K111 | — | 1500 |
| SIOV-S05K20G  | B72205S0200K111 | — | 1500 |
| SIOV-S05K25G  | B72205S0250K111 | — | 1500 |
| SIOV-S05K30G  | B72205S0300K111 | — | 1500 |
| SIOV-S05K35G  | B72205S0350K111 | — | 1500 |
| SIOV-S05K40G  | B72205S0400K111 | — | 1500 |
| SIOV-S05K50G  | B72205S0500K111 | — | 1500 |
| SIOV-S05K60G  | B72205S0600K111 | — | 1500 |
| SIOV-S05K75G  | B72205S0750K111 | — | 1500 |
| SIOV-S05K95G  | B72205S0950K111 | — | 1500 |
| SIOV-S05K115G | B72205S0111K111 | — | 1500 |
| SIOV-S05K130G | B72205S0131K111 | — | 1500 |
| SIOV-S05K140G | B72205S0141K111 | — | 1500 |
| SIOV-S05K150G | B72205S0151K111 | — | 1500 |
| SIOV-S05K175G | B72205S0171K111 | — | 1500 |
| SIOV-S05K230G | B72205S0231K111 | — | 1500 |
| SIOV-S05K250G | B72205S0251K111 | — | 1500 |
| SIOV-S05K275G | B72205S0271K111 | — | 1500 |
| SIOV-S05K300G | B72205S0301K111 | — | 1000 |

### Type series SIOV-S05, crimped leads $e = 5,0$

|                |                 |    |      |
|----------------|-----------------|----|------|
| SIOV-S05K11GS2 | B72205S0110K211 | S2 | 1500 |
| SIOV-S05K14GS2 | B72205S0140K211 | S2 | 1500 |
| SIOV-S05K17GS2 | B72205S0170K211 | S2 | 1500 |
| SIOV-S05K20GS2 | B72205S0200K211 | S2 | 1500 |
| SIOV-S05K25GS2 | B72205S0250K211 | S2 | 1500 |
| SIOV-S05K30GS2 | B72205S0300K211 | S2 | 1500 |
| SIOV-S05K35GS2 | B72205S0350K211 | S2 | 1500 |
| SIOV-S05K40GS2 | B72205S0400K211 | S2 | 1500 |
| SIOV-S05K50GS2 | B72205S0500K211 | S2 | 1500 |
| SIOV-S05K60GS2 | B72205S0600K211 | S2 | 1500 |
| SIOV-S05K75GS2 | B72205S0750K211 | S2 | 1500 |
| SIOV-S05K95GS2 | B72205S0950K211 | S2 | 1500 |



