

# Spezifikation für Freigabe / specification for release

Kunde / customer: \_\_\_\_\_

Artikelnummer / part number: **744901015**

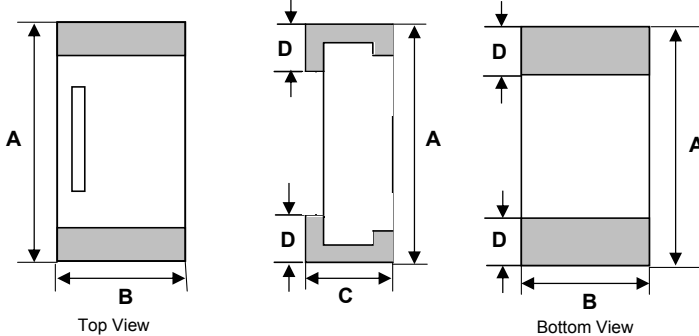
LF



Bezeichnung: **Dünnschicht-SMD-Induktivität WE-TCI**  
 description: **Thinfilm-Chip-Inductor WE-TCI**

DATUM / DATE : 2005-08-17

## A Mechanische Abmessungen / dimensions

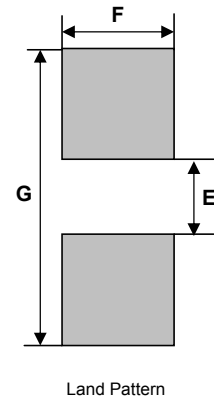


|   | Größe / size 0402  |    |
|---|--------------------|----|
| A | <b>1,0 ± 0,05</b>  | mm |
| B | <b>0,5 ± 0,05</b>  | mm |
| C | <b>0,32 ± 0,05</b> | mm |
| D | <b>0,2 ± 0,1</b>   | mm |
| E | <b>0,4</b>         | mm |
| F | <b>0,5 - 0,6</b>   | mm |
| G | <b>1,4 - 1,5</b>   | mm |

## B Elektrische Eigenschaften / electrical properties

| Eigenschaften / properties               | Testbedingungen / test conditions |                 | Wert / value | Einheit / unit | tol.           |
|--|-----------------------------------|-----------------|--------------|----------------|----------------|
| Induktivität / inductance                | <b>500 MHz</b>                    | L               | <b>1,5</b>   | nH             | <b>± 0.1nH</b> |
| Güte Q / Q factor                        | <b>500 MHz</b>                    | Q               | <b>13</b>    |                | <b>min.</b>    |
| Güte Q / Q factor                        | <b>500 MHz</b>                    | Q               | <b>14,37</b> |                | <b>typ.</b>    |
| DC-Widerstand / DC-resistance            |                                   | R <sub>DC</sub> | <b>0,20</b>  | Ω              | <b>max.</b>    |
| DC-Widerstand / DC-resistance            |                                   | R <sub>DC</sub> | <b>0,14</b>  | Ω              | <b>typ.</b>    |
| Nennstrom / rated current                | <b>ΔT = 30 K</b>                  | I <sub>DC</sub> | <b>700</b>   | mA             | <b>max.</b>    |
| Eigenres.-Frequenz / self-res.-frequency |                                   | SRF             | <b>10</b>    | GHz            | <b>min.</b>    |

## C Lötpad / soldering spec.:



## D Prüfgeräte / test equipment

**HP 4287A + 16196B** für/for L und/and Q/ RDC  
**HP 8753D** für/for SRF

## E Testbedingungen/ test conditions

Luftfeuchtigkeit / humidity: 33%  
 Umgebungstemperatur / temperature: +20°C

## F Werkstoffe & Zulassungen/ material & approvals

Basismaterial / base material: Al<sub>2</sub>O<sub>3</sub>  
 Terminal electrode: Sn  
 Conductor: Ag + Cu

## G Eigenschaften / general specifications:

Umgebungstemp. / ambient temperature: -40°C ...+ 85°C  
 Betriebstemp. / operating temperature: -40°C ...+ 125°C  
 Lagerbedingungen / storage conditions: -10°C ...+ 40°C  
 30 ... 70% RH

|                                     |                          |                         |              |
|-------------------------------------|--------------------------|-------------------------|--------------|
| Freigabe erteilt / general release: | <b>Kunde / customer</b>  |                         |              |
|                                     |                          |                         |              |
| Datum / date                        | Unterschrift / signature |                         |              |
|                                     | <b>Würth Elektronik</b>  |                         |              |
| Geprüft / checked                   | Kontrolliert / approved  |                         |              |
|                                     | AWe                      | Version 2               | 05-08-17     |
|                                     | AWe                      | Version 1               | 04-10-11     |
|                                     | Name                     | Änderung / modification | Datum / date |

