

Ordering Instructions and Mechanical Data

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TTL INTEGRATED CIRCUITS MECHANICAL DATA

ORDERING INSTRUCTIONS

Electrical characteristics presented in this data book, unless otherwise noted, apply for circuit type(s) listed in the page heading regardless of package. The availability of a circuit function in a particular package is denoted by an alphabetical reference above the pin-connection diagram(s). These alphabetical references refer to mechanical outline drawings shown in this section.

Factory orders for circuits described in this catalog should include a four-part type number as explained in the following example.

EXAMPLE: SN 54LS75 J -00

1. Prefix
MUST CONTAIN TWO OR THREE LETTERS
(From Individual Data Sheet)

RSN	Radiation-Hardened Circuit
SN	Standard Prefix
SNM	Mach IV, Level I
SNC	Mach IV, Level III
SNH	Mach IV, Level IV
SNJ	JAN Processed

2. Unique Circuit Description
MUST CONTAIN FOUR TO EIGHT CHARACTERS
(From Individual Data Sheet)

Examples: 5410
74H10
54S112
54L78
74LS295A
74188A

3. Package
MUST CONTAIN ONE OR TWO LETTERS
J, JD, N, T, W
(From Pin-Connection Diagram on Individual Data Sheet)

4. Instructions (Dash No.)
MUST CONTAIN TWO NUMBERS
(From Dash No. Column of Following Table)

PACKAGES	FORMED LEADS	SOLDER-DIPPED LEADS	INSULATOR	CARRIER	ORDER DASH NO.
METAL FLAT PACKAGES					
T	No	No	No	†	00
T	Yes	No	Yes	†	01
T	No	No	No	Mech-Pak	02
T	No	No	Yes	Mech-Pak	03
T	Yes	No	No	Mech-Pak	04
T	Yes	No	Yes	Mech-Pak	05
T	No	No	Yes	†	06
T	Yes	No	No	†	07
T	No	Yes	No	†	10
T	Yes	Yes	Yes	†	11
T	No	Yes	No	Mech-Pak	12
T	No	Yes	Yes	Mech-Pak	13
T	Yes	Yes	No	Mech-Pak	14
T	Yes	Yes	Yes	Mech-Pak	15
T	No	Yes	Yes	†	16
T	Yes	Yes	No	†	17
CERAMIC FLAT PACKAGES					
W	No	No	N/A	†	00
W	No	Yes	N/A	†	10
DUAL-IN-LINE PACKAGES					
J, JD, N	No	No	N/A	†	00
N	No	Yes	N/A	†	10

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† These circuits are shipped in one of the carriers shown below. Unless a specific method of shipment is specified by the customer (with possible additional posts), circuits will be shipped in the most practical carrier. Please contact your TI sales representative for the method that will best suit your particular needs.

