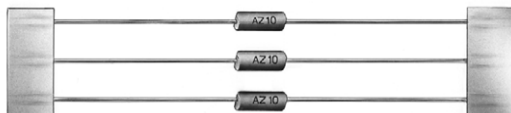


# Molded Inductors, Axial Leads, High Frequency and Noise Suppression Applications



The inductors have copper winding on magnetic core structure.

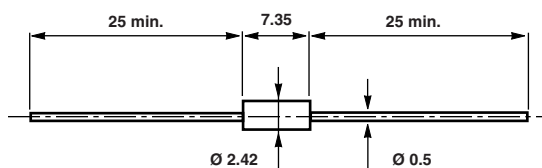
## FEATURES

- Accurate dimensions
- Superior moisture protection
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

## DIMENSIONS in millimeters (± 0.5)



## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | INDUCTANCE RANGE<br>µH | RATED POWER<br>$P_{70^\circ\text{C}}$<br>W | LIMITING ELEMENT VOLTAGE<br>$V_{\text{RMS}}$ | TOLERANCE <sup>(1)</sup><br>± % | Q RANGE  | I RANGE<br>mA |
|-------|------------------------|--------------------------------------------|----------------------------------------------|---------------------------------|----------|---------------|
| TR021 | 0.022 to 1500          | 0.180                                      | 500                                          | 10                              | 15 to 40 | 45 to 2530    |

### Note

<sup>(1)</sup> ± 10 % for 0.022 µH < L ≤ 1500 µH . On request: ± 5 % and ± 2 % for 1 µH < L ≤ 1000 µH

## MECHANICAL SPECIFICATIONS

|         |              |
|---------|--------------|
| Coating | Molded epoxy |
| Weight  | 0.5 g        |

## PACKAGING

Standard: in tape and reel of 1000 pieces, code R15 (R)  
On request: 250 pieces tape in box "ammopack", code A15 (B)

## ENVIRONMENTAL SPECIFICATIONS

|                             |                   |
|-----------------------------|-------------------|
| Operating temperature range | 0 °C to +70 °C    |
| Temperature limits          | -55 °C to +125 °C |

## MARKING

Standard:  
print marked-manufacturer, inductance value, tolerance

## ORDERING INFORMATION (part number)

|       |   |       |   |                                          |   |                                                  |   |                                                                    |   |                              |   |  |  |  |  |  |  |
|-------|---|-------|---|------------------------------------------|---|--------------------------------------------------|---|--------------------------------------------------------------------|---|------------------------------|---|--|--|--|--|--|--|
| T     | R | 0     | 2 | 1                                        | 6 | R                                                | 8 | K                                                                  | R | 1                            | 5 |  |  |  |  |  |  |
| MODEL |   | STYLE |   | VALUE                                    |   | TOLERANCE                                        |   | PACKAGING                                                          |   | SPECIAL                      |   |  |  |  |  |  |  |
| TR    |   | 021   |   | From 0.022 µH to 1500 µH<br>6R8 = 6.8 µH |   | K: ± 10 %<br>On request:<br>G: ± 2 %<br>J: ± 5 % |   | R15 = reel 1000 pieces<br>On request:<br>A15 = ammopack 250 pieces |   | Special code given by Vishay |   |  |  |  |  |  |  |

## PART NUMBER DESCRIPTION (for information only)

|       |       |       |           |           |         |                |
|-------|-------|-------|-----------|-----------|---------|----------------|
| TR    | 021   | 6µH8  | 10 %      | R         |         | e1             |
| MODEL | STYLE | VALUE | TOLERANCE | PACKAGING | SPECIAL | LEAD (Pb)-FREE |



