

DuPont™ 00LXL Series

Resistor Composition 20mΩ/SQ. ~ 100mΩ/SQ. Resistors

Product Description

Designed to give high productivity and high quality, DuPont™ 00LXL low ohm resistor series has been specifically developed for Chip Resistor Applications. It meets the market needs for low cost of manufacturing.

Processing Features

- Excellent printability
- Insensitive to firing profile / chip size
- Linear blend behavior
- Compatible with DuPont™ 5426, 5421E, 5418 Ag/Pd terminations and 5463 Ag termination.

Product Benefits

- Balanced cost vs. TCR performance
- Tight distribution of resistances
- High productivity and manufacturing yields
- Phthalate free* and Lead free*

*Phthalate free and Lead free as used herein mean that phthalate and lead are not intentional ingredients in and are not intentionally added to the referenced product. Trace amounts however may be present.

Typical Performance Properties

Product Name	Resistivity Ω/sq ¹	HTCR ppm/°C ²	CTCR ppm/°C ²	Viscosity Pa.s ³
00L3L	20m (15m ~ 25m)	< +600	< +600	120 ~ 240
00L2L	40m (30m ~ 50m)	< +600	< +600	120 ~ 240
00L1L	100m (75m ~ 125m)	< +600	< +600	120 ~ 240

¹Unless otherwise noted, 00LXL resistors were printed on DuPont™ 5426 terminations at 18-22µm dried thickness, then fired in 30 minutes cycle with 850°C peak for 10 minutes. Resistor geometry is 500sq.

²Temperature Coefficient of Resistance from +25 to +125°C for Hot TCR and +25 to -55°C for Cold TCR.

³Brookfield HAT, UC&S, @10rpm

Recommended Processing Conditions

Substrates

Reported properties are based on tests with 96% alumina substrates. Substrates of other composition may yield variation in performance properties.

Termination

DuPont™ 00LXL resistors were designed for use with high silver-containing terminations like DuPont™ 5421E Ag/Pd conductor. Reported properties were obtained using DuPont™ 5426 Ag/Pd termination. Use of different terminations may cause a shift of resistance and TCR values.

Blending

Adjacent members among DuPont™ 00LXL series are totally blendable. As blend members of 00LXL series, 0001L(1Ω/sq.) is blendable with 00L1L.

Printing

The composition should be thoroughly mixed before use. This is best achieved by slow, gently, hand stirring with a clean burr-free spatula (flexible plastic or stainless steel) for 1-2 minutes. Care must be taken to avoid air entrapment. Printing should be performed in a clean and well ventilated area. Note: optimum printing characteristics are generally achieved in the room temperature range of 20°C - 23°C. It is therefore important that the material, in its container, is at this temperature prior to commencement of printing.

Thinner

DuPont™ 00LXL resistors have been optimized for screen printing and thinning is not normally required or recommended. DuPont™ 8250 thinner may be added sparingly to compensate for evaporative losses.

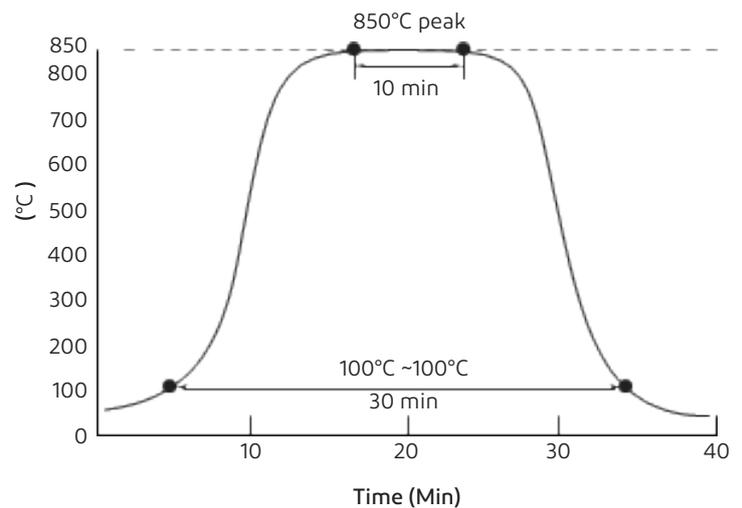
Drying

Parts should be allowed to level at room temperature for 5-10minutes and then dried for 10-15minutes at 150°C.

Firing

Properties are based on a 30 minutes firing cycle (100°C - 100°C) with 10 minutes at a peak temperature of 850 °C DuPont™ standard profile.

DuPont Standard QA Firing Profile (850°C 10 min)



Storage and Shelf Life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature. Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and Handling

For Safety and Handling information pertaining to this product, read the material Safety Data Sheet (SDS)



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For more information on DuPont™ 00LXL Series or other DuPont products, please visit our website.

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CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-5 and "DuPont Policy Regarding Medical Applications" H-50103-5..

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