

Package Specification: 84ld LDCCF, .275 cav., .050 pitch

I. Material:

- A. Substrate: Ceramic, 90-96% alumina, Al₂O₃, opaque.
- B. Internal Metallization: All metallized paths must be tungsten or approved equivalent.
- C. Leads/Lead Frame:
 - 1. Preferred: Kovar, per MIL-M-38510, 3.5.6.2, Type A, MIL-I-23011, Class I, ASTM F-15.
 - 2. Option: Alloy 42, per MIL-M-38510, 3.5.6.2, Type B, MIL-I-23011, Class I, ASTM F-15.

II. Plating:

- A. Ni (nickel) underplate must meet the requirements of electrolytic (electrodeposited) Ni (nickel) per Mil-Std-1276. All Ni (nickel) underplate must be 50 microinches (1.27 micrometers) minimum, 350 microinches (8.89 micrometers) maximum.
- B. Au (gold) plate must meet the requirements of electrolytic (electrodeposited) Au (gold), per Mil-G-45204, Type III, Grade A.
 - 1. All exposed metal surfaces must be plated with Au (gold), 80 microinches (2.03 micrometers) minimum, 225 microinches (5.72 micrometers) maximum.
 - 2. Thickness will be measured at the center of the wire bond posts and the center of the Seal Ring
 - 3. Each shipment must include a certificate of analysis for Au (gold) purity of 99.7% minimum.
Special note: The plated Au (gold) must not contain Thallium.
 - 4. The plated surface must be free of any discoloration or obvious changes in texture.
- C. Plating must not delaminate, blister, peel, flake, or discolor when submitted to 500 degrees C, +/-10 degrees, for 3 minutes +/- 20 seconds in air.

III. Metallization:

- A. Seal Ring and Die Attach pad must be electrically isolated.
- B. Pin 1 location: With the package oriented cavity up, and the small chamfer at the lower left corner:
 - 1. External pin 1: center lead of left edge.
 - 2. Internal pin 1: center wire bond post of left edge, with chamfered corner.
- C. Pin number system: Pins are numbered from pin 1 counter-clockwise. Internal pad numbers match external pin numbers.

IV. Electrical:

- A. Lead resistance: 0.35 ohms maximum, all leads.
- B. Measured from center of wire bond post to the lead, within 0.100 inches of the tip of the lead.

(continued)

(continued: pkg. spec.: 84ld LDCCF, .275 cav., .050 pitch)

V. Mechanical:

- A. Packages must have no cracks, delaminations or foreign material visible at 20X.
- B. Assembled packages must pass the latest revision of the following tests per Mil-Std-883.
 - 1. Soderability: Method 2003 (except 3.2).
 - 2. Salt atmosphere: Method 1009, condition A minimum.
 - 3. External Visual: Method 2009, (if not specifically mentioned elsewhere).
 - 4. Lead Integrity: Method 2004, condition B2.
 - 5. Seal: Method 1014, condition A1, A2, A4, B or C.
 - a. Table II cavity volume:
 - (1) Maximum: 0.10096 cm^3 .
 - (2) Minimum: 0.09123 cm^3 .
- C. Flatness.
 - 1. Wire bond post: .001"
 - a. Area: along post, from tip, +.005" to .015"; across post, 66% of width.
 - 2. Die Attach: .002" per Sheet 4 of 4.
 - 3. Seal Ring: .003" per Sheet 4 of 4.
 - 4. Package base surface: .003" per Sheet 4 of 4.


CCF08407



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TITLE: PACKAGE DETAIL DRAWING, 84LD LDCCF, .275 CAV.

REV	ECN NUMBER	DATE	APPROVAL NAME/INITIALS	DESCRIPTION OF CHANGE (FOR PREVIOUS HISTORY SEE D.C.)
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