

Temporary information

KEKO LTCC Tape SK47

KEKO LTCC Tape SK47 is a standard glass-ceramic LTCC tape usable for production of elements mainly for the working frequencies up to 10 GHz.

KEKO LTCC Tape SK47 is available in 3 standard thicknesses of 50 μm , 114 μm , 165 and 254 μm . Other thicknesses as well as glass-ceramic powder for custom tape casting are available by request.

Size:

6"×6", 8"×8", rolls and sheets with other widths available by request up to the width of 10".

The LTCC can be cofired with compatible conductive pastes and compatible passive element pastes.

Typical processing procedure for KEKO LTCC tape SK47

Screen printing:

Compatible with DuPont Green Tape 951 paste system.

Stacking: Compatible with KEKO stacking machines SW and SB series.

Lamination: 21MPa (3000 PSI) at 60°C, 10 minutes (pre-heating 5 min)

Firing:

- **Burnout:** 450 °C for 1hrs \leq 7°C/min, ramp to 450°C, air atmosphere

- **Sintering:** 900 °C peak for \geq 30 minutes, Ramp to peak temperature \leq 10°C/min, cooling rate \leq 10°C/min.

Setters: Alumina, porose alumina, fused quartz

Cutting:

Cutting single or multilayers with a hot knife or a Nd:YAG laser cutter in an unfired state. After firing use the diamond saw or a laser scribe (not recommended for finer cuts)

Post firing processing:

Print the compatible paste on the fired substrates and refire. Compatible with DuPont Green Tape 951 paste system.

Storage:

Store the tape roles or the green sheet boxes in an closed package at room temperature in clean environment. Avoid direct sunlight or other source of heat radiation. The shelf life of unopened package is 6 months.

Typical properties of fired KEKO LTCC tape SK47

Shrinkage:

X,Y $13 \pm 0.5 \%$

Z $17 \pm 0.5 \%$

Controllable with lamination pressure.

Fired density: 2.9 g/cm^3

Flexural strength (P3B): $>200 \text{ MPa}$

Thermal expansion coefficient (30-300 °C):
 $6.9 \cdot 10^{-6} \text{ K}^{-1}$

Thermal conductivity: $2.9 \text{ W/m}\cdot\text{K}$

Dielectric constant (10GHz): 7.1 ± 0.2

Dissipation factor (10GHz): $= 0,3 \%$

Surface roughness: $0.60 \mu\text{m} \pm 0,02 \mu\text{m}$

This data represents typical properties measured by on our own test specimens and it is not intended to be used as specification limits.