



MCS[®]-51 and MCS[®]-96 Packaging Information

July 2004



Order Number: 272118-002

COPYRIGHT © INTEL CORPORATION: 2004

Information in this document is provided in connection with Intel products. Intel assumes no liability whatsoever, including infringement of any patent or copyright, for sale and use of Intel products except as provided in Intel's Terms and Conditions of Sale for such products.

Intel retains the right to make changes to these specifications at any time, without notice. Microcomputer Products may have minor variations to this specification known as errata.

*Other brands and names are the property of their respective owners.

†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

COPYRIGHT © INTEL CORPORATION, 2004

MCS-51 and MCS-96 Packaging Information

CONTENTS	PAGE
Product Identification Codes	5
40-Lead Plastic DIP	6
40-Lead Cerdip	7
44-Lead QFP	8
48-Lead Plastic DIP	9
48-Lead Ceramic DIP	10
64-Lead Plastic Shrink DIP	11
68-Lead LCC	12
68-Lead PGA	13
80-Lead QFP	14
100-Lead PQFP	15
44/52/68/84-Lead PLCC	16



Intel Product Identification Codes

Package Type

- Ceramic Pin Grid Array
- Ceramic Dual In-Line Package
- Cerdip Dual In-Line Package
- Plastic Quad Flatpack Package, Fine Pitch, Die Up
- Plastic Leaded Chip Carrier
- Plastic Dual In-Line Package
- Ceramic Leadless Chip Carrier
- Quad Flatpack Package
- Plastic Dual In-Line Package (Shrink)

- Indicates extended operating temperature range (-40°C to +85°C) express product with 160 ± 8 hrs. dynamic burn-in.

- Indicates commercial temperature range (0°C to 70°C) express product with 160 ± 8 hrs. dynamic burn-in

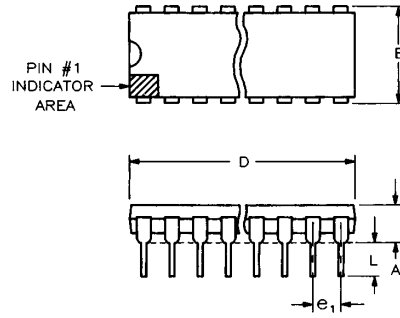
- Indicates extended temperature range (-40°C to +85°C) express product without burn-in.

272118-12

Note: Package type and temperature variables have changed. They are now indicated by x.



