

Technical Data Sheet



THICK FILM MATERIALS

Product Type: Resistors

LTR4300 Series



250mohm/sq to 10kohm/sq Polymer Resistor System

Description

The LTR4300 series is a Pb and Cd free polymer resistor system designed for printing and curing on both polymer dielectric as well as a variety of substrates. The LTR4300 series provides stable resistance values when cured at low temperatures. The LTR4300 series is compatible with Heraeus low temperature dielectrics and conductors.

Key Benefits

- REACH¹ and RoHS² compliant
- Stable resistance values
- Compatible with a variety of substrates
- Compatible with Heraeus low temperature conductor and dielectric systems

Typical Fired Resistor Properties

| LTR4300 Series ¹ | LTR43.25 | LTR43.50 | LTR4311 | LTR4321 | LTR4331 | LTR4341 |
|---------------------------------|-----------|-----------|---------|----------|---------|----------|
| Resistivity ² (Ω/sq) | 250 mΩ/sq | 500 mΩ/sq | 10 Ω/sq | 100 Ω/sq | 1 kΩ/sq | 10 kΩ/sq |
| TCR ² (ppm/°C) | ± 3000 | ± 3000 | ± 3000 | ± 3000 | ± 3000 | ± 3000 |
| Viscosity ² (kcps) | 30 – 80 | 30 – 80 | 30 – 80 | 30 – 80 | 10 – 50 | 10 – 50 |

1. Processing Conditions; Termination: LTC3301 cured at peak temp of 150 °C for 30 minutes.
Resistor size 50 x 50 mil pattern printed with 280 mesh screen to cured film thickness of 23-27 μm on FR4
2. Shipping specifications

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Recommended Processing Guidelines

Printing

250 – 325 stainless steel mesh or nylon screen, 0.3 – 0.5 mil emulsion thickness

Terminal Conductor

LTC3301

Curing:

150 – 170 °C for 60 minutes

Thickness:

Cured film: 23 – 27 µm

Recommended Substrates:

FR4 or other PCB materials, Glass, 96 % Alumina, Polymer dielectric on metal

Thinner:

V-521

Cleaning:

Clean uncured resin with RV-540 followed by Acetone or similar solvent

Warranty:

Material guaranteed to meet specifications for 6 months from date of shipment.

Handling and Precautions:

Use in a well-ventilated area

Avoid contact with skin

Wash with soap and water

Storage:

Store in a dry location at 5 – 10 °C.

DO NOT REFRIGERATE.

Allow paste to come to room temperature prior to opening. Spatulate well before using, as settling may occur during storage.

Legend:

¹⁾ REACH compliant according to the latest * Annex XIV to Regulation (EC) of the European Parliament and of the council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (“REACH”) by European Chemicals Agency and its subsequent amendments; the material does not contain any substance listed in Annex XIV.

²⁾ RoHS compliant according to the latest * Directives (European Union) of Restriction of Hazardous Substances (“RoHS”) and its subsequent amendments (including the exceptions related to Pb)

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