

Technical Data Sheet

Ceramic Powders and Formulations for Passive Components Lowfire COG Type Dielectric Powders

Application

Ferro's COG type dielectric powders are designed for use in the manufacture of Class I MLCC and single layer capacitor components where COG TCC characteristics are required.

These products are compatible with precious metal conductors and fire in air at the ranges indicated below.

Compatible electrode and termination ink products are also available from Ferro.

Most of these products are formulated and processed to be RoHS compliant unless noted otherwise. See individual Product Data Sheets for details.

PME COG Type Lowfire Products (Sintering Temps: 1100 - 1150°C)

Product Code		COG630L	LF-085	COG900L	LF-451C
Dielectric Type		COG	COG	COG	N2200
Dielectric Constant at 1MHz	@ 1 MHz	63	85	90	500
RoHS Compliant?		No	Yes	No	Yes
PbO Content (%)	%	< 5	0	< 5	0
Quality Factor (1MHz)	@ 1 MHz	-	-	-	>2000
Dissipation Factor < 1000 pF (1 MHz)	% @ 1 MHz	<0.100	<0.10 (MHz)	<0.080	<0.050
Insulation Resistance (IR) at 25°C	GΩ	> 10,000	> 20,000	> 10,000	> 1000
Insulation Resistance (IR) at 125°C	GΩ	> 10,000	> 500	> 10,000	> 100
Breakdown Strength	V/μm	> 100	> 60	> 100	> 40
Particle Size D50	μm	1.3	0.7	1.6	0.7
Surface Area	m ² /g	3.0	2.4	2.3	3.1
Powder Density ¹	g/cc	6.0	5.2	6.0	5.4
Peak Firing Temperature	°C	1115	1100	1120	1150
Time at Peak Temperature	Hours	3	3	3	3
Electrode Composition	Ag/Pd	70/30	70/30	70/30	70/30
Ferro Electrode Ink Product		EL44-040	EI-7030-High-K-COG	EL44-040	EI-7030-X7R
Ferro Termination Ink Product ²		TM63-150	TM63-150	TM63-150	TM63-150

¹ Helium Pycnometer.

² Products shown are for platable applications. Other types are available.



EU RoHS Directive 2011/65/EU

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