PACKAGE INFORMATION

ORDERING CODES

IC PACKAGE CODES

A = VQFP (Very Small QFP)
C = Ceramic Sidebrazed
D = Cerdip
E = Ceramic Window
F = Plastic Quad Flatpack
G = Ceramic PGA (Pin Grid Array)
H = SSOP (Slim Small Outline Package)
I = PCB Chip Carrier
K = Cerdip Window
L = Ceramic LCC (Leadless Chip Carrier)
P = Plastic DIP
S = SOIC (Small Outline Integrated Circuit)
V = Plastic Leaded Chip Carrier

SUPPORT TOOL PACKAGE CODES

T = Emulation Module
Z = Support Tools

ENVIRONMENTAL

PREFERRED
C = Plastic Standard
E = Hermetic Standard

LONGER LEAD TIME
A = Hermetic Stressed
B = 883 Class B Military
D = Plastic Stressed

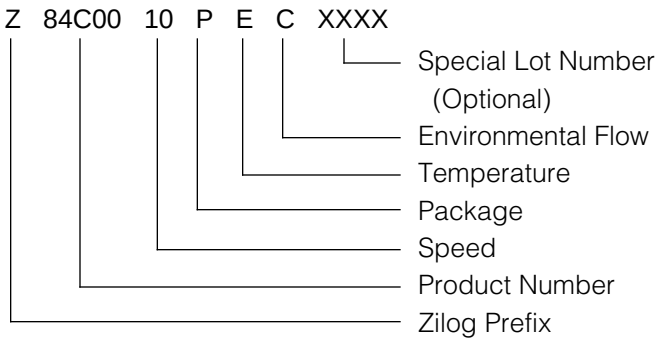
TEMPERATURE

PREFERRED
Standard: S = 0°C to +70°C

LONGER LEAD TIME
Extended: E = –40°C to +100°C
(–40°C to +105°C for Consumer Products)
Military: M = –55°C to +125°C

EXAMPLE

Z84C0010PEC is a CMOS 8400, 10 MHz, Plastic, –40°C to 100°C, Plastic Standard Flow.

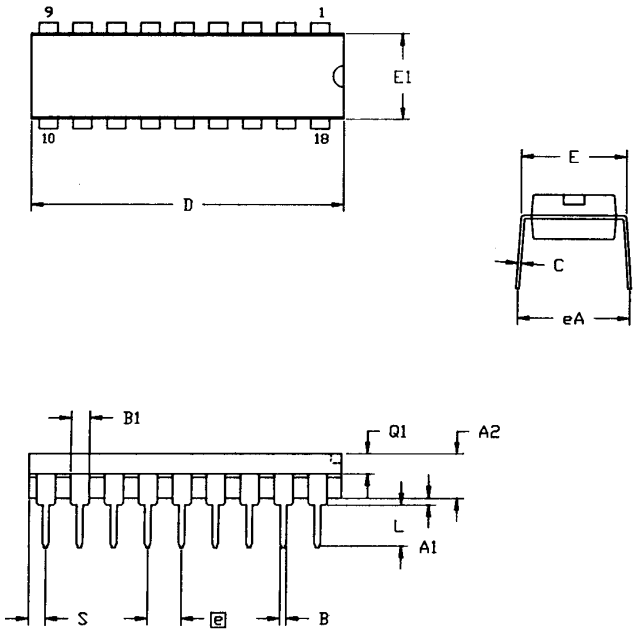


PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	0.81	.020	.032
A2	3.25	3.43	.128	.135
B	0.38	0.53	.015	.021
B1	1.14	1.65	.045	.065
C	0.23	0.38	.009	.015
D	22.35	23.37	.880	.920
E	7.62	8.13	.300	.320
E1	6.22	6.48	.245	.255
e	2.54 TYP		.100 TYP	
eA	7.87	8.89	.310	.350
L	3.18	3.81	.125	.150
Q1	1.52	1.65	.060	.065
S	0.89	1.65	.035	.065