**Leaded Varistors****Taping**

| Type                                                             | Ordering code   | Crimp style | Pieces/reel I |
|------------------------------------------------------------------|-----------------|-------------|---------------|
| <b>Type series SIOV-S05, crimped leads [e] = 5,0 (continued)</b> |                 |             |               |
| SIOV-S05K115GS2                                                  | B72205S0111K211 | S2          | 1500          |
| SIOV-S05K130GS2                                                  | B72205S0131K211 | S2          | 1500          |
| SIOV-S05K140GS2                                                  | B72205S0141K211 | S2          | 1500          |
| SIOV-S05K150GS2                                                  | B72205S0151K211 | S2          | 1500          |
| SIOV-S05K175GS2                                                  | B72205S0171K211 | S2          | 1500          |
| SIOV-S05K230GS3                                                  | B72205S0231K311 | S3          | 1500          |
| SIOV-S05K250GS3                                                  | B72205S0251K311 | S3          | 1500          |
| SIOV-S05K275GS3                                                  | B72205S0271K311 | S3          | 1500          |
| SIOV-S05K300GS3                                                  | B72205S0301K311 | S3          | 1000          |
| SIOV-S05K385GS3                                                  | B72205S0381K311 | S3          | 1000          |
| SIOV-S05K420GS3                                                  | B72205S0421K311 | S3          | 1000          |
| SIOV-S05K440GS3                                                  | B72205S0441K311 | S3          | 1000          |
| SIOV-S05K460GS3                                                  | B72205S0461K311 | S3          | 1000          |
| <b>Type series SIOV-S07, straight leads [e] = 5,0</b>            |                 |             |               |
| SIOV-S07K11G                                                     | B72207S0110K111 | —           | 1500          |
| SIOV-S07K14G                                                     | B72207S0140K111 | —           | 1500          |
| SIOV-S07K17G                                                     | B72207S0170K111 | —           | 1500          |
| SIOV-S07K20G                                                     | B72207S0200K111 | —           | 1500          |
| SIOV-S07K25G                                                     | B72207S0250K111 | —           | 1500          |
| SIOV-S07K30G                                                     | B72207S0300K111 | —           | 1500          |
| SIOV-S07K35G                                                     | B72207S0350K111 | —           | 1500          |
| SIOV-S07K40G                                                     | B72207S0400K111 | —           | 1500          |
| SIOV-S07K50G                                                     | B72207S0500K111 | —           | 1500          |
| SIOV-S07K60G                                                     | B72207S0600K111 | —           | 1500          |
| SIOV-S07K75G                                                     | B72207S0750K111 | —           | 1500          |
| SIOV-S07K95G                                                     | B72207S0950K111 | —           | 1500          |
| SIOV-S07K115G                                                    | B72207S0111K111 | —           | 1500          |
| SIOV-S07K130G                                                    | B72207S0131K111 | —           | 1500          |
| SIOV-S07K140G                                                    | B72207S0141K111 | —           | 1500          |
| SIOV-S07K150G                                                    | B72207S0151K111 | —           | 1500          |
| SIOV-S07K175G                                                    | B72207S0171K111 | —           | 1500          |
| SIOV-S07K230G                                                    | B72207S0231K111 | —           | 1500          |
| SIOV-S07K250G                                                    | B72207S0251K111 | —           | 1500          |
| SIOV-S07K275G                                                    | B72207S0271K111 | —           | 1000          |
| SIOV-S07K300G                                                    | B72207S0301K111 | —           | 1000          |



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| Type                                                                      | Ordering code   | Crimp style | Pieces/reel I |
|---------------------------------------------------------------------------|-----------------|-------------|---------------|
| <b>Type series SIOV-S07, crimped leads <math>\varnothing = 5,0</math></b> |                 |             |               |
| SIOV-S07K11GS2                                                            | B72207S0110K211 | S2          | 1500          |
| SIOV-S07K14GS2                                                            | B72207S0140K211 | S2          | 1500          |
| SIOV-S07K17GS2                                                            | B72207S0170K211 | S2          | 1500          |
| SIOV-S07K20GS2                                                            | B72207S0200K211 | S2          | 1500          |
| SIOV-S07K25GS2                                                            | B72207S0250K211 | S2          | 1500          |
| SIOV-S07K30GS2                                                            | B72207S0300K211 | S2          | 1500          |
| SIOV-S07K35GS2                                                            | B72207S0350K211 | S2          | 1500          |
| SIOV-S07K40GS2                                                            | B72207S0400K211 | S2          | 1500          |
| SIOV-S07K50GS2                                                            | B72207S0500K211 | S2          | 1500          |
| SIOV-S07K60GS2                                                            | B72207S0600K211 | S2          | 1500          |
| SIOV-S07S60AGS2                                                           | B72207S0600S212 | S2          | 1500          |
| SIOVS007K75GS2                                                            | B72207S0750K211 | S2          | 1500          |
| SIOVS007K95GS2                                                            | B72207S0950K211 | S2          | 1500          |
| SIOVS007S95AGS2                                                           | B72207S0950S212 | S2          | 1500          |
| SIOV-S07K115GS2                                                           | B72207S0111K211 | S2          | 1500          |
| SIOV-S07K130GS2                                                           | B72207S0131K211 | S2          | 1500          |
| SIOV-S07K140GS2                                                           | B72207S0141K211 | S2          | 1500          |
| SIOV-S07K150GS2                                                           | B72207S0151K211 | S2          | 1500          |
| SIOV-S07K175GS2                                                           | B72207S0171K211 | S2          | 1500          |
| SIOV-S07K230GS3                                                           | B72207S0231K311 | S3          | 1000          |
| SIOV-S07K250GS3                                                           | B72207S0251K311 | S3          | 1000          |
| SIOV-S07K275GS3                                                           | B72207S0271K311 | S3          | 1000          |
| SIOV-S07K300GS3                                                           | B72207S0301K311 | S3          | 1000          |
| SIOV-S07K385GS3                                                           | B72207S0381K311 | S3          | 1000          |
| SIOV-S07K420GS3                                                           | B72207S0421K311 | S3          | 1000          |
| SIOV-S07K440GS3                                                           | B72207S0441K311 | S3          | 1000          |
| SIOV-S07K460GS3                                                           | B72207S0461K311 | S3          | 1000          |