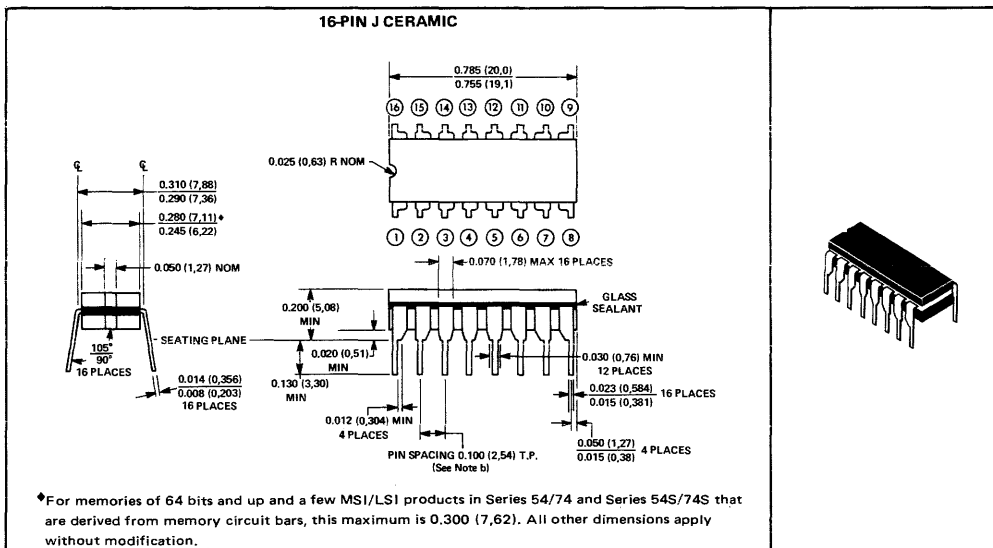
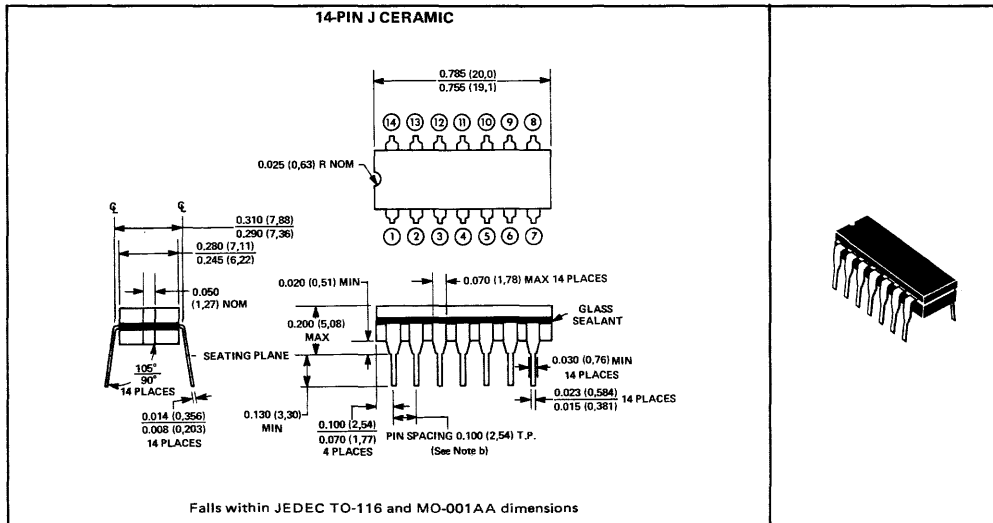
- | | |
|---|--|
| <p>Flat (T, W)</p> <ul style="list-style-type: none"> -Barnes Carrier -Milton Ross Carrier | <p>Dual-in-line (J, JD, N)</p> <ul style="list-style-type: none"> -Slide Magazines -A-Channel Plastic Tubing -Barnes Carrier (N only) -Sectioned Cardboard Box -Individual Plastic Box |
|---|--|