CONTROLLING DIMENSIONS : INCH

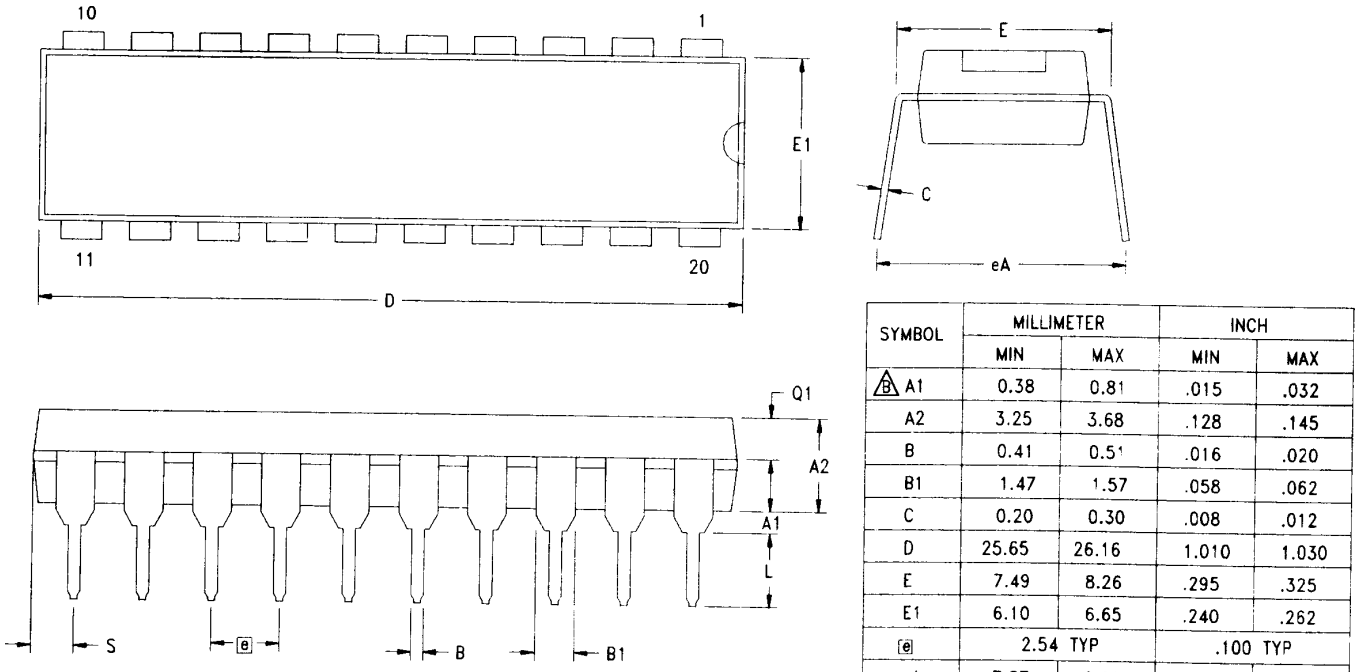
18-Lead Plastic Dual-In-Line Package (DIP)

PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
Ⓑ A1	0.38	0.81	.015	.032
A2	3.25	3.68	.128	.145
B	0.41	0.51	.016	.020
B1	1.47	1.57	.058	.062
C	0.20	0.30	.008	.012
D	25.65	26.16	1.010	1.030
E	7.49	8.26	.295	.325
E1	6.10	6.65	.240	.262
e	2.54 TYP		.100 TYP	
eA	7.87	8.89	.310	.350
L	3.18	3.43	.125	.135
Q1	1.42	1.65	.056	.065
S	1.52	1.65	.060	.065

CONTROLLING DIMENSIONS : INCH

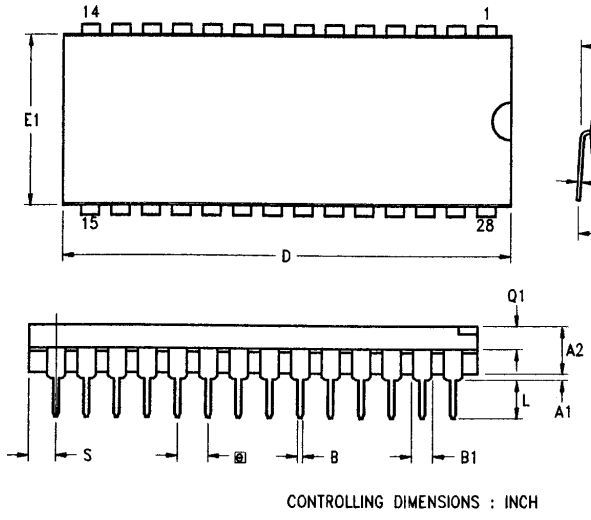
20-Lead Plastic Dual-In-Line Package (DIP)

PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



OPTION TABLE	
OPTION #	PACKAGE
01	STANDARD
02	IDF

SYMBOL	OPT #	MILLIMETER		INCH	
		MIN	MAX	MIN	MAX
A1		0.51	1.02	.020	.040
A2		3.18	3.94	.125	.155
B		0.38	0.53	.015	.021
B1	01	1.40	1.65	.055	.065
	02	1.14	1.40	.045	.055
C		0.23	0.38	.009	.015
D	01	36.58	37.34	1.440	1.470
	02	35.31	35.94	1.390	1.415
E		15.24	15.75	.600	.620
E1	01	13.59	14.10	.535	.555
	02	12.83	13.08	.505	.515
e		2.54 TYP		.100 TYP	
eA		15.49	16.76	.610	.660
L		3.05	3.81	.120	.150
Q1	01	1.52	1.91	.060	.075
	02	1.52	1.78	.060	.070
S	01	1.52	2.29	.060	.090
	02	1.02	1.52	.040	.060

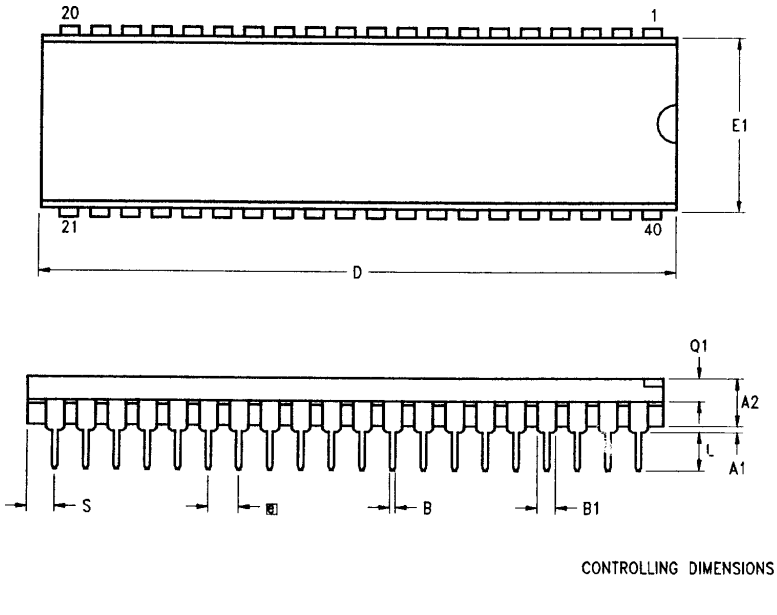
28-Lead Plastic Dual-In-Line Package (DIP)

PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	1.02	.020	.040
A2	3.18	3.94	.125	.155
B	0.38	0.53	.015	.021
B1	1.02	1.52	.040	.060
C	0.23	0.38	.009	.015
D	52.07	52.58	2.050	2.070
E	15.24	15.75	.600	.620
E1	13.59	14.22	.535	.560
e	2.54 TYP		.100 TYP	
eA	15.49	16.76	.610	.660
L	3.05	3.81	.120	.150
Q1	1.52	1.91	.060	.075
S	1.52	2.29	.060	.090

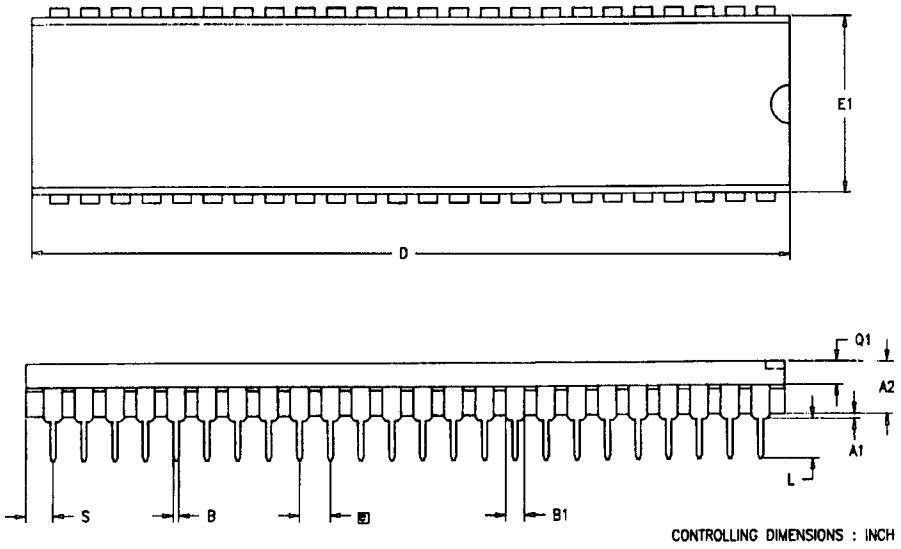
40-Lead Plastic Dual-In-Line Package (DIP)

