MCS®-51 and MCS®-96 Packaging Information

November 1994

Order Number: 272118-001

†Since publication of documents referenced in this document, registration of the Pentium, OverDrive and iCOMP trademarks has been issued to Intel Corporation.

Contact your local Intel sales office or your distributor to obtain the latest specifications before placing your product order.

Copies of documents which have an ordering number and are referenced in this document, or other Intel literature, may be obtained from:

Intel Corporation
P.O. Box 7641
Mt. Prospect, IL 60056-7641

or call 1-800-879-4683

MCS-51 and MCS-96 Packaging Information

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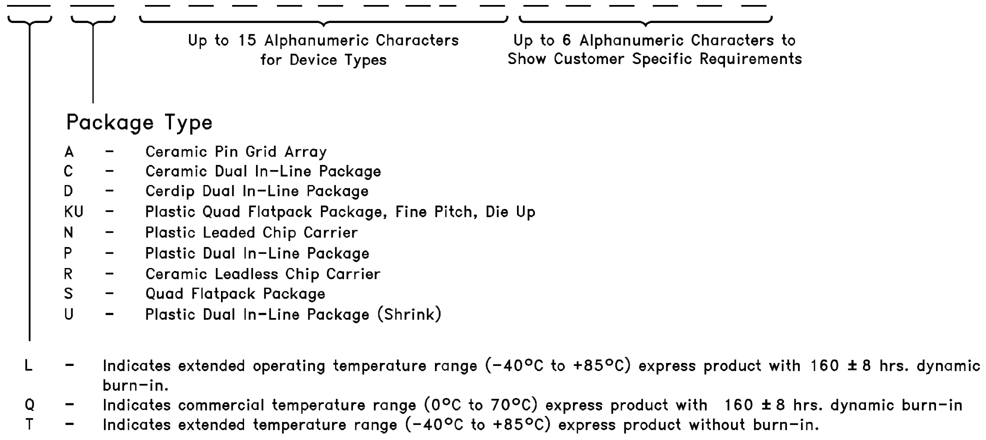
Intel Product Identification Codes



Up to 15 Alphanumeric Characters for Device Types

Up to 6 Alphanumeric Characters to Show Customer Specific Requirements

Package Type

A	Ceramic Pin Grid Array
C	Ceramic Dual In-Line Package
D	Cerdip Dual In-Line Package
KU	Plastic Quad Flatpack Package, Fine Pitch, Die Up
N	Plastic Leaded Chip Carrier
P	Plastic Dual In-Line Package
R	Ceramic Leadless Chip Carrier
S	Quad Flatpack Package
U	Plastic Dual In-Line Package (Shrink)

L – Indicates extended operating temperature range (−40°C to +85°C) express product with 160 ± 8 hrs. dynamic burn-in.
Q – Indicates commercial temperature range (0°C to 70°C) express product with 160 ± 8 hrs. dynamic burn-in
T – Indicates extended temperature range (−40°C to +85°C) express product without burn-in.

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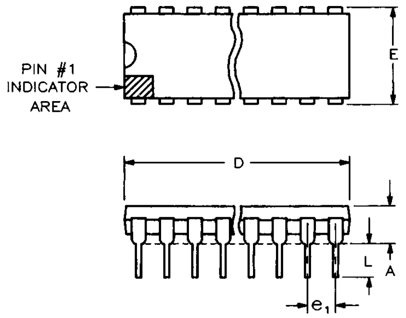
EXAMPLES:

N80C196KR	PLCC, 16 MHz, Commercial Temperature Range
LN87C54	PLCC, 12 MHz, Extended Temperature Range (Express)

40-LEAD PLASTIC DUAL IN-LINE PACKAGE (TYPE N)

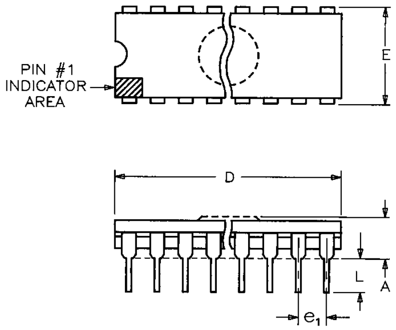


272118–1

Family: Plastic Dual In-Line Package		
Symbol	**Millimeters Approx***	**Inches Approx***
A	5	0.2
D	53	2.1
E	16	0.6
e_1	2.5	0.10
L	3	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

40-LEAD CERDIP DUAL IN-LINE PACKAGE (TYPE D)