**Leaded Varistors****Taping**

| Type                                                                       | Ordering code   | Crimp style | Pieces/reel III |
|----------------------------------------------------------------------------|-----------------|-------------|-----------------|
| <b>Type series SIOV-S10, straight leads <math>\varnothing = 7,5</math></b> |                 |             |                 |
| SIOV-S10K11G5                                                              | B72210S0110K151 | —           | 1500            |
| SIOV-S10K14G5                                                              | B72210S0140K151 | —           | 1500            |
| SIOV-S10K17G5                                                              | B72210S0170K151 | —           | 1500            |
| SIOV-S10K20G5                                                              | B72210S0200K151 | —           | 1500            |
| SIOV-S10K25G5                                                              | B72210S0250K151 | —           | 1500            |
| SIOV-S10K30G5                                                              | B72210S0300K151 | —           | 1500            |
| SIOV-S10K35G5                                                              | B72210S0350K151 | —           | 1500            |
| SIOV-S10K40G5                                                              | B72210S0400K151 | —           | 1500            |
| SIOV-S10K50G5                                                              | B72210S0500K151 | —           | 1500            |
| SIOV-S10K60G5                                                              | B72210S0600K151 | —           | 1500            |
| SIOV-S10K75G5                                                              | B72210S0750K151 | —           | 1500            |
| SIOV-S10K95G5                                                              | B72210S0950K151 | —           | 1500            |
| SIOV-S10K115G5                                                             | B72210S0111K151 | —           | 1500            |
| SIOV-S10K130G5                                                             | B72210S0131K151 | —           | 1500            |
| SIOV-S10K140G5                                                             | B72210S0141K151 | —           | 1500            |
| SIOV-S10K150G5                                                             | B72210S0151K151 | —           | 1500            |
| SIOV-S10K175G5                                                             | B72210S0171K151 | —           | 1500            |
| SIOV-S10K230G5                                                             | B72210S0231K151 | —           | 1000            |
| SIOV-S10K250G5                                                             | B72210S0251K151 | —           | 1000            |
| SIOV-S10K275G5                                                             | B72210S0271K151 | —           | 1000            |
| SIOV-S10K300G5                                                             | B72210S0301K151 | —           | 1000            |

| Type                                                                      | Ordering code   | Crimp style | Pieces/reel I |
|---------------------------------------------------------------------------|-----------------|-------------|---------------|
| <b>Type series SIOV-S10, crimped leads <math>\varnothing = 5,0</math></b> |                 |             |               |
| SIOV-S10K11GS4R5                                                          | B72210S0110K412 | S4          | 1500          |
| SIOV-S10K14GS4R5                                                          | B72210S0140K412 | S4          | 1500          |
| SIOV-S10K17GS4R5                                                          | B72210S0170K412 | S4          | 1500          |
| SIOV-S10K20GS4R5                                                          | B72210S0200K412 | S4          | 1500          |
| SIOV-S10K25GS4R5                                                          | B72210S0250K412 | S4          | 1500          |
| SIOV-S10K30GS4R5                                                          | B72210S0300K412 | S4          | 1500          |
| SIOV-S10K35GS4R5                                                          | B72210S0350K412 | S4          | 1500          |
| SIOV-S10K40GS4R5                                                          | B72210S0400K412 | S4          | 1500          |
| SIOV-S10K50GS4R5                                                          | B72210S0500K412 | S4          | 1500          |
| SIOV-S10K75GS4R5                                                          | B72210S0750K412 | S4          | 1500          |
| SIOV-S10K95GS4R5                                                          | B72210S0950K412 | S4          | 1500          |