PACKAGE INFORMATION

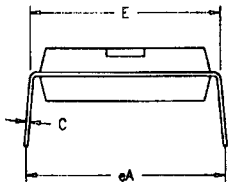
PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	0.81	.015	.032
A2	3.68	4.19	.145	.165
B	0.38	0.53	.015	.021
B1	1.02	1.52	.040	.060
C	0.23	0.38	.009	.015
D	61.98	62.74	2.440	2.470
E	15.24	15.75	.600	.620
E1	13.72	14.22	.540	.560
e	2.54 TYP		.100 TYP	
eA	15.49	16.76	.610	.660
L	3.18	3.81	.125	.150
Q1	1.52	1.91	.060	.075
S	1.52	2.29	.060	.090



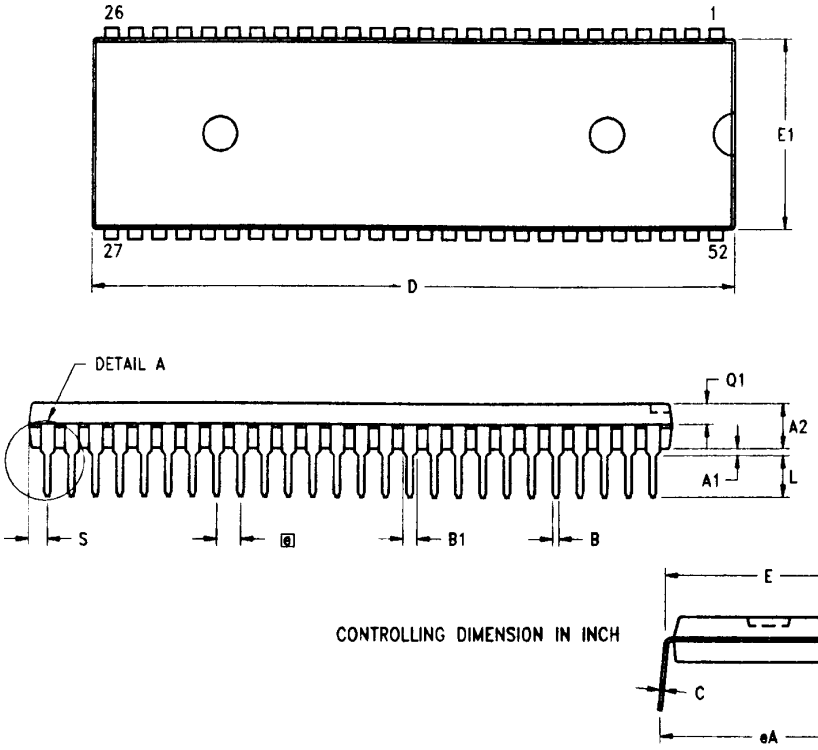
48-Lead Plastic Dual-In-Line Package (DIP)

PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	–	0.020	–
A2	3.25	3.94	0.128	0.155
B	0.38	0.53	0.015	0.021
B1	0.89	1.14	0.035	0.045
C	0.23	0.38	0.009	0.015
D	–	47.50	–	1.870
E	15.24	15.75	0.600	0.620
E1	13.72	14.10	0.540	0.555
e	1.778 TYP		.070 TYP	
eA	15.49	16.76	0.610	.660
L	3.05	3.68	0.120	0.145
Q1	1.52	1.91	0.060	0.075
S	0.64	1.78	0.025	0.070

