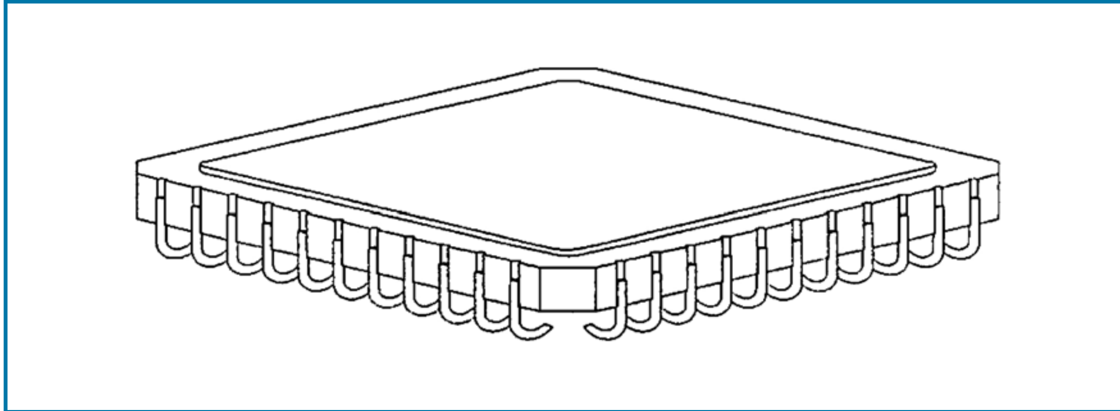
micross components

Lead Attachment Service



JEDEC MO-110

Round Lead “J” Form Chip Carriers
Mount Directly to PWB footprint
Meet Requirements of MIL-M-38510 and MIL-STD-883

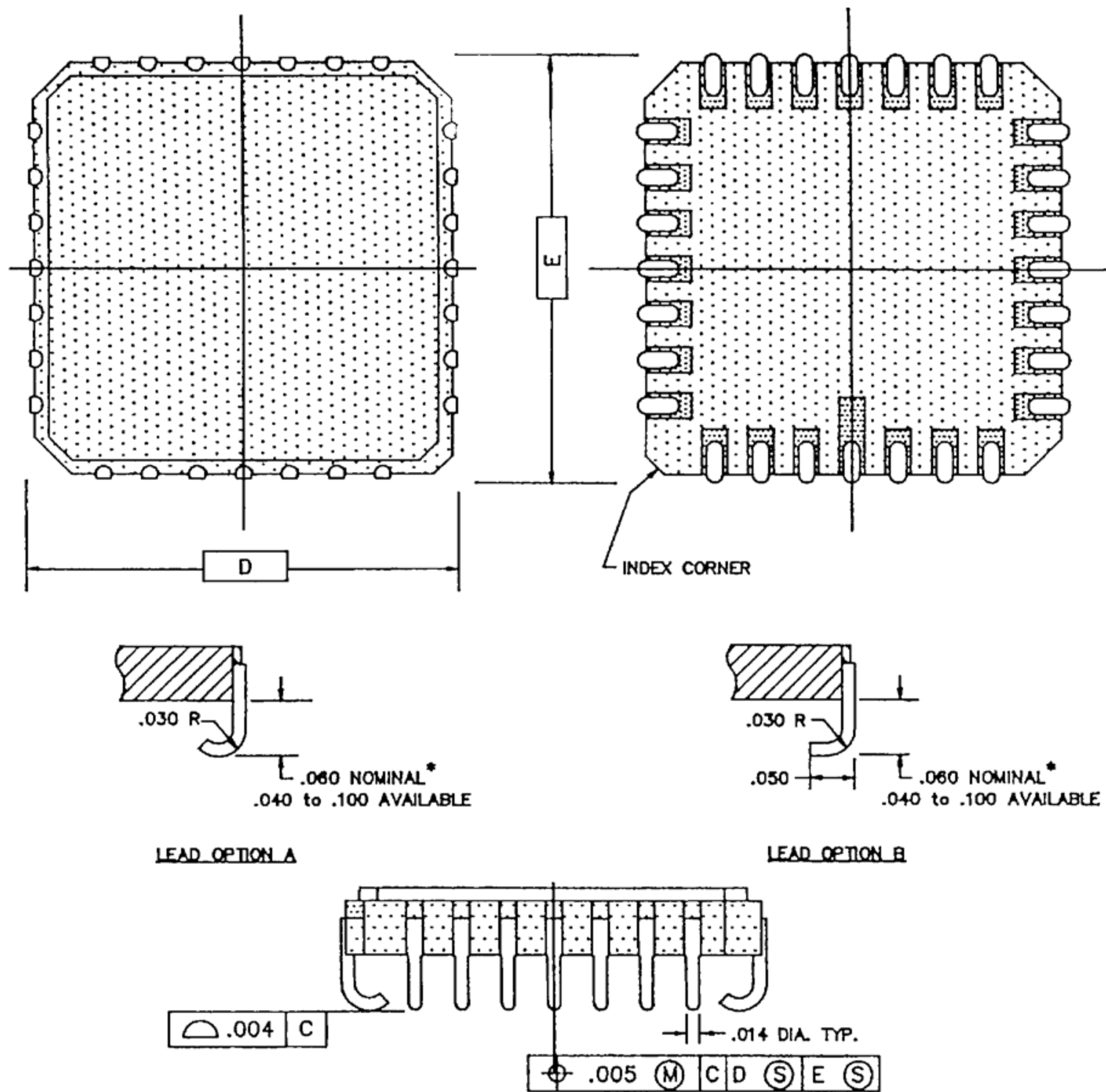
Round lead ceramic chip carriers were developed in response to the need for a family of low cost leaded chip carriers, capable of meeting the requirements of MIL-M-38510 and MIL-STD-883, while providing the compliance between the ceramic chip carrier and the PWB. The round lead was chosen for its ability to locate itself into the castellation of the leadless chip carrier and be attached by the thermocompression welding of gold plated finished LCC’s or tin-lead soldering of pretinned LCC’s. Since the attachment processes are achieved with heat and pressure in milliseconds, the leads can be attached after the complete assembly of the electronic device. Thus, the semiconductor manufacturer can utilize one process to provide LCC’s or leaded chip carriers. Previously, each type of package required a specific production line with distinct tooling and processes to provide “J,” Gullwing, and the various other lead forms. Now all chip carriers can be processed through end of line as LCC’s. The final lead form is selected and the leads attached, formed and hot solder dipped in the eutectic solder, just prior to shipment or board mounting. The advantages of the single processing are reflected in higher quality and lower costs. Users of chip carriers can significantly increase the reliability of the PWB assembly by adding leads to readily available LCC’s. Leadforms are available to meet every design and operational requirement.