TTL INTEGRATED CIRCUITS MECHANICAL DATA

J ceramic dual-in-line package

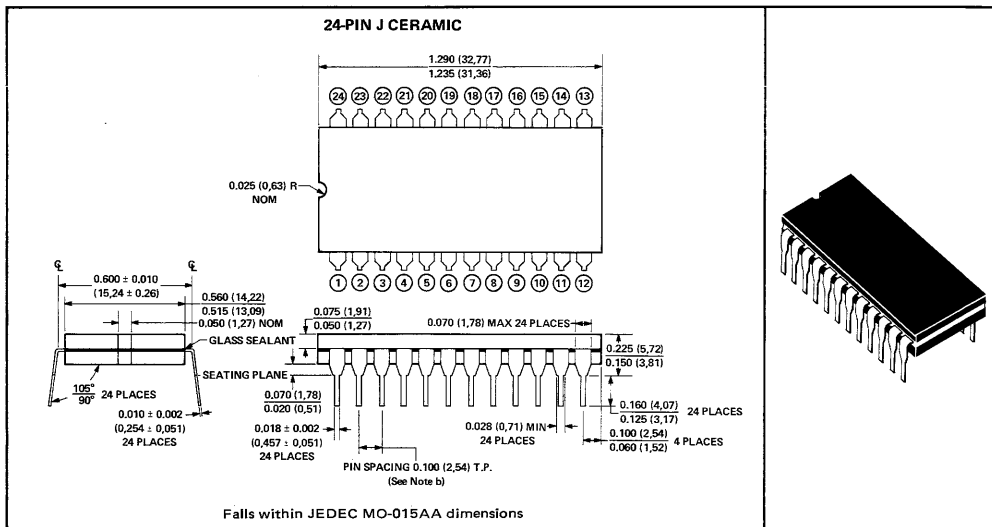
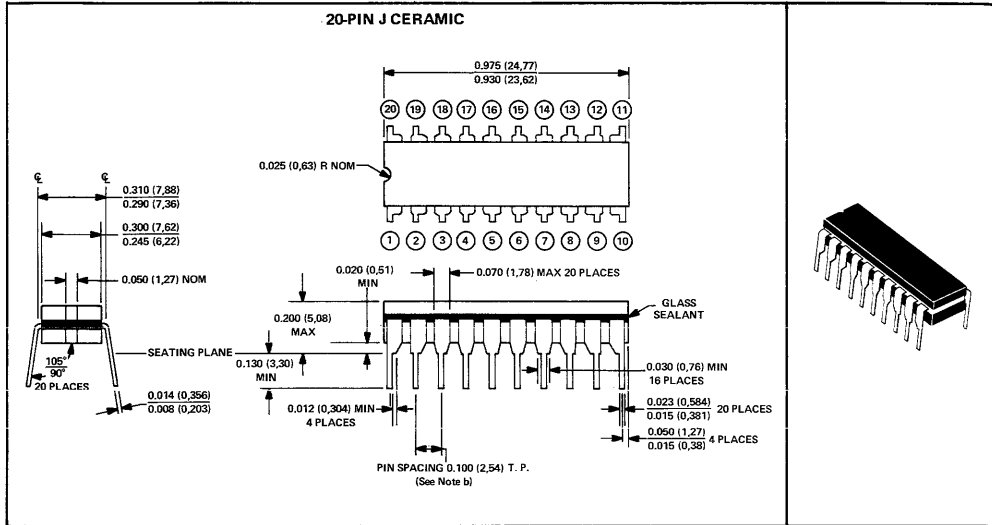
These hermetically sealed dual-in-line packages consist of a ceramic base, ceramic cap, and a 14-, 16-, 20-, or 24-lead frame. Hermetic sealing is accomplished with glass. The packages are intended for insertion in mounting-hole rows on 0.300 (7,62) or 0.600 (15,24) centers. Once the leads are compressed and inserted, sufficient tension is provided to secure the package in the board during soldering. Tin-plated ("bright-dipped") leads (-00) require no additional cleaning or processing when used in soldered assembly.

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TTL INTEGRATED CIRCUITS MECHANICAL DATA

J ceramic dual-in-line packages (continued)



