



DUPONT™ 0FXXA SERIES

LEAD FREE RESISTOR COMPOSITION

PRODUCT DESCRIPTION

Designed to give an ideal balance of properties, DuPont™ 0FXXA series has been specifically developed for Chip Resistor Applications. It meets the market needs for smaller sized resistors and greener products.

PRODUCT BENEFITS

- Lead free* and Cadmium free*
- Excellent performance for smaller chip sizes with thinner printed thickness
- Good power handling stability
- Excellent ESD stability
- High speed laser trimmable
- Narrow TCR gap

*Lead and cadmium “free” as used herein means that these are not intentionally added to the referenced products. Trace amounts, however, may be present.

TYPICAL PERFORMANCE PROPERTIES

Product Name	Blending Group	Resistivity Ω/sq^1		HTCR $\text{ppm}/^\circ\text{C}^2$	CTCR $\text{ppm}/^\circ\text{C}^2$	Viscosity $\text{Pa}\cdot\text{s}^3$
0F01A	Lower-ohm	1	0.75 - 1.25	+/- 100	+/- 100	150 - 240
0F10A		10	7.5 - 12.5	+/- 100	+/- 100	150 - 240
0F20A		100	75 - 125	+/- 100	+/- 100	150 - 240
0F30A		1K	0.75K - 1.25K	+/- 100	+/- 100	150 - 240
0F40A		10K	11.3K - 18.8K	+/- 100	+/- 100	150 - 240
0F39A	Higher-ohm	1.4K	1.05K - 1.75K	+/- 100	+/- 100	150 - 240
0F49A		10K	6.6K - 11.0K	+/- 100	+/- 100	150 - 240
0F59A		100K	75K - 125K	+/- 100	+/- 100	150 - 240
0F69A		1M	0.75M - 1.25M	+/- 100	+/- 100	150 - 240
0F79A		10M	9.0M - 13.0M	+/- 100	+/- 100	150 - 240

¹Shipping specification: Resistors are printed with dried thickness 11-13 μm . Printed on DuPont™ 5421E termination (12-14 μm dried thickness). Fired in DuPont standard QA firing profile with 850 $^\circ\text{C}$ peak for 10 minutes. Resistor geometry is 0.5mm x 0.5mm except 0F01A (8sq.)

²Temperature Coefficient of Resistance from +25 to +125 $^\circ\text{C}$ for Hot TCR and -55 to +25 $^\circ\text{C}$ for Cold TCR.

³Brookfield HAT, SC4-14/6R, @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

0FXXA resistors were designed for use with high silver-containing terminations like DuPont™ 5421E Ag/Pd conductor. Reported properties were obtained using DuPont™ 5421E Ag/Pd termination. Use of different terminations may cause a shift of resistance and TCR values.

Blending

Adjacent members of each blending group are blendable. It is also blendable with DuPont™ 00LXX lead free lower ohm resistor members in good linearity.

Printing

Properties of 0FXXA series are based on resistors printed to 11-13 μm dried thickness. 250-325 mesh screen with 5-25 μm emulsion is recommended.



DUPONT™ OFXXA SERIES

Thinner

OFXXA 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 5-10 minutes and then dried for 10-15 minutes at 150°C.

Firing

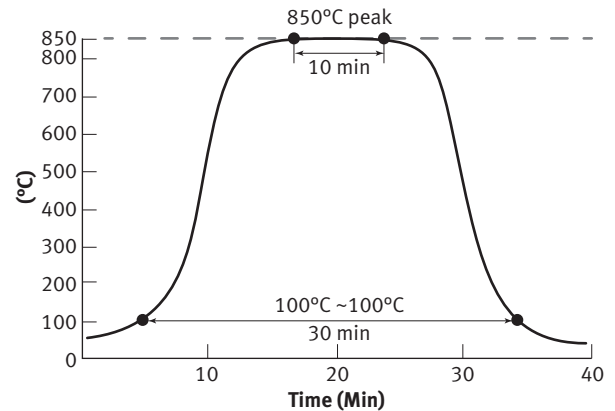
Properties are based on a 30-minute firing cycle (100°C - 100°C) with 10 minutes at a peak temperature of 850°C DuPont standard profile.

Storage and Shelf Life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature between 5°C - 30°C. 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 (MSDS).



FOR MORE INFORMATION ON DUPONT™ OFXXA OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

Americas

DuPont Microcircuit Materials
14 TW Alexander Drive
Research Triangle Park, NC 27709
USA
Tel +1 800 284 3382 (calls within USA)
Tel +1 919 248 5188 (calls outside USA)

Europe, Middle East & Africa

Du Pont (UK) Ltd
Coldharbour Lane
Bristol BS16 1QD
UK
Tel +44 117 931 3191

Asia

Du Pont Kubushiki Kaisha
MCM Technical Lab
DuPont Electronics Center
KSP R&D B213, 2-1,
Sakado 3-chome, Takatsu-ku,
Kawasaki-shi, Kanagawa, 213-0012
Japan
Tel +81 44 820 7575

DuPont Taiwan Ltd
45, Hsing-Pont Road
Taoyuan, 330
Taiwan
Tel +886 3 377 3616

DuPont China Holding Company Ltd
Bldg. 11, 399 Keyuan Road
Zhangjiang Hi-Tech Park
Pudong New District
Shanghai 201203
Tel +86 21 3862 2888

DuPont Korea Inc.
3-5th Floor, Asia tower #726
Yeoksam-dong, Gangnam-gu
Seoul 135-719, Korea
Tel +82 2 2222 5275

E.I. DuPont India Private Limited
7th Floor, Tower C, DLF Cyber Greens
Sector-25A, DLF City, Phase-III
Gurgaon 122 002 Haryana, India
Tel +91 124 409 1818

Du Pont Company (Singapore) Pte Ltd
21 Biopolis Road,
#06-21, Nucleos, South Tower,
Singapore 138567
Tel +65 6586 3022

mcm.dupont.com

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