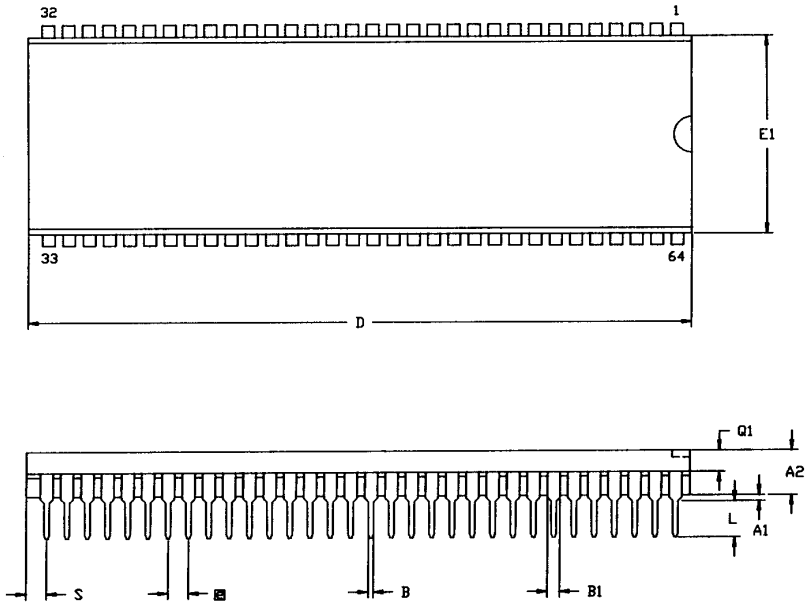
52-Lead Plastic Dual-In-Line Package (DIP)

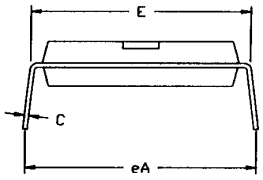
PACKAGE INFORMATION

PDIP (Plastic Dual In-Line Package) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak





SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	1.07	.015	.042
A2	3.68	3.94	.145	.155
B	0.38	0.53	.015	.021
B1	0.94	1.09	.037	.043
C	0.23	0.38	.009	.015
D	57.40	58.17	2.260	2.290
E	18.80	19.30	.740	.760
E1	16.76	17.27	.660	.680
e	1.78 TYP		.070 TYP	
eA	19.30	20.32	.760	.800
L	3.18	3.81	.125	.150
Q1	1.65	1.91	.065	.075
S	1.02	1.78	.040	.070

CONTROLLING DIMENSIONS : INCH

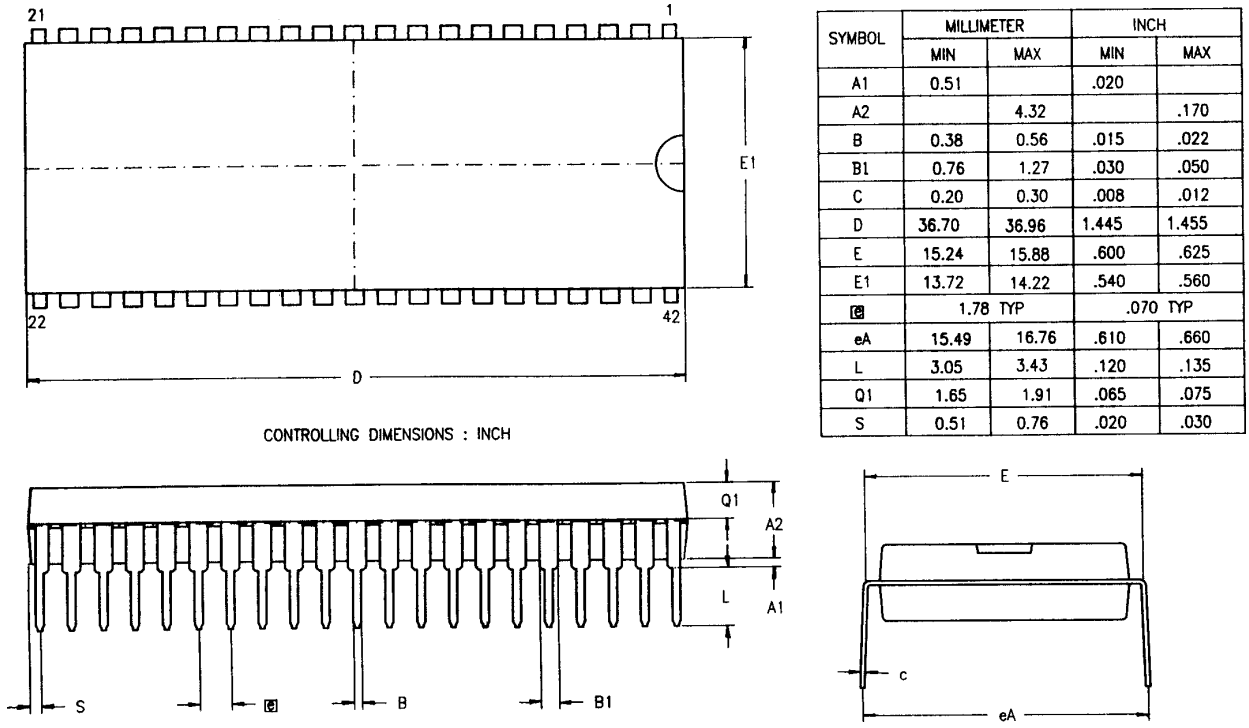
64-Lead Plastic Dual-In-Line Package (DIP)
with 0.070" Lead Centers