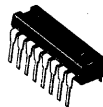
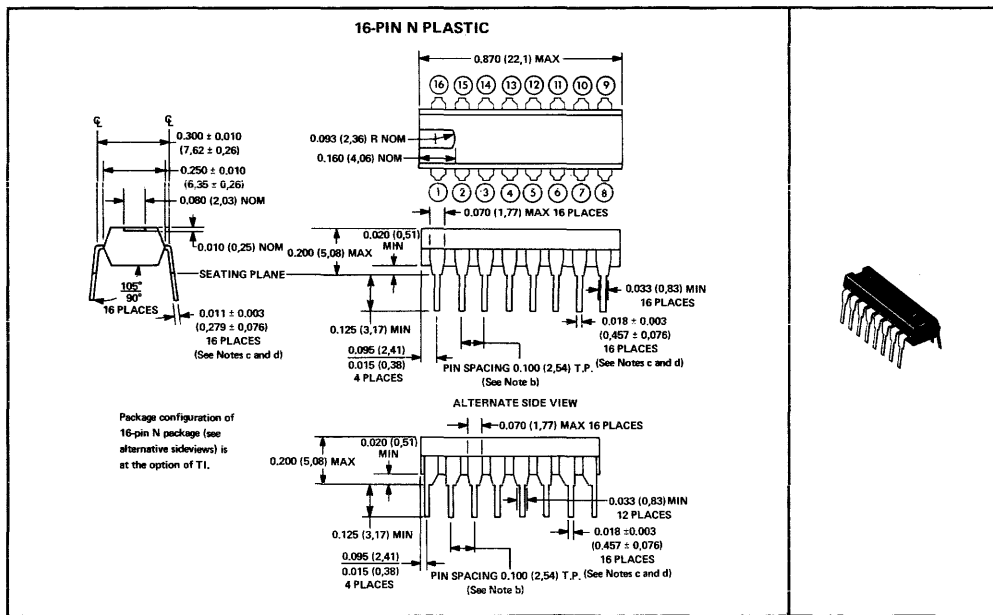
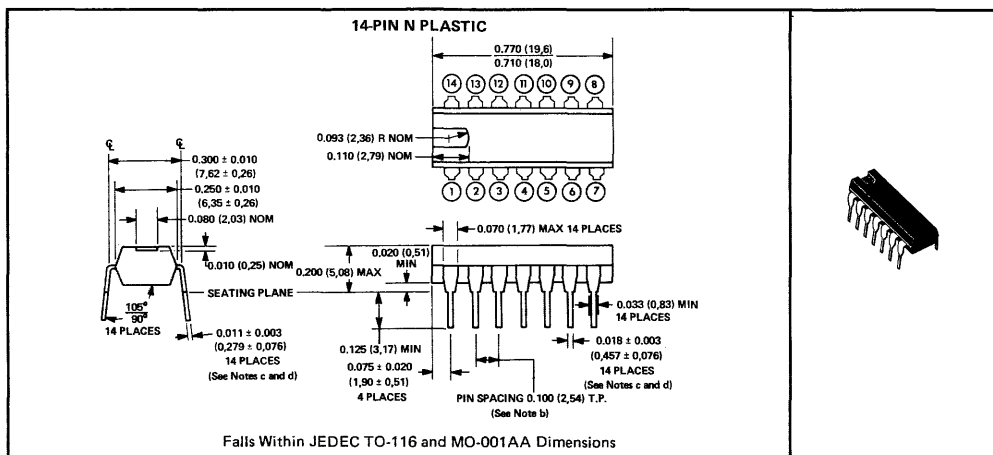
- NOTES: a. All dimensions are shown in inches (and parenthetically in millimeters for reference only). Inch dimensions govern.
 b. Each pin centerline is located within 0.010 (0,26) of its true longitudinal position.

TTL INTEGRATED CIRCUITS MECHANICAL DATA

N plastic dual-in-line packages

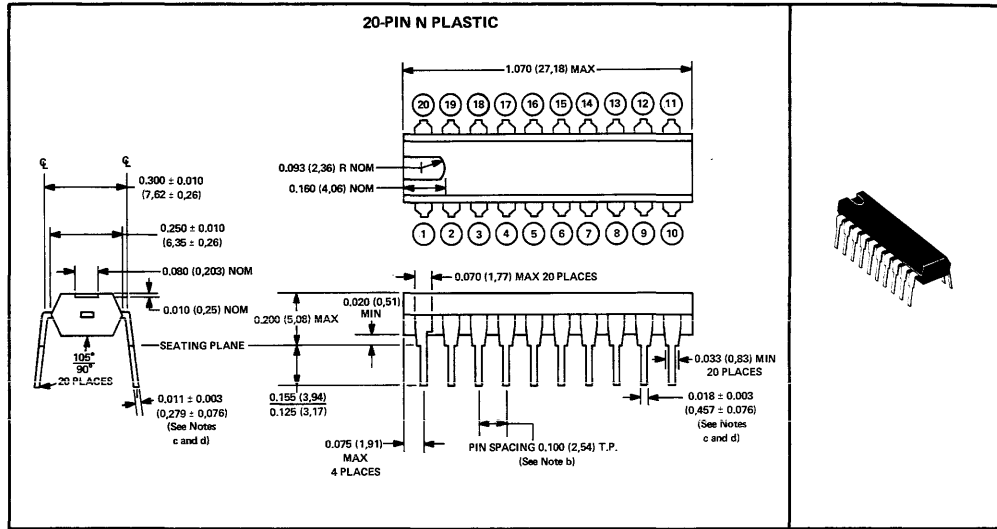
These dual-in-line packages consist of a circuit mounted on a 14-, 16-, 20-, or 28-lead frame and encapsulated within an electrically nonconductive plastic compound. The compound will withstand soldering temperature with no deformation and circuit performance characteristics remain stable when operated in high-humidity conditions. The packages are intended for insertion in mounting hole rows on 0.300 (7,62) or 0.600 (15,24) centers. Once the leads are compressed and inserted, sufficient tension is provided to secure the package in the board during soldering. Leads require no additional cleaning or processing when used in soldered assembly.

