



- 1 Resistor paste on AlN.
2 Test structures and products.

THICK FILM PASTES FOR AlN

Motivation

Aluminium nitride (AlN) shows a high thermal conductivity in the range of 180...200 W/mK, good dielectric properties and a thermal expansion coefficient (TEC) closed to that of silicon. These properties make AlN a suitable substrate material for microwave applications and for power microelectronics.

Paste systems

Resistor pastes

Paste	Conducting phase	R [Ω/sq]	TCR [10 ⁻⁶ /K]
FK9821m	AgPd	0.1	± 100
FK9831m	AgPd	1	± 200
FK9611	RuO ₂	10	± 100
FK9615	RuO ₂	50	± 100
FK9621	RuO ₂	100	± 100
FK9631	RuO ₂	1000	± 100

Conductor pastes

Paste	Conducting phase	R [mΩ/sq]	Application
FK1205	AgPd	< 25	Termination for resistors
FK1071	AgPt	< 6	Low resistivity
FK1282	AgPt	< 35	High leach resistance

Glass pastes

Paste	Application
FK4027	Encapsulating, 650°C
FKM4889	Marking paste green
FKM4891	Marking paste white
FKM4893	Marking paste black
FKM4939	Marking paste dark red

Services offered

- Production and characterisation of thick film pastes for AlN
- Development and test of thick film pastes for AlN

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