40-LEAD PLASTIC DUAL IN-LINE PACKAGE

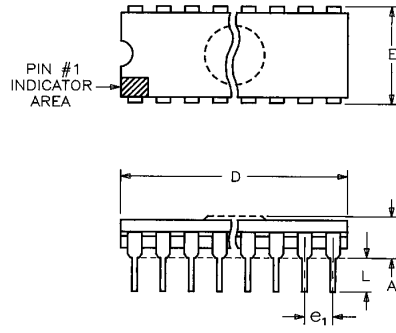


272118±1

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

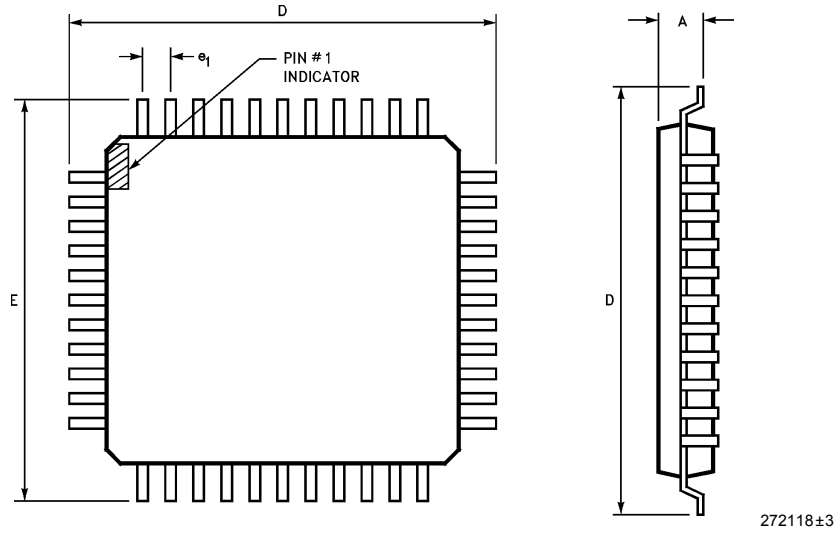


Family: Cerdip Dual In-Line Package		
Symbol	Millimeters Approx *	Inches Approx *
A	5.8	0.2
D	53	2.1
E	16	0.6
e ₁	2.5	0.10
L	3	0.1

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



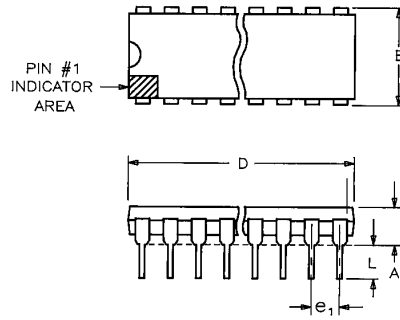
**44-LEAD QUAD FLATPACK PACKAGE
VARIATION: SQUARE**



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



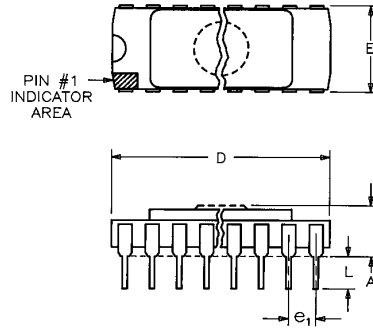
272118±4

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



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

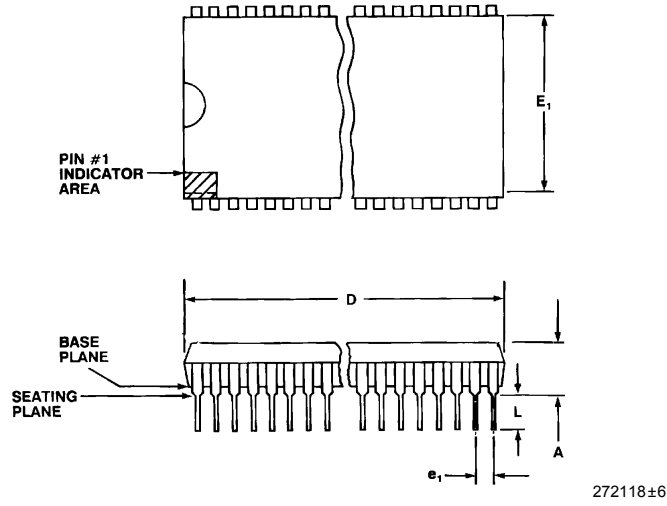
NOTES:

- 1. Solid LID
- 2. EPROM LID

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

MCS-51 AND MCS-96 PACKAGING INFORMATION

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

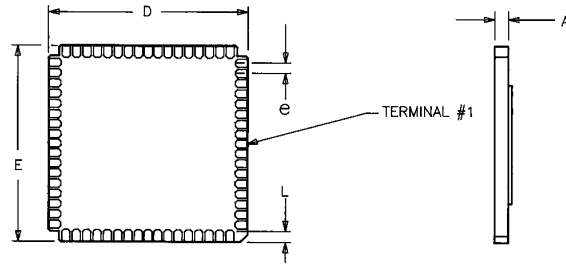


Family: Plastic Dual In-Line Package		
Symbol	Millimeters Approx *	Inches Approx *
A	6	0.3
D	59	2.3
E_1	18	0.7
e_1	1.8	0.07
L	3	0.1