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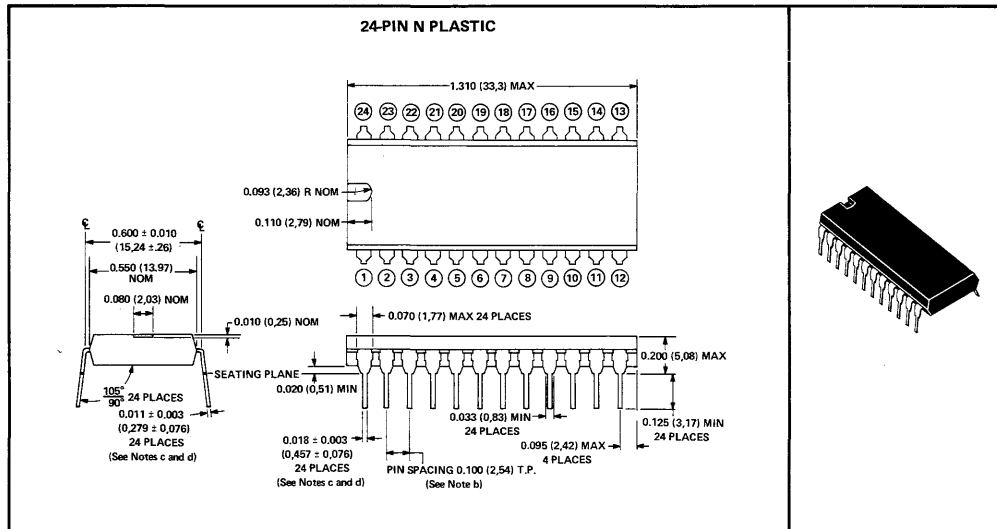


TTL INTEGRATED CIRCUITS MECHANICAL DATA

N plastic dual-in-line packages (continued)

