

Technical Data Sheet

Ceramic Powders and Formulations for Passive Components Highfire 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 Highfire Products (Sintering Temps: 1250 - 1340°C)

Product Code		MW13H	COG200H	COG600H	600NH MR
Dielectric Type		P120	COG	COG	COG
Dielectric Constant at 1MHz	@ 1 MHz	13	20	60	70
RoHS Compliant?		Yes	Yes	Yes	Yes
PbO Content (%)	%	0	0	0	0
Quality Factor (1MHz)	@ 1 MHz	> 5000	> 100,000	> 10,000	25,000
Dissipation Factor < 1000 pF (1 MHz)	% @ 1 MHz	0.020	0.001	0.010	0.004
Insulation Resistance (IR) at 25°C	GΩ	> 20,000	> 20,000	> 10,000	> 5000 ΩF
Insulation Resistance (IR) at 125°C	GΩ	> 20,000	> 20,000	> 1000	> 500 ΩF
Breakdown Strength	V/μm	70	> 140	> 100	> 50
Particle Size D50	μm	2.1	1.1	1.5	1.8
Surface Area	m ² /g	3.5	4.9	2.8	1.5
Powder Density ¹	g/cc	3.5	3.8	6.0	5.7
Peak Firing Temperature	°C	1340	1300	1280	1300
Time at Peak Temperature	Hours	2	2	3	1.5
Electrode Composition	Ag/Pd	100 Pd	100 Pd	30/70	30/70
Ferro Electrode Ink Product		EL45-006	EL45-006	EL44-006	EL44-006
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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