PACKAGE INFORMATION

SDIP (Shrink Dual In-Line Package)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51		.020	
A2		4.32		.170
B	0.38	0.56	.015	.022
B1	0.76	1.27	.030	.050
C	0.20	0.30	.008	.012
D	36.70	36.96	1.445	1.455
E	15.24	15.88	.600	.625
E1	13.72	14.22	.540	.560
e	1.78 TYP		.070 TYP	
eA	15.49	16.76	.610	.660
L	3.05	3.43	.120	.135
Q1	1.65	1.91	.065	.075
S	0.51	0.76	.020	.030

42-Lead Shrink Dual-In-Line Package (SDIP)

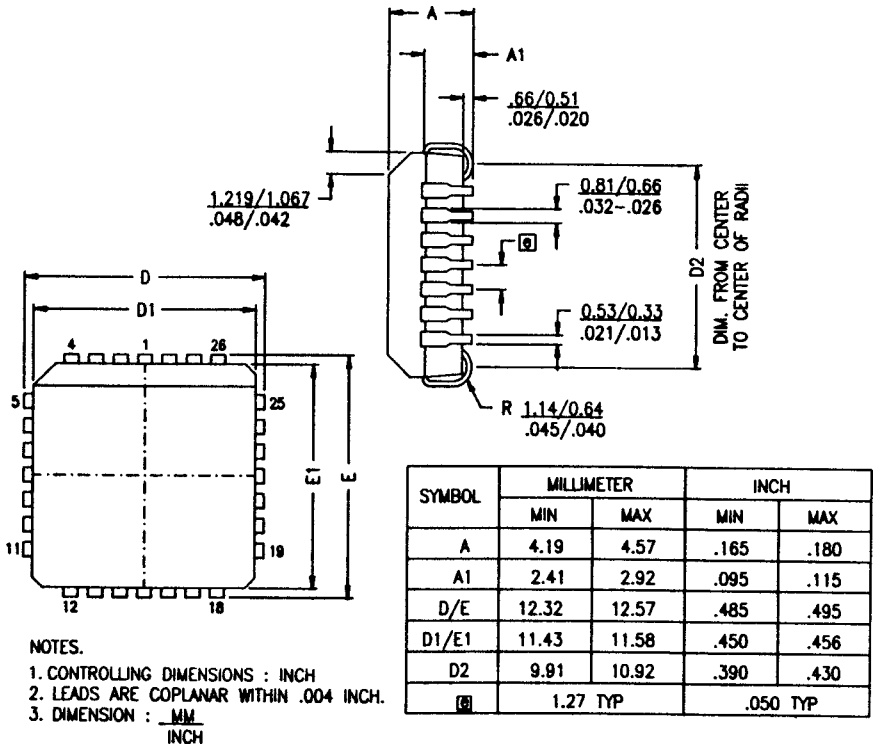
PACKAGE INFORMATION

PLCC (Plastic Leaded Chip Carrier)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak

3. Coplanarity — Maximum 4 mils deviation



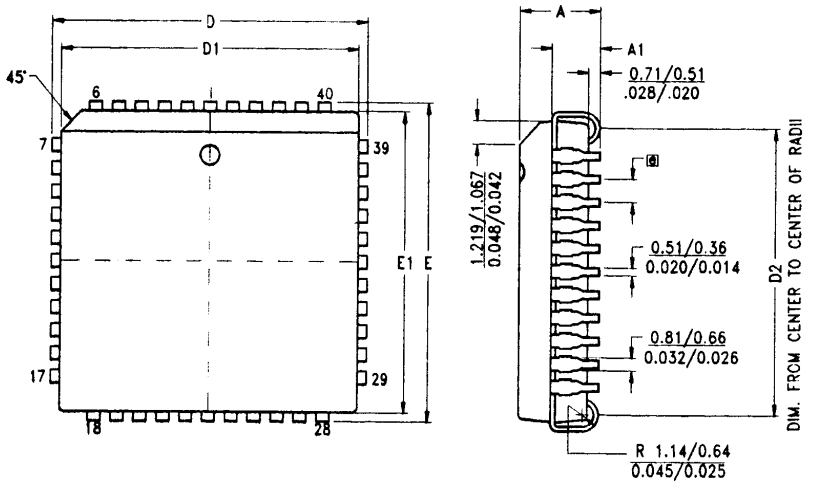
SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	4.19	4.57	.165	.180
A1	2.41	2.92	.095	.115
D/E	12.32	12.57	.485	.495
D1/E1	11.43	11.58	.450	.456
D2	9.91	10.92	.390	.430
e	1.27 TYP		.050 TYP	