## Leaded Varistors

### Taping

| Type                                                                                  | Ordering code   | Crimp style | Pieces/reel I |
|---------------------------------------------------------------------------------------|-----------------|-------------|---------------|
| <b>Type series SIOV-S10, crimped leads <math>\varnothing = 5,0</math> (continued)</b> |                 |             |               |
| SIOV-S10K115GS4R5                                                                     | B72210S0111K412 | S4          | 1500          |
| SIOV-S10K130GS4R5                                                                     | B72210S0131K412 | S4          | 1500          |
| SIOV-S10K140GS4R5                                                                     | B72210S0141K412 | S4          | 1500          |
| SIOV-S10K150GS4R5                                                                     | B72210S0151K412 | S4          | 1500          |
| SIOV-S10K175GS4R5                                                                     | B72210S0171K412 | S4          | 1500          |
| SIOV-S10K230GS3R5                                                                     | B72210S0231K312 | S3          | 1500          |
| SIOV-S10K250GS3R5                                                                     | B72210S0251K312 | S3          | 1500          |
| SIOV-S10K275GS3R5                                                                     | B72210S0271K312 | S3          | 1000          |
| SIOV-S10K300GS3R5                                                                     | B72210S0301K312 | S3          | 1000          |

| Type                                                                      | Ordering code   | Crimp style | Pieces/reel III |
|---------------------------------------------------------------------------|-----------------|-------------|-----------------|
| <b>Type series SIOV-S10, crimped leads <math>\varnothing = 7,5</math></b> |                 |             |                 |
| SIOV-S10K11G5S5                                                           | B72210S0110K551 | S5          | 1500            |
| SIOV-S10K14G5S5                                                           | B72210S0140K551 | S5          | 1500            |
| SIOV-S10K17G5S5                                                           | B72210S0170K551 | S5          | 1500            |
| SIOV-S10K20G5S5                                                           | B72210S0200K551 | S5          | 1500            |
| SIOV-S10K25G5S5                                                           | B72210S0250K551 | S5          | 1500            |
| SIOV-S10K30G5S5                                                           | B72210S0300K551 | S5          | 1500            |
| SIOV-S10K35G5S5                                                           | B72210S0350K551 | S5          | 1500            |
| SIOV-S10K40G5S5                                                           | B72210S0400K551 | S5          | 1500            |
| SIOV-S10K50G5S5                                                           | B72210S0500K551 | S5          | 1500            |
| SIOV-S10K60G5S5                                                           | B72210S0600K551 | S5          | 1500            |
| SIOV-S10K75G5S5                                                           | B72210S0750K551 | S5          | 1500            |
| SIOV-S10K95G5S5                                                           | B72210S0950K551 | S5          | 1500            |
| SIOV-S10K115G5S5                                                          | B72210S0111K551 | S5          | 1500            |
| SIOV-S10K130G5S5                                                          | B72210S0131K551 | S5          | 1500            |
| SIOV-S10K140G5S5                                                          | B72210S0141K551 | S5          | 1500            |
| SIOV-S10K150G5S5                                                          | B72210S0151K551 | S5          | 1500            |
| SIOV-S10K175G5S5                                                          | B72210S0171K551 | S5          | 1500            |
| SIOV-S10K230G5S5                                                          | B72210S0231K551 | S5          | 1000            |
| SIOV-S10K250G5S5                                                          | B72210S0251K551 | S5          | 1000            |
| SIOV-S10K275G5S5                                                          | B72210S0271K551 | S5          | 1000            |
| SIOV-S10K300G5S5                                                          | B72210S0301K551 | S5          | 1000            |

