TECHNICAL DATA SHEET

MRA Laboratories, Inc.
Materials, Research & Applications

MRA Product No. LF-182

Product Description

LF-182 is a Lead·Lanthanum·Zirconate·Titanate (PLZT) based dielectric formulated from high purity precursor materials. It is compatible with 70Ag/30Pd electrodes and features excellent voltage response.

Key Features

- 70Ag/30Pd electrode compatibility
- Excellent TC/VC characteristics3 hours.
- Excellent lot-to-lot uniformity

Typical Powder Properties

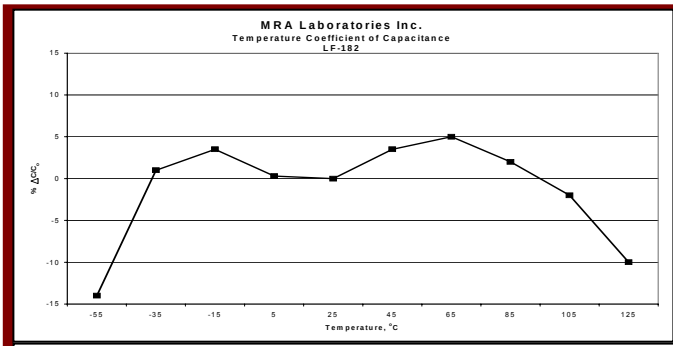
Tap Density 2.3 ± 0.3 gm/cc
Powder Density 7.4 gm/cc
Surface Area 2.5 ± 0.4 M^2/gm
Particle Size
D_{90} 1.40
D_{50} 0.57
D_{10} 0.34
LOI (650°C, 6 hours) <0.2

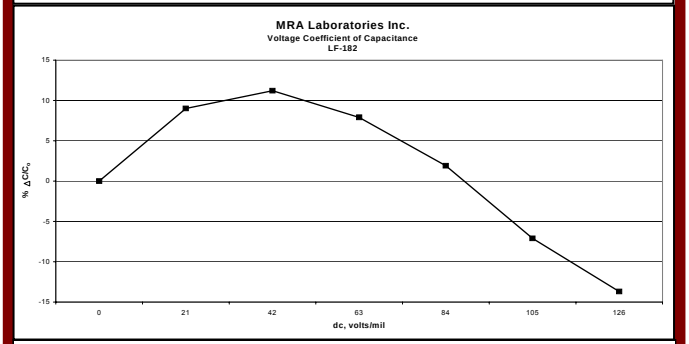
Sintering Conditions

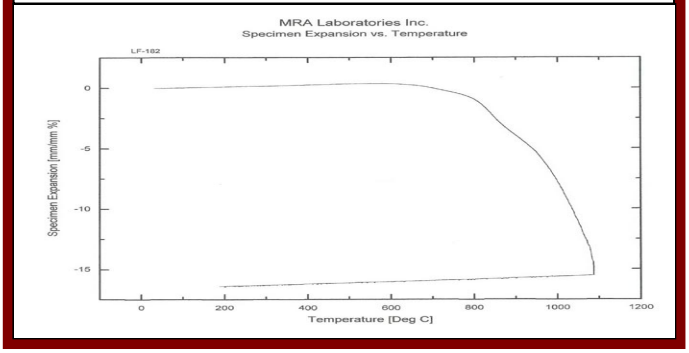
Binder burnout to 400°C
Bisque 750°C/1 hour
Sintering 1100°C ± 10°C/3 hours (closed crucible)

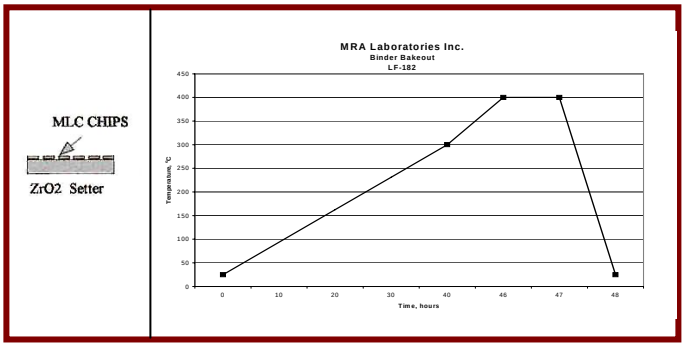
Typical MLCC Characteristics

Chip Size .1210 Active Layers 10 70Ag/30Pd
Dielectric Thickness ~25µ
K 1800 ±50
Dissipation Factor ≤0.4% @ 1KHz, 1Vrms
Insulation Resistance at 150V, 125°C >5 x $10^{10}\Omega$
Dielectric Withstanding Voltage ≥700V/mil
TCC meets X7R

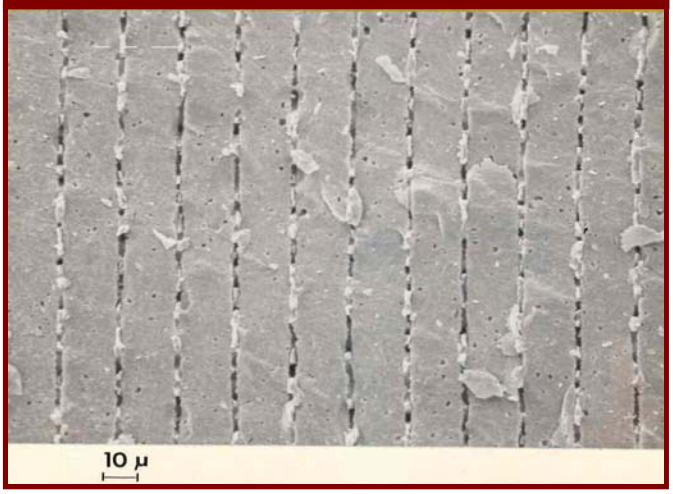


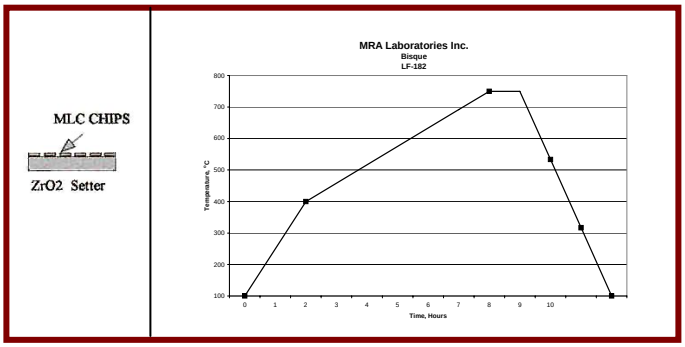




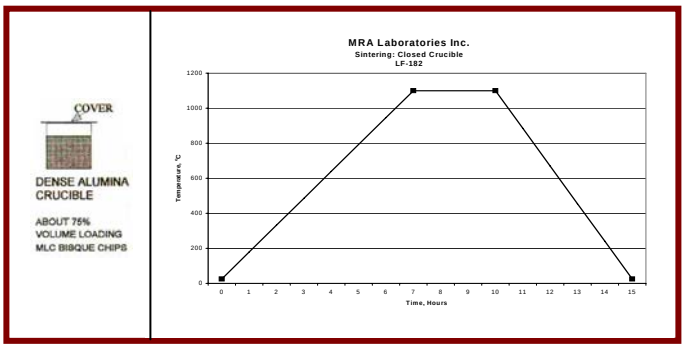


MLCC SEM Fracture Surface 500X





MLCC Surface SEM 5000X



The data presented is based on our research and is considered to be fair representation of this product. MRA makes no warranties, expressed or implied, as to its accuracy and assumes no liability out of its use by others.

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