28-Lead Plastic Leaded Chip Carrier (PLCC)

PACKAGE INFORMATION

PLCC (Plastic Leaded Chip Carrier)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	4.27	4.57	0.168	0.180
A1	2.41	2.92	0.095	0.115
D/E	17.40	17.65	0.685	0.695
D1/E1	16.51	16.66	0.650	0.656
D2	15.24	16.00	0.600	0.630
e	1.27 TYP		0.050 TYP	

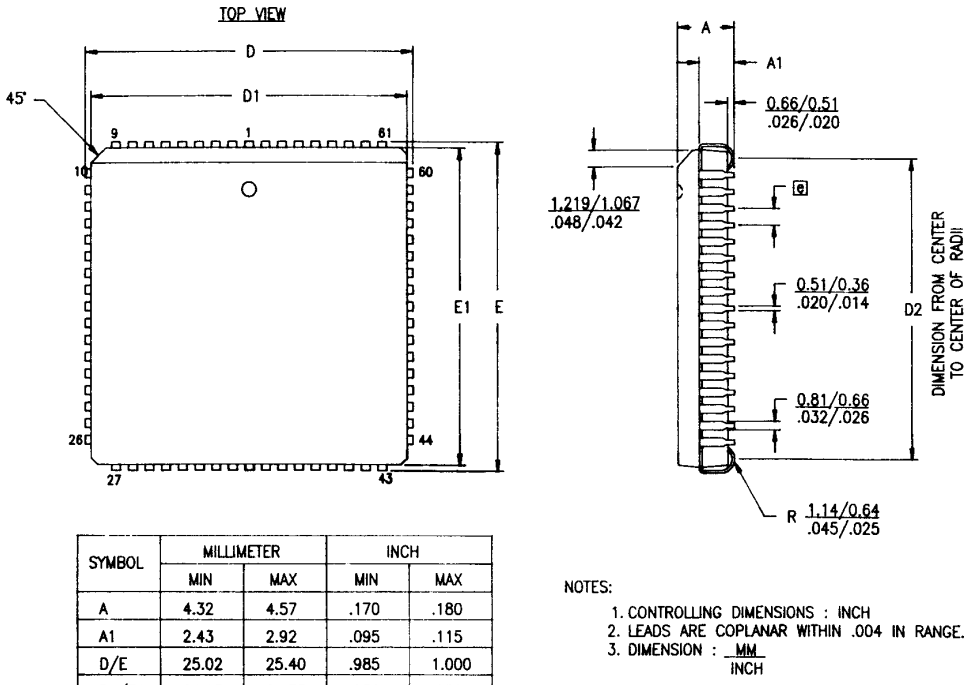
NOTES:
1. CONTROLLING DIMENSION : INCH
2. LEADS ARE COPLANAR WITHIN 0.004".
3. DIMENSION : MM / INCH

44-Lead Plastic Leaded Chip Carrier (PLCC)

PACKAGE INFORMATION

PLCC (Plastic Leaded Chip Carrier) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	4.32	4.57	.170	.180
A1	2.43	2.92	.095	.115
D/E	25.02	25.40	.985	1.000
D1/E1	24.13	24.33	.950	.958
D2	22.86	23.62	.900	.930
e	1.27 TYP		.050 TYP	