SIOV-S10K320 ... 460G.S. upon request

**Leaded Varistors****Taping**

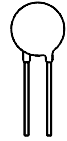
| Type | Ordering code | Crimp style | Pieces/reel III |
|------|---------------|-------------|-----------------|
|------|---------------|-------------|-----------------|

**Type series SIOV-S14, straight leads [e] = 7,5**

|                |                 |   |      |
|----------------|-----------------|---|------|
| SIOV-S14K11G5  | B72214S0110K151 | — | 1500 |
| SIOV-S14K14G5  | B72214S0140K151 | — | 1500 |
| SIOV-S14K17G5  | B72214S0170K151 | — | 1500 |
| SIOV-S14K20G5  | B72214S0200K151 | — | 1500 |
| SIOV-S14K25G5  | B72214S0250K151 | — | 1500 |
| SIOV-S14K30G5  | B72214S0300K151 | — | 1500 |
| SIOV-S14K35G5  | B72214S0350K151 | — | 1500 |
| SIOV-S14K40G5  | B72214S0400K151 | — | 1500 |
| SIOV-S14K50G5  | B72214S0500K151 | — | 1500 |
| SIOV-S14K60G5  | B72214S0600K151 | — | 1500 |
| SIOV-S14K75G5  | B72214S0750K151 | — | 1500 |
| SIOV-S14K95G5  | B72214S0950K151 | — | 1500 |
| SIOV-S14K115G5 | B72214S0111K151 | — | 1500 |
| SIOV-S14K130G5 | B72214S0131K151 | — | 1500 |
| SIOV-S14K140G5 | B72214S0141K151 | — | 1500 |
| SIOV-S14K150G5 | B72214S0151K151 | — | 1500 |
| SIOV-S14K175G5 | B72214S0171K151 | — | 1500 |
| SIOV-S14K230G5 | B72214S0231K151 | — | 1000 |
| SIOV-S14K250G5 | B72214S0251K151 | — | 1000 |
| SIOV-S14K275G5 | B72214S0271K151 | — | 1000 |
| SIOV-S14K300G5 | B72214S0301K151 | — | 1000 |

**Type series SIOV-S14, crimped leads [e] = 7,5**

|                 |                 |    |      |
|-----------------|-----------------|----|------|
| SIOV-S14K11G5S5 | B72214S0110K551 | S5 | 1500 |
| SIOV-S14K14G5S5 | B72214S0140K551 | S5 | 1500 |
| SIOV-S14K17G5S5 | B72214S0170K551 | S5 | 1500 |
| SIOV-S14K20G5S5 | B72214S0200K551 | S5 | 1500 |
| SIOV-S14K25G5S5 | B72214S0250K551 | S5 | 1500 |
| SIOV-S14K30G5S5 | B72214S0300K551 | S5 | 1500 |
| SIOV-S14K35G5S5 | B72214S0350K551 | S5 | 1500 |
| SIOV-S14K40G5S5 | B72214S0400K551 | S5 | 1500 |
| SIOV-S14K50G5S5 | B72214S0500K551 | S5 | 1500 |
| SIOV-S14K60G5S5 | B72214S0600K551 | S5 | 1500 |
| SIOV-S14K75G5S5 | B72214S0750K551 | S5 | 1500 |
| SIOV-S14K95G5S5 | B72214S0950K551 | S5 | 1500 |