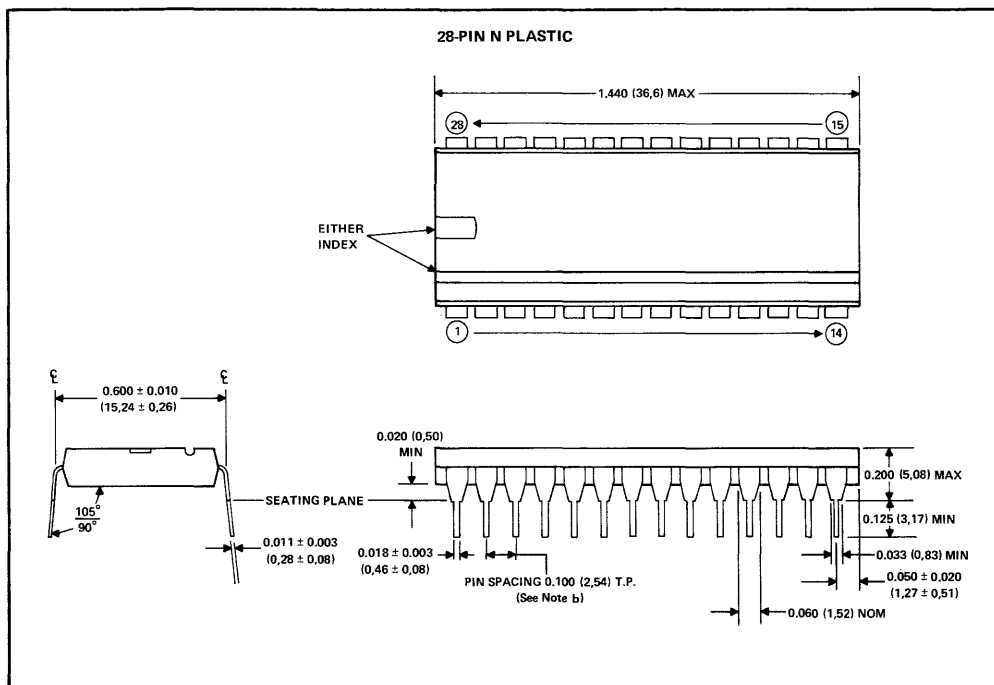


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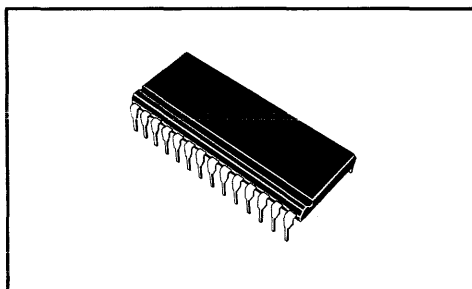
TTL INTEGRATED CIRCUITS MECHANICAL DATA

N plastic dual-in-line packages (continued)



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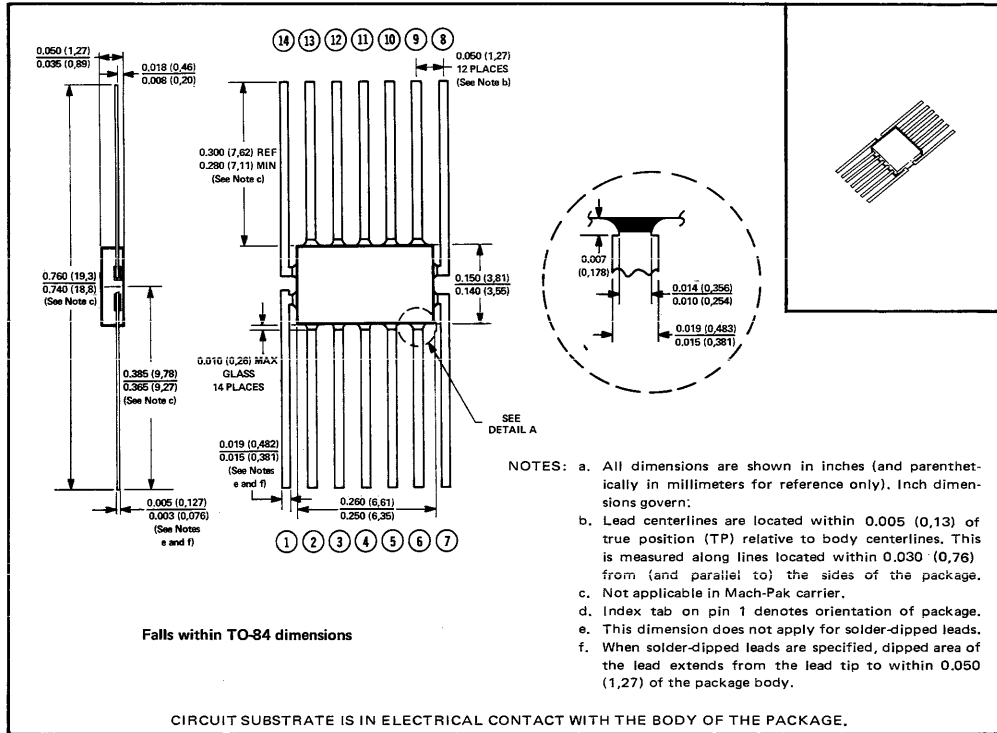
- NOTES: a. All dimensions are shown in inches (and parenthetically in millimeters for reference only). Inch dimensions govern.
- b. Each pin centerline is located within 0.010 (0,26) of its true longitudinal position.
- c. This dimension does not apply for solder-dipped leads.
- d. When solder-dipped leads are specified, dipped area of the lead extends from the lead tip to at least 0.020 (0,50) above the seating plane.