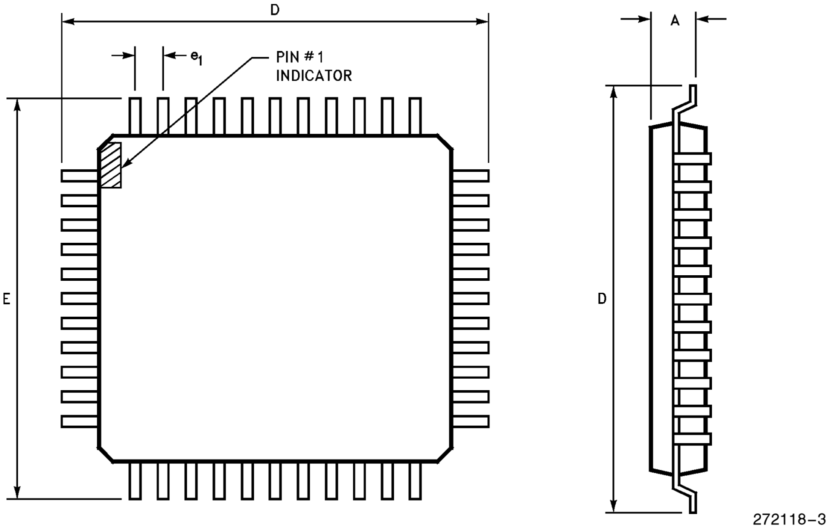


272118–2

Family: Cerdip Dual In-Line Package		
Symbol	**Millimeters Approx***	**Inches Approx***
A	5.8	0.2
D	53	2.1
E	16	0.6
e_1	2.5	0.10
L	3	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

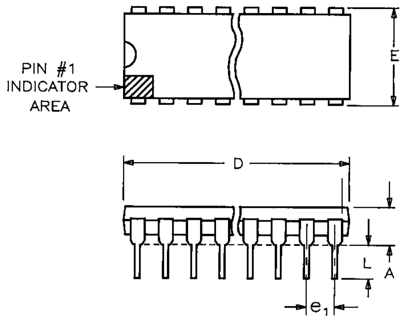
44-LEAD QUAD FLATPACK PACKAGE (TYPE S)
VARIATION: SQUARE



Family: Quad Flatpack Package	
Symbol	**Millimeters Approx***
A	3
D	13
E	13
e_1	0.8

*For exact dimensions consult the Packaging Handbook (#240800).

48-LEAD PLASTIC DUAL IN-LINE PACKAGE (TYPE N)

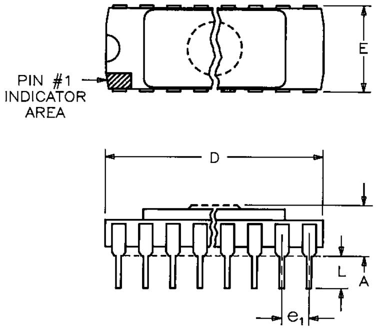


272118–4

Family: Plastic Dual In-Line Package		
Symbol	**Millimeters Approx***	**Inches Approx***
A	5	0.2
D	62	2.5
E	16	0.6
e_1	2.5	0.1
L	3	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

48-LEAD CERAMIC DUAL IN-LINE PACKAGE (TYPE C)



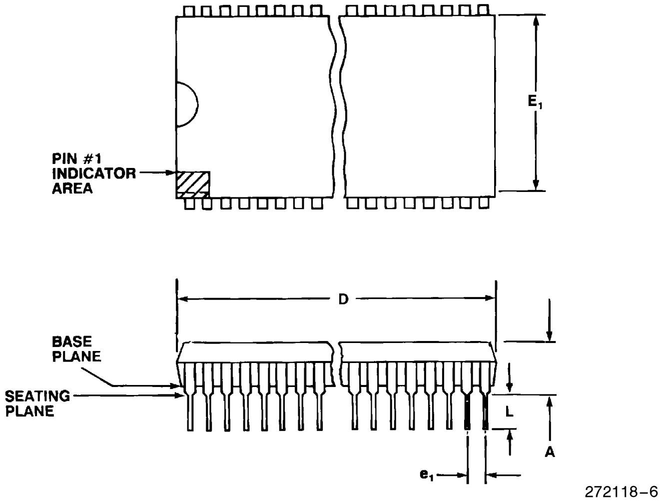
272118–5

Family: Ceramic Side Braze Dual In-Line		
Symbol	**Millimeters Approx***	**Inches Approx***
A	6(1)	0.2(1)
A	7(2)	0.3(2)
D	62	2.5
E	16	0.6
e_1	2.5	0.1
L	3	0.1

NOTES:
1. Solid LID
2. EPROM LID

*For exact dimensions consult the Packaging Handbook (#240800).

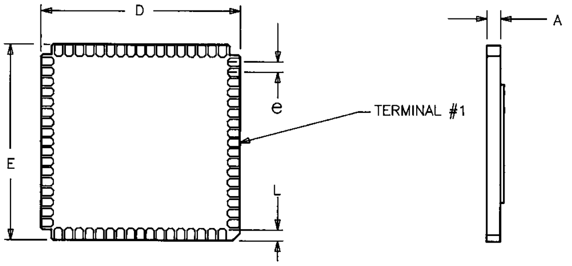
64-LEAD PLASTIC DUAL IN-LINE PACKAGE (SHRINK) (TYPE U)



Family: Plastic Dual In-Line Package		
Symbol	**Millimeters Approx***	**Inches Approx***
A	6	0.3
D	59	2.3
E_1	18	0.7
e_1	1.8	0.07
L	3	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