| STANDARD VALUES                      |                |           |                          |                                |                    |                 |
|--------------------------------------|----------------|-----------|--------------------------|--------------------------------|--------------------|-----------------|
| INDUCTANCE<br>VALUE<br>$\mu\text{H}$ | TOLERANCE<br>% | Q<br>MIN. | TEST<br>FREQUENCY<br>MHz | RESISTANCE<br>MAX.<br>$\Omega$ | SRF<br>MIN.<br>MHz | I<br>MAX.<br>mA |
| 0.022                                | $\pm 10$       | 35        | 50                       | 0.028                          | 650                | 2530            |
| 0.027                                | $\pm 10$       | 35        | 50                       | 0.030                          | 650                | 2450            |
| 0.033                                | $\pm 10$       | 35        | 50                       | 0.035                          | 650                | 2270            |
| 0.039                                | $\pm 10$       | 35        | 50                       | 0.035                          | 650                | 2270            |
| 0.047                                | $\pm 10$       | 35        | 50                       | 0.04                           | 650                | 2120            |
| 0.056                                | $\pm 10$       | 35        | 50                       | 0.05                           | 650                | 1900            |
| 0.068                                | $\pm 10$       | 35        | 50                       | 0.06                           | 650                | 1730            |
| 0.082                                | $\pm 10$       | 35        | 50                       | 0.07                           | 650                | 1620            |
| 0.10                                 | $\pm 10$       | 30        | 25                       | 0.08                           | 650                | 1500            |
| 0.12                                 | $\pm 10$       | 30        | 25                       | 0.09                           | 620                | 1410            |
| 0.15                                 | $\pm 10$       | 30        | 25                       | 0.10                           | 600                | 1340            |
| 0.18                                 | $\pm 10$       | 30        | 25                       | 0.12                           | 550                | 1225            |
| 0.22                                 | $\pm 10$       | 30        | 25                       | 0.14                           | 510                | 1130            |
| 0.27                                 | $\pm 10$       | 30        | 25                       | 0.16                           | 430                | 1060            |
| 0.33                                 | $\pm 10$       | 30        | 25                       | 0.20                           | 410                | 945             |
| 0.39                                 | $\pm 10$       | 30        | 25                       | 0.30                           | 380                | 775             |
| 0.47                                 | $\pm 10$       | 30        | 25                       | 0.38                           | 340                | 690             |
| 0.56                                 | $\pm 10$       | 30        | 25                       | 0.50                           | 300                | 600             |
| 0.68                                 | $\pm 10$       | 30        | 25                       | 0.60                           | 275                | 550             |
| 0.82                                 | $\pm 10$       | 30        | 25                       | 0.75                           | 250                | 490             |
| 1                                    | $\pm 10$       | 30        | 25                       | 0.90                           | 230                | 445             |
| 1.2                                  | $\pm 10$       | 25        | 7.9                      | 0.18                           | 150                | 1000            |
| 1.5                                  | $\pm 10$       | 25        | 7.9                      | 0.22                           | 140                | 905             |
| 1.8                                  | $\pm 10$       | 25        | 7.9                      | 0.30                           | 125                | 775             |
| 2.2                                  | $\pm 10$       | 25        | 7.9                      | 0.40                           | 115                | 670             |
| 2.7                                  | $\pm 10$       | 30        | 7.9                      | 0.50                           | 100                | 600             |
| 3.3                                  | $\pm 10$       | 35        | 7.9                      | 0.80                           | 90                 | 475             |
| 3.9                                  | $\pm 10$       | 35        | 7.9                      | 1                              | 82                 | 425             |
| 4.7                                  | $\pm 10$       | 35        | 7.9                      | 1.2                            | 75                 | 385             |
| 5.6                                  | $\pm 10$       | 35        | 7.9                      | 1.8                            | 68                 | 330             |
| 6.8                                  | $\pm 10$       | 40        | 7.9                      | 1.8                            | 60                 | 330             |
| 8.2                                  | $\pm 10$       | 40        | 7.9                      | 2.55                           | 55                 | 265             |
| 10                                   | $\pm 10$       | 40        | 7.9                      | 2.9                            | 50                 | 245             |
| 12                                   | $\pm 10$       | 35        | 2.5                      | 1.9                            | 45                 | 305             |
| 15                                   | $\pm 10$       | 40        | 2.5                      | 2.8                            | 45                 | 250             |
| 18                                   | $\pm 10$       | 40        | 2.5                      | 3.1                            | 40                 | 240             |
| 22                                   | $\pm 10$       | 40        | 2.5                      | 3.3                            | 40                 | 230             |
| 27                                   | $\pm 10$       | 40        | 2.5                      | 3.9                            | 30                 | 215             |
| 33                                   | $\pm 10$       | 40        | 2.5                      | 4                              | 24                 | 210             |
| 39                                   | $\pm 10$       | 40        | 2.5                      | 4.4                            | 22                 | 200             |
| 47                                   | $\pm 10$       | 40        | 2.5                      | 5                              | 20                 | 190             |
| 56                                   | $\pm 10$       | 40        | 2.5                      | 5.3                            | 18                 | 180             |
| 68                                   | $\pm 10$       | 40        | 2.5                      | 6.1                            | 15                 | 170             |
| 82                                   | $\pm 10$       | 40        | 2.5                      | 6.9                            | 14                 | 160             |
| 100                                  | $\pm 10$       | 40        | 2.5                      | 7.7                            | 11.5               | 150             |
| 120                                  | $\pm 10$       | 35        | 0.79                     | 9.9                            | 9.5                | 135             |
| 150                                  | $\pm 10$       | 35        | 0.79                     | 11                             | 8.5                | 120             |
| 180                                  | $\pm 10$       | 25        | 0.79                     | 18                             | 8                  | 100             |
| 220                                  | $\pm 10$       | 25        | 0.79                     | 21                             | 7.2                | 90              |
| 270                                  | $\pm 10$       | 25        | 0.79                     | 25                             | 6.4                | 85              |
| 330                                  | $\pm 10$       | 25        | 0.79                     | 34                             | 5.6                | 70              |
| 390                                  | $\pm 10$       | 25        | 0.79                     | 42                             | 4.5                | 65              |
| 470                                  | $\pm 10$       | 25        | 0.79                     | 46                             | 4.2                | 60              |
| 560                                  | $\pm 10$       | 25        | 0.79                     | 52                             | 3.5                | 55              |
| 680                                  | $\pm 10$       | 25        | 0.79                     | 55                             | 3.3                | 55              |
| 820                                  | $\pm 10$       | 25        | 0.79                     | 62                             | 3                  | 50              |
| 1000                                 | $\pm 10$       | 25        | 0.79                     | 67                             | 2.5                | 50              |
| 1200                                 | $\pm 10$       | 15        | 0.25                     | 74                             | 1.6                | 45              |
| 1500                                 | $\pm 10$       | 15        | 0.25                     | 80                             | 1.2                | 45              |



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