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T flat package

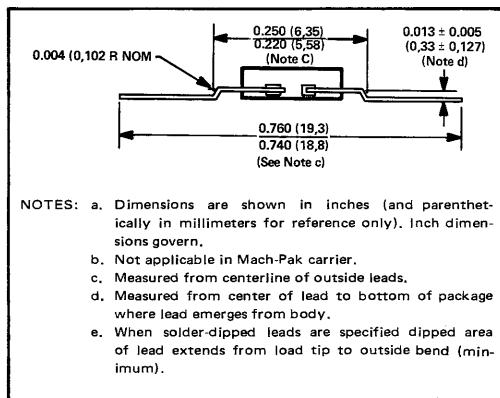
This hermetic package features glass-to-metal seals and welded construction. Package body and leads are gold-plated F-15 ≠ glass-sealing alloy. Approximate weight is 0.1 gram.



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T package leads

Gold-plated F-15[‡] leads require no additional cleaning or processing when used in soldered or welded assembly. Solder-dipped leads are also available. Formed leads are available to facilitate planar mounting of networks on flat circuit boards. Circuits can be removed from Mach-Pak carriers with lead lengths up to 0.300 (7,62).

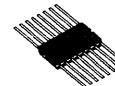
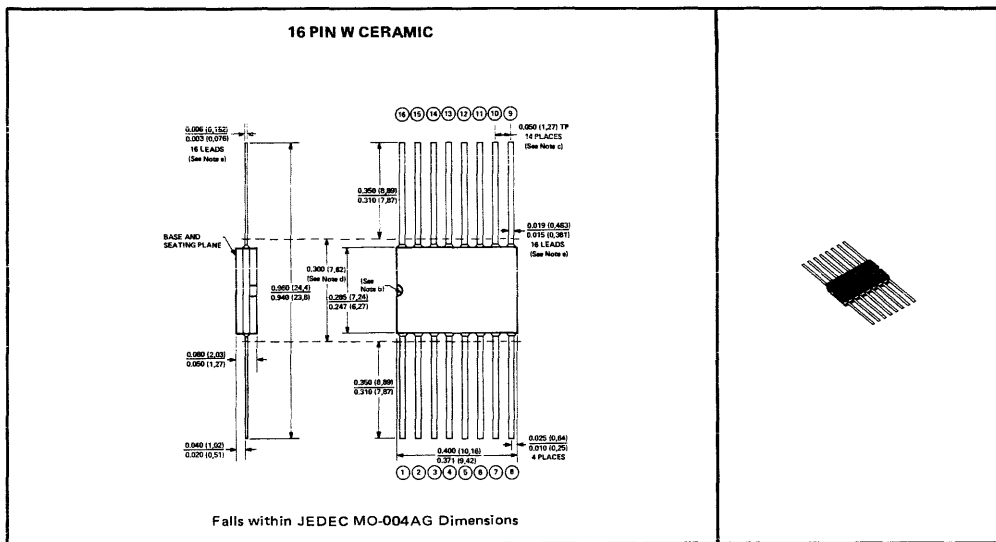
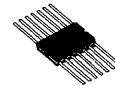
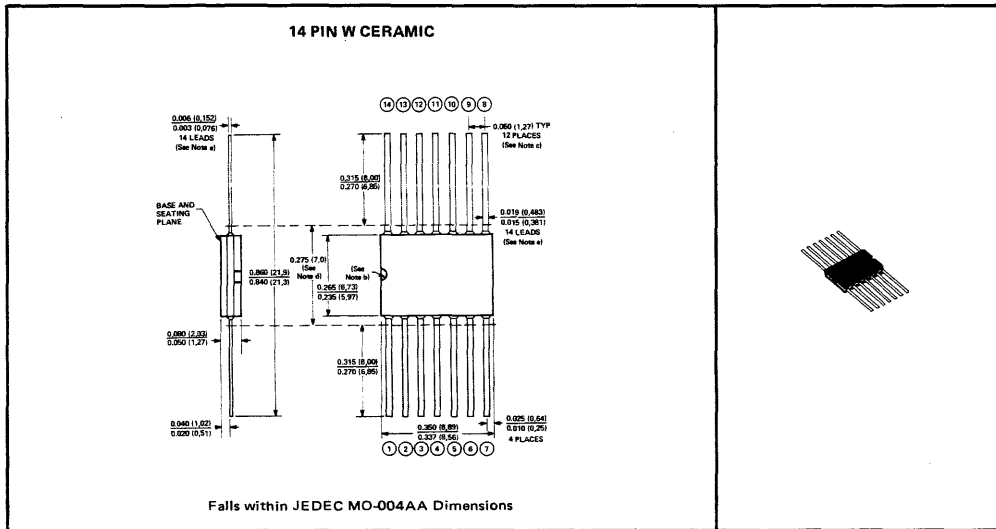