## Leaded Varistors

### Taping / Lock-In Crimps

| Type                                                                     | Ordering code   | Crimp style | Pieces/reel III |
|--------------------------------------------------------------------------|-----------------|-------------|-----------------|
| <b>Type series SIOV-S14, crimped leads</b> $\boxed{e} = 7,5$ (continued) |                 |             |                 |
| SIOV-S14K115G5S5                                                         | B72214S0111K551 | S5          | 1500            |
| SIOV-S14K130G5S5                                                         | B72214S0131K551 | S5          | 1500            |
| SIOV-S14K140G5S5                                                         | B72214S0141K551 | S5          | 1500            |
| SIOV-S14K150G5S5                                                         | B72214S0151K551 | S5          | 1500            |
| SIOV-S14K175G5S5                                                         | B72214S0171K551 | S5          | 1500            |
| SIOV-S14K230G5S5                                                         | B72214S0231K551 | S5          | 1000            |
| SIOV-S14K250G5S5                                                         | B72214S0251K551 | S5          | 1000            |
| SIOV-S14K275G5S5                                                         | B72214S0271K551 | S5          | 1000            |
| SIOV-S14K300G5S5                                                         | B72214S0301K551 | S5          | 1000            |

SIOV-S14K320 ... 460G.(S.) upon request

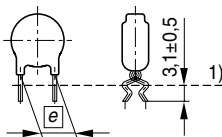
SIOV-S20K11 ... 320G.(S.) upon request

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| SIOV-S..K ... E2G.(S.) | } tapping according<br>to the versions<br>of the standard program<br>upon request |
| SIOV-S20K ... E3G.(S.) |                                                                                   |
| SIOV-Q14K ... G.(S.)   |                                                                                   |
| SIOV-Q20K ... G.(S.)   |                                                                                   |

### Lock-in crimps

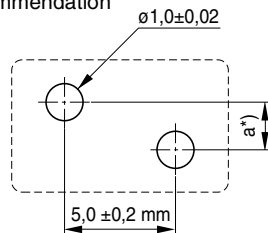
These crimp styles provide automatic lock-in function on the printed circuit board, for facilitated assembly.

Crimp style S9 (for lead spacing  $\boxed{e} = 5$ ):



1) Seating plane in according to IEC 60717  
VAR0413-V

### Layout recommendation

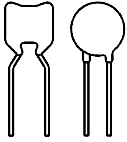


\*) Set-off "a" depending on voltage ratings

VAR0421-M

Recommended PCB thickness:  $1,5 + 0,2 \text{ mm}$

Example: SIOV-S07K275S9

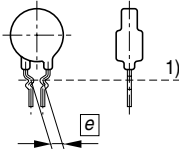


## Leaded Varistors

### Taping / Lock-In Crimps / Trimmed Leads

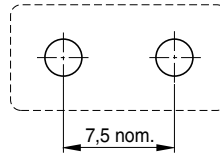
Crimp style S11 (for lead spacing  $e = 7,5$ ):

Layout recommendation



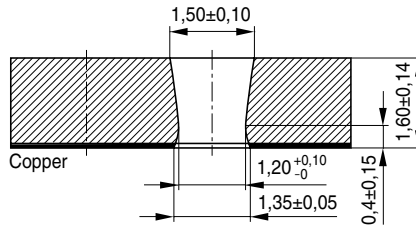
1) Seating plane according to IEC 60717

VAR0429-Y



VAR0414-D

Recommended PCB thickness:  $1,6 \pm 0,14$  mm



VAR0549-S

Recommended hole pattern

Example: SIOV-S14K275S11

### Trimmed leads

Varistors with cut leads available upon request.

Lead length tolerances:

|                  |              |
|------------------|--------------|
| Straight leads   | $\pm 1,0$ mm |
| Crimped leads    | $\pm 0,8$ mm |
| Min. lead length | 3,5 mm       |

Examples: SIOV-S07K275M4,5: straight leads, lead length  $4,5 \pm 1,0$  mm  
 SIOV-S14K275S5M4,5: crimpstyle 5, lead length  $4,5 \pm 0,8$  mm

**Herausgegeben von EPCOS AG****Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND****☎ ++49 89 636 09, FAX (0 89) 636-2 26 89**

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