

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



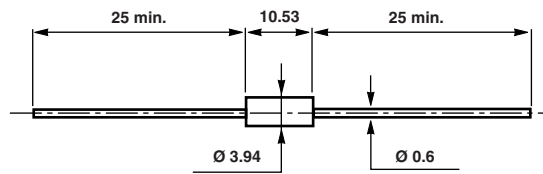
## FEATURES

- 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**

The inductors have copper winding on magnetic core structure.

## DIMENSIONS in millimeters ( $\pm 0.5$ )



## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | INDUCTANCE RANGE $\mu\text{H}$ | RATED POWER $P_{70^\circ\text{C}}$ W | LIMITING ELEMENT VOLTAGE $V_{\text{RMS}}$ | TOLERANCE <sup>(1)</sup> $\pm \%$ | Q RANGE  | I RANGE mA |
|-------|--------------------------------|--------------------------------------|---|-----------------------------------|----------|------------|
| TR022 | 0.1 to 1000                    | 0.180                                | 500                                       | 10                                | 35 to 60 | 94 to 2600 |

### Note

<sup>(1)</sup>  $\pm 10 \%$  for  $0.1 \mu\text{H} < L \leq 1000 \mu\text{H}$ . On request:  $\pm 5 \%$  and  $\pm 2 \%$  for  $1 \mu\text{H} < L \leq 1000 \mu\text{H}$

## MECHANICAL SPECIFICATIONS

|         |              |
|---------|--------------|
| Coating | Molded epoxy |
| Weight  | 0.78 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 | $0^\circ\text{C}$ to $+70^\circ\text{C}$    |
| Temperature limits          | $-55^\circ\text{C}$ to $+125^\circ\text{C}$ |

## MARKING

Standard:  
print marked-manufacturer, inductance value, tolerance

## ORDERING INFORMATION (part number)

|       |   |       |   |   |  |   |   |   |   |  |   |  |                              |  |  |  |  |
|-------|---|-------|---|---|--|---|---|---|---|--|---|--|------------------------------|--|--|--|--|
| T     | R | 0     | 2 | 2 | R  | 3 | 9 | K   | A | 1  | 5 |  |                              |  |  |  |  |
| MODEL |   | STYLE |   |   | VALUE  |   |   | TOLERANCE   |   | PACKAGING  |   |  | SPECIAL                      |  |  |  |  |
| TR    |   | 022   |   |   | From 0.1 $\mu\text{H}$ to 1000 $\mu\text{H}$<br>R39 = 0.39 $\mu\text{H}$ |   |   | K: $\pm 10 \%$<br>On request:<br>G: $\pm 2 \%$<br>J: $\pm 5 \%$ |   | R15 = reel 1000 pieces<br>On request:<br>A15 = ammopack 250 pieces |   |  | Special code given by Vishay |  |  |  |  |

## PART NUMBER DESCRIPTION (for information only)

|       |       |                 |           |           |         |                |
|-------|-------|-----------------|-----------|-----------|---------|----------------|
| TR    | 022   | $\mu\text{H}39$ | 10 %      | B         |         | e1             |
| MODEL | STYLE | VALUE           | TOLERANCE | PACKAGING | SPECIAL | LEAD (Pb)-FREE |