GENERAL SPECIFICATIONS: All copper-post attached round lead chip carriers shall be capable of meeting requirements of MIL-STD-883 Group D (package related, all classes) Method 5005 subgroups:

1. Physical Dimensions
2. Lead Integrity
3. Thermal Shock
4. Mechanical Shock
5. Salt Atmosphere
6. Internal Water Vapor
7. Adhesion of Lead Finish

MATERIAL: Copper, CDA 102, ASTM B-170 Grade 2 Resistivity, max. 1532 Ωg/m2 @ 20°C. Thermal conductivity 226 Btu/Ft•Hr•°F

FINISH: Hot solder dip IAW MIL-M-38510 (63/37)



ROUND LEAD "J" FORM, .050" PITCH CERAMIC CHIP CARRIERS

SQUARE CHIP CARRIERS			
LEAD COUNT	JEDEC TYPE	LEAD COUNT	JEDEC TYPE
16	MO-110-AA	44	MO-110-AE
20	MO-110-AB	52	MO-110-AF
24	MO-110-AC	68	MO-110-AG
28	MO-110-AD	84	MO-110-AH

RECTANGULAR CHIP CARRIERS			
LEAD COUNT	JEDEC TYPE	LEAD COUNT	JEDEC TYPE
18	MO-110-BA	28	MO-110-BD
20	MO-110-BB	32	MO-110-BE
22	MO-110-BC		

REFER TO JEDEC OUTLINE MO-110 FOR COMPLETE DIMENSIONS

IN ADDITION TO THE .050" PITCH CHIP CARRIERS, A FULL LINE OF .040" PITCH CHIP CARRIERS ARE TOOLED.

Lead compliance varies with lead length. See "Round Lead Chip Carrier" technical bulletin for design considerations.

2294 North Penn Road, Hatfield, PA 19440
407.298.7100 • sales.americas@micross.com • www.micross.com