68-CERAMIC LEADLESS CHIP CARRIER (TYPE R)
VARIATION: B

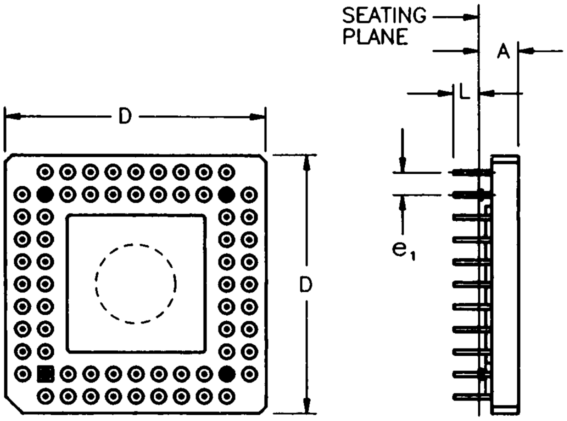


272118–7

Family: Ceramic Leadless Chip Carrier		
Symbol	**Millimeters Approx***	**Inches Approx***
A	3	0.1
D	25	1.0
E	25	1.0
e	1.3	0.05
L	1	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

68-LEAD CERAMIC PIN GRID ARRAY PACKAGE (TYPE A)

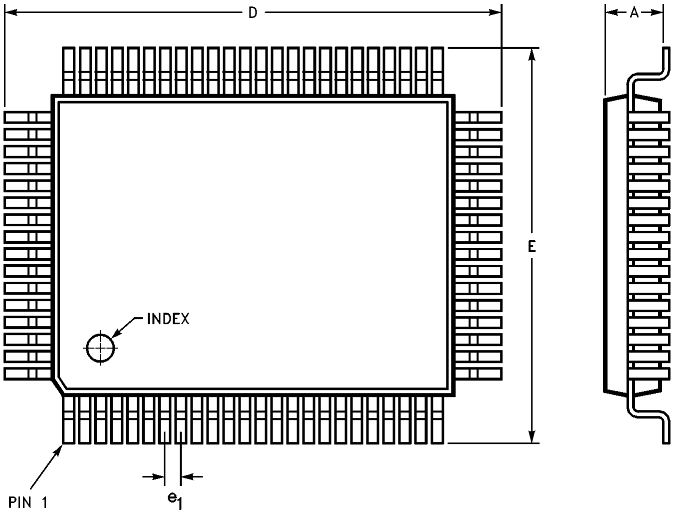


272118–8

Family: Ceramic Pin Grid Array Package		
Symbol	**Millimeters Approx***	**Inches Approx***
A	5	0.2
D	30	1.2
e_1	2.5	0.1
L	2	0.1

*For exact dimensions consult the Packaging Handbook (#240800).

80-LEAD QUAD FLATPACK PACKAGE (TYPE S)
VARIATION: RECTANGULAR

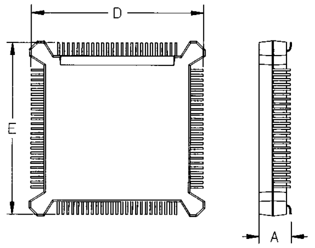


272118–9

Family: Quad Flatpack Package	
Symbol	**Millimeters Approx***
A	3
D	25
E	19
e_1	0.8

*For exact dimensions consult the Packaging Handbook (#240800).

100-LEAD PLASTIC QUAD FLATPACK PACKAGE (TYPE KU)

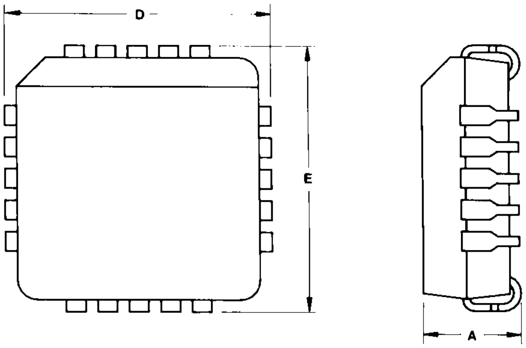


272118–10

Family: Plastic Quad Flatpack (0.025 Inch (0.635mm) Pitch)			
Symbol	**Description**	**Inches Approx***	**Millimeters Approx***
A	Package Height	0.2	5
D, E	Terminal Dimension	0.9	23

*For exact dimensions consult the Packaging Handbook (#240800).

44/52/68/84-LEAD PLASTIC LEADED CHIP CARRIER (TYPE N)



272118-11

Family: Plastic Leaded Chip Carrier—Square		
Symbol	**44-Lead**	
	Millimeters Approx*	**Inches Approx***
A	5	0.2
D	18	0.7
E	18	0.7

Family: Plastic Leaded Chip Carrier—Square						
Symbol	**Millimeters Approx***			**Inches Approx***		
	68-Lead	**52-Lead**	**84-Lead**	**68-Lead**	**52-Lead**	**84-Lead**
A	5	5	5	0.2	0.2	0.2
D	26	21	31	1.0	0.8	1.2
E	26	21	31	1.0	0.8	1.2

*For exact dimensions consult the Packaging Handbook (#240800).