| STANDARD VALUES        |                |           |                       |                         |                    |                 |
|------------------------|----------------|-----------|-----------------------|-------------------------|--------------------|-----------------|
| INDUCTANCE VALUE<br>μH | TOLERANCE<br>% | Q<br>MIN. | TEST FREQUENCY<br>MHZ | RESISTANCE<br>MAX.<br>Ω | SRF<br>MIN.<br>MHZ | I<br>MAX.<br>mA |
| 0.10                   | ± 10           | 35        | 25                    | 0.027                   | 550                | 2600            |
| 0.12                   | ± 10           | 35        | 25                    | 0.029                   | 530                | 2490            |
| 0.15                   | ± 10           | 35        | 25                    | 0.030                   | 525                | 2450            |
| 0.18                   | ± 10           | 35        | 25                    | 0.042                   | 500                | 2070            |
| 0.22                   | ± 10           | 35        | 25                    | 0.050                   | 450                | 1900            |
| 0.27                   | ± 10           | 35        | 25                    | 0.075                   | 410                | 1550            |
| 0.33                   | ± 10           | 35        | 25                    | 0.090                   | 370                | 1400            |
| 0.39                   | ± 10           | 35        | 25                    | 0.10                    | 310                | 1330            |
| 0.47                   | ± 10           | 35        | 25                    | 0.12                    | 260                | 1225            |
| 0.56                   | ± 10           | 35        | 25                    | 0.14                    | 250                | 1130            |
| 0.68                   | ± 10           | 35        | 25                    | 0.15                    | 240                | 1100            |
| 0.82                   | ± 10           | 35        | 25                    | 0.22                    | 220                | 900             |
| 1                      | ± 10           | 35        | 25                    | 0.24                    | 200                | 860             |
| 1.2                    | ± 10           | 35        | 7.9                   | 0.20                    | 170                | 950             |
| 1.5                    | ± 10           | 35        | 7.9                   | 0.21                    | 150                | 925             |
| 1.8                    | ± 10           | 35        | 7.9                   | 0.23                    | 135                | 885             |
| 2.2                    | ± 10           | 35        | 7.9                   | 0.24                    | 125                | 865             |
| 2.7                    | ± 10           | 35        | 7.9                   | 0.21                    | 110                | 925             |
| 3.3                    | ± 10           | 35        | 7.9                   | 0.25                    | 105                | 850             |
| 3.9                    | ± 10           | 35        | 7.9                   | 0.27                    | 95                 | 815             |
| 4.7                    | ± 10           | 35        | 7.9                   | 0.29                    | 90                 | 790             |
| 5.6                    | ± 10           | 35        | 7.9                   | 0.32                    | 60                 | 750             |
| 6.8                    | ± 10           | 35        | 7.9                   | 0.47                    | 55                 | 630             |
| 8.2                    | ± 10           | 35        | 7.9                   | 0.57                    | 50                 | 560             |
| 10                     | ± 10           | 40        | 7.9                   | 0.90                    | 45                 | 445             |
| 12                     | ± 10           | 50        | 2.5                   | 1.10                    | 40                 | 400             |
| 15                     | ± 10           | 50        | 2.5                   | 1.30                    | 38                 | 370             |
| 18                     | ± 10           | 55        | 2.5                   | 2                       | 34                 | 300             |
| 22                     | ± 10           | 60        | 2.5                   | 2.2                     | 30                 | 275             |
| 27                     | ± 10           | 60        | 2.5                   | 2.6                     | 25                 | 260             |
| 33                     | ± 10           | 60        | 2.5                   | 2.65                    | 22                 | 255             |
| 39                     | ± 10           | 60        | 2.5                   | 2.70                    | 18                 | 250             |
| 47                     | ± 10           | 60        | 2.5                   | 2.90                    | 15                 | 245             |
| 56                     | ± 10           | 60        | 2.5                   | 3.10                    | 14                 | 240             |
| 68                     | ± 10           | 55        | 2.5                   | 3.40                    | 12                 | 230             |
| 82                     | ± 10           | 55        | 2.5                   | 3.90                    | 11                 | 215             |
| 100                    | ± 10           | 55        | 2.5                   | 4.50                    | 10                 | 200             |
| 120                    | ± 10           | 55        | 0.79                  | 5.20                    | 9                  | 185             |
| 150                    | ± 10           | 55        | 0.79                  | 5.80                    | 8                  | 175             |
| 180                    | ± 10           | 55        | 0.79                  | 6.50                    | 7                  | 165             |
| 220                    | ± 10           | 55        | 0.79                  | 7.20                    | 6                  | 158             |
| 240                    | ± 10           | 55        | 0.79                  | 7.40                    | 6                  | 155             |
| 270                    | ± 10           | 55        | 0.79                  | 8                       | 5.7                | 150             |
| 330                    | ± 10           | 55        | 0.79                  | 9                       | 5.5                | 140             |
| 390                    | ± 10           | 55        | 0.79                  | 10                      | 5.3                | 135             |
| 470                    | ± 10           | 55        | 0.79                  | 15                      | 5                  | 110             |
| 560                    | ± 10           | 55        | 0.79                  | 15.5                    | 4                  | 108             |
| 680                    | ± 10           | 55        | 0.79                  | 16.5                    | 3.8                | 104             |
| 820                    | ± 10           | 55        | 0.79                  | 18                      | 3.6                | 100             |
| 1000                   | ± 10           | 55        | 0.79                  | 20                      | 3.2                | 94              |



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