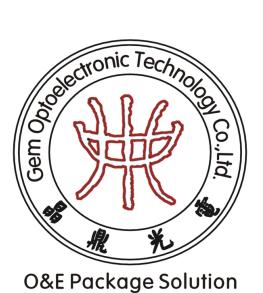
FN: 4.0x4.5x0.337mm Product Specification AFN: JDZJ-PS10



VER: 000

Product Specification

Spec#: 4.0x4.5x0.337mm (DPC)

AFN: JDZJ-PS10

VER: <u>000</u>

FN: 4.0x4.5x0.337mm Product Specification AFN: JDZJ-PS10 VER: 000

1. Product Description

1.1 Specifications: 4.0x4.5x0.337 ALN Product

1.2 Drawing No.: 128-08-G-0101A

2. Product Specifications

2.1 Substrate Specifications

2.1.1 Material: Aluminum Nitride

2.1.2 Appearance requirement: Ra 0.3~0.5µm

2.1.3 Submount TTV: ≤10µm

2.1.4 Coefficient of thermal conductivity: TC ≥170W/m·K, 200W/m·K, 230W/m·K

2.2 Finished Product Specification

Description(mm)	Thickness (mm)	Coverage area	
4.0±0.05×4.5±0.05	0.337±0.01	Top side for Chip mounting: Thick Cu/Ni/Au plating AuSn according to the drawing	
		Bottom side : Thick Cu/Ni/Au in whole area+ metallization	

2.3 Spectrum Specifications

2.3.1 Conductive wire area: Ti(0.1µm nom)+Cu(2µm nom)+Ni(2.5±0.5µm min)+Au(0.5µm min)

2.3.2 Thick film area: Ti(0.1µm nom)+Cu(75µm nom)+Ni(2.5±0.5µm)+Au(1.0µm min)

2.3.3 AuSn area: Pt(0.2µm min)+AuSn:Au73±3wt%(3.0±0.5µm)+Au Flush(0.1µm Typ)

3. Appearance Quality Criteria

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Inspection Document	Item	Inspection Criteria	Instruments
《Inspection Specification》 JDZJ-WI-QD-10	Scratch	Scratch into the substrate is not allowed; Scratch width≤10um allowed; Width 10~40um, total scratch length < twice the diagonal length of the product Scratch width ≥40µm not allowed	20X microscope Metallographic microscope
	Metallized gap	The bump in the insulated channel is not allowed to exceed 1/3 of the width of the channel. The bump in other areas is not allowed to exceed 100µm.	20X microscope
	Bump of metallization	Not allowed≥50µm	20X microscope
	Contamination	Can be removed	20X microscope
	Burr	< 10µm in edge area < 50µm in other areas.	20X microscope Metallographic microscope
	Chipping	Edge chipping< 50µm (ceramic)	20X microscope Metallographic microscope

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4. Reliability test

Item	Methods	Criteria	Sampling	Instruments
Reliability test of metallization	Gold wire bonding tension test: Φ38um gold wire baked at 275°C/2H.	When the tension > 20g, the bonding pad not allowed falling off. Gold wire broken is acceptable.	Per lot	tautness meter/ultrasonic gold wire ball bonding wire/high temperature heating platform
	Baking at 400°C for 5min	No hetero color, bubbling, falling off	Per lot	thrust meter
Reliability test of AuSn	Gold tin molten state : Heating the sliced product on high frequency heating platform	Gold tin surface infiltration, no aggregation, Reflow time: > 40s	Per lot	50X industrial camera/high temperature heating platform
	Gold-tin bonding strength: After welding the solder to the products till the gold tin out of it under on 295 °C heating in 12 seconds.	Thrust > 25N	Per lot	thrust meter/ high temperature heating platform

5. Package

- 5.1 The product packaging box uses anti-static materials to ensure the cleanliness of the packaging box and ensure that the materials will not be polluted and corroded.
- 5.2 The boxes are packed into clean bags, filled with desiccant and vacuum baled.

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5.3 The vacuum packaging bag is attached with a label, which contains: Lot No., product name, quantity, delivery date, and company name.

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5.4 The packing box needs to have flexible materials such as foam to ensure that the vacuum of the packing box does not fail and is not damp.

6. Shipping

- 6.1 The products should be packed in a sturdy box. The box should meet fragile goods transport requirements.
 - 6.2 Avoid direct exposure to the rain, snow and mechanical collision during transportation.
- 6.3 Inspection reports should be packed in the packing box and the report should meet the requirements according to the drawings.

7. Drawing (128-08-G-0101A)