[‡]F-15 is the ASTM designation for an iron-nickel-cobalt alloy containing nominally 53% iron, 29% nickel, and 17% cobalt.

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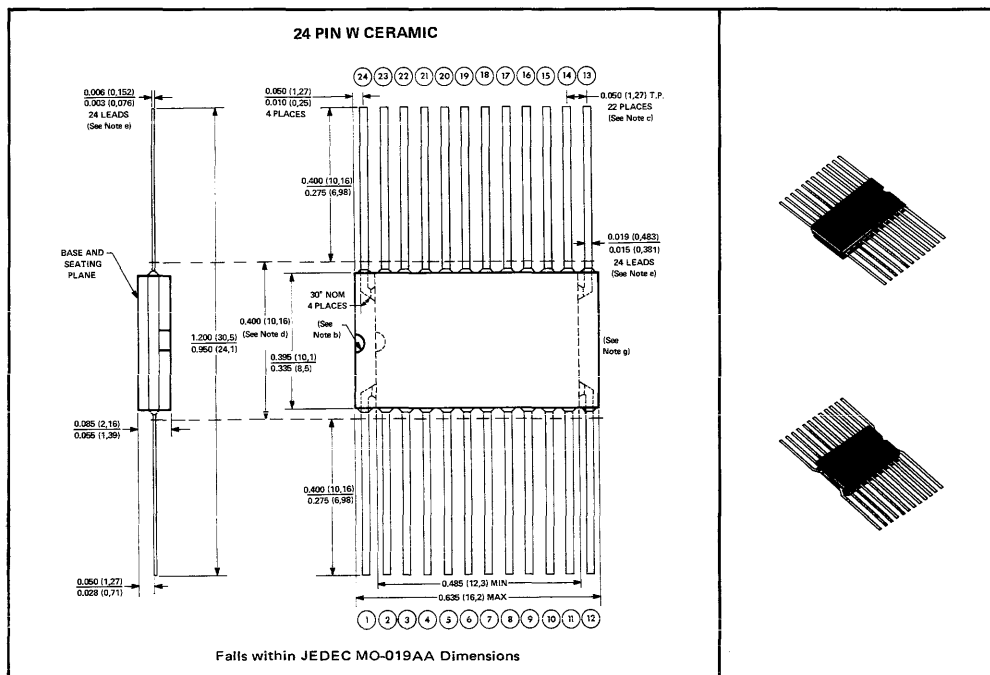
W ceramic flat package

These hermetically sealed flat packages consist of an electrically nonconductive ceramic base and cap, and a 14-, 16-, or 24-lead frame. Hermetic sealing is accomplished with glass. Tin-plated ("bright-dipped") leads (-00) require no additional cleaning or processing when used in soldered assembly.



TTL INTEGRATED CIRCUITS MECHANICAL DATA

W ceramic flat package (continued)



- NOTES:
- a. All dimensions are shown in inches (and parenthetically in millimeters for reference only). Inch dimensions govern.
 - b. Index point is provided on cap for terminal identification only.
 - c. Leads are within 0.005 (0,13) radius of true position (T.P.) at maximum material condition.
 - d. This dimension determines a zone within which all body and lead irregularities lie.
 - e. Not applicable for solder-dipped leads.
 - f. When solder-dipped leads are specified, dipped area extends from lead tip to within 0.050 (1,27) of package body.
 - g. End configuration of 24-pin package is at the option of TI.

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