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



**68-CERAMIC LEADLESS CHIP CARRIER
VARIATION: B**

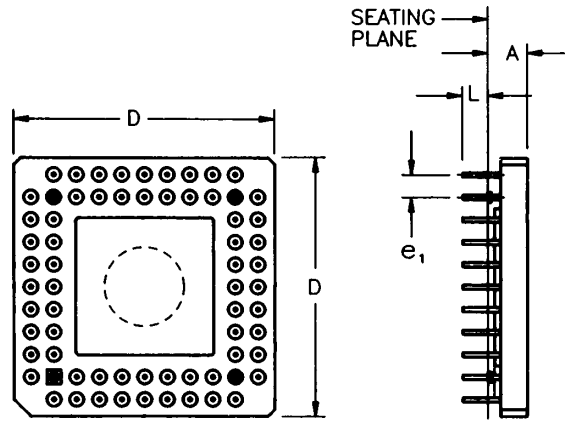


272118±7

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



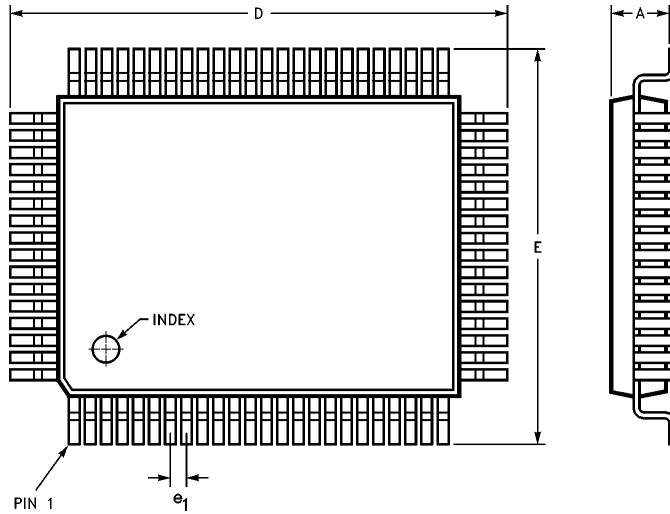
272118±8

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
VARIATION: RECTANGULAR**

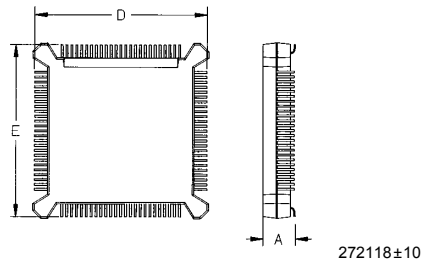


Family: Quad Flatpack Package	
Symbol	Millimeters Approx *
A	3
D	25
E	19
e ₁	0.8

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



100-LEAD PLASTIC QUAD FLATPACK PACKAGE

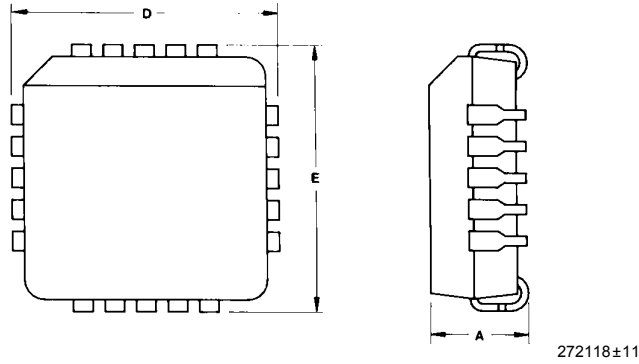


Family: Plastic Quad Flatpack (0.025 Inch (0.635mm) Pitch)			
Symbol	Description	Inches Approx *	Millimeters Approx *
A	Package Height	0.2	5
D, E	Terminal Dimension	0.9	23

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



44/52/68/84-LEAD PLASTIC LEADED CHIP CARRIER



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).