

## ANCeram – Technical Data

### Thin Film Metallization: Ti - Pt – Au

substrate	ANCeram Aluminium Nitride	
surface	standard, $CLA \leq 0.6 \mu\text{m}$ polished, $CLA < 0.1 \mu\text{m}$	DIN 41850 resp. 4768
metallization film thickness	Titanium-Platinum-Gold Ti $0.3 \mu\text{m}$ Pt $0.2 \mu\text{m}$ Au $0.1 - 2.5 \mu\text{m}$ (customer spec.)	
insulation resistance	$>10^{11}\Omega$	MIL-STD-883, method 1003
sheet resistivity	$17 \pm 4 \text{ m}\Omega / \square$	DIN 41850
breakdown voltage	$>3.6 \text{ kV/mm}$	
recommended solder	SnPb36Ag2, PbIn50 AuSn20, AuSn5 AlSi1	
adhesion strength	$14 \pm 3 \text{ N/mm}^2$ , soldered with PbIn 50	DIN 41850
bondability	AuBe, $30 \mu\text{m}$ $\bar{x} > 7 \text{ cN}$ , $x_{\text{min}} > 5 \text{ cN}$ AlSi1, $25 \mu\text{m}$ $\bar{x} > 6 \text{ cN}$ , $x_{\text{min}} > 4 \text{ cN}$	MIL-STD-883 C, method 2001-4, test cond. D

Thermo-mechanical tests according to MIL-STD-883C resp. DIN 41848 show excellent results. ANCeram thin film Ti-Pd-Au meets the requirements of below mentioned test procedures.

heat resistance test (burn In)	$150^\circ\text{C}/1000 \text{ h}$	MIL-STD-102 F, method 108 A MIL-STD-883 C, method 1005
temperature cycling	$-65^\circ\text{C}/+150^\circ\text{C}$ ; 1000 cycles	MIL-STD-292 F, method 107 C MIL-STD-883 C, method 1010.5, test cond. C IEC 68 (2)
humidity test	$85^\circ\text{C} / 85\% \text{ rel. humidity}$ 1000 h, 60 V bias	IEC 68 (2) IEC 50B (CO) 264
pressure cooker test	$120^\circ\text{C} / 2 \text{ bar}$ , 500 h	

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