## Würth Elektronik eiSos GmbH & Co.KG

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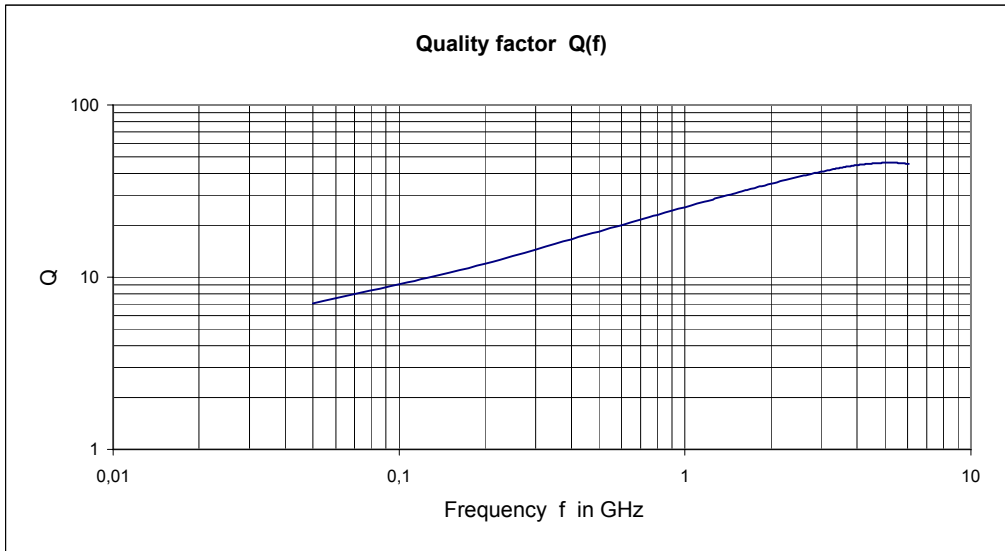
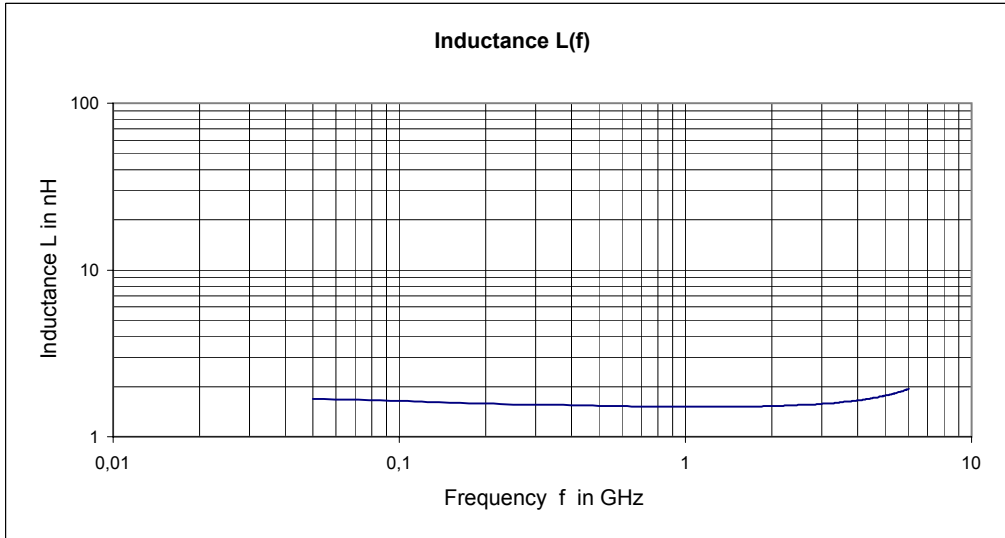
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## H Typical Frequency Characteristics



|                                     |                          |      |                         |              |
|-------------------------------------|--------------------------|------|-------------------------|--------------|
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This electronic component is designed and developed with the intention for use in general electronics equipments. Before incorporating the components into any equipments in the field such as aerospace, aviation, nuclear control, submarine, transportation, (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network where higher safety and reliability are especially required or if there is possibility of direct damage or injury to human body. In addition, even electronic component in general electric equipments, when used in electrical circuits that require high safety, reliability functions or performance, the sufficient reliability evaluation-check for the safety must be performed before use. It is essential to give consideration when to install a protective circuit at the design stage.

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