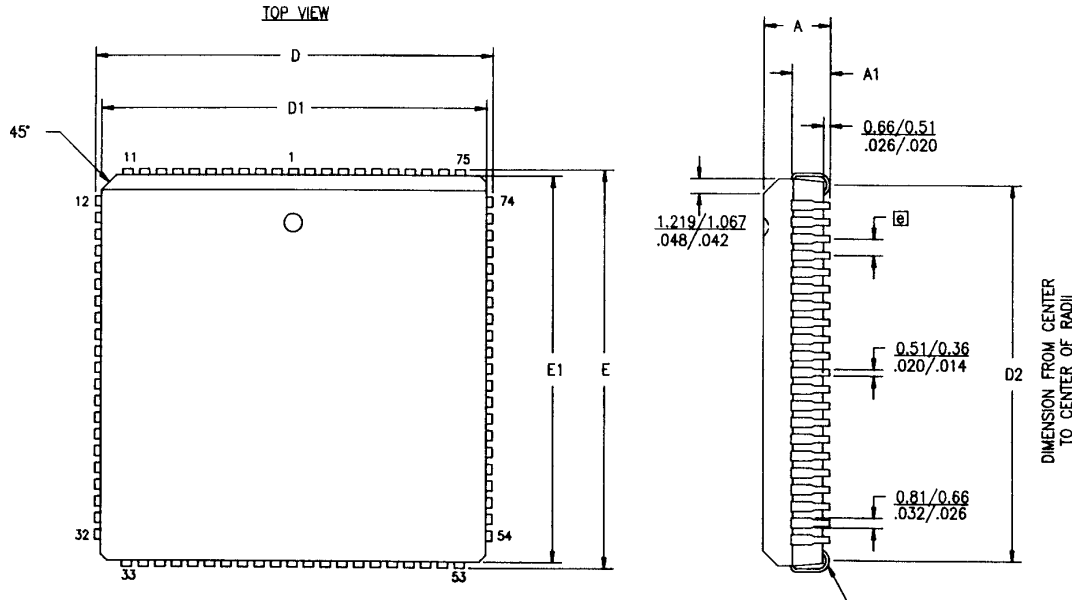
NOTES:
1. CONTROLLING DIMENSIONS : INCH
2. LEADS ARE COPLANAR WITHIN .004 IN RANGE.
3. DIMENSION : MM / INCH

68-Lead Plastic Leaded Chip Carrier (PLCC)

PACKAGE INFORMATION

PLCC (Plastic Leaded Chip Carrier) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	4.32	4.57	.170	.180
A1	2.43	2.92	.095	.115
D/E	30.10	30.35	1.185	1.195
D1/E1	29.21	29.41	1.150	1.158
D2	27.94	28.58	1.100	1.125
e	1.27 TYP		.050 TYP	

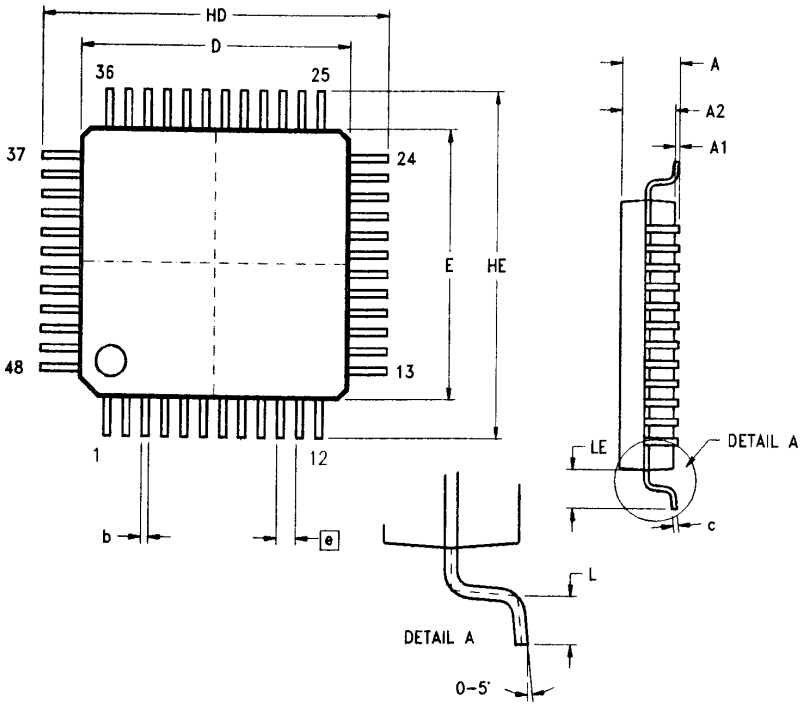
NOTES:
1. CONTROLLING DIMENSIONS : INCH
2. LEADS ARE COPLANAR WITHIN .004 IN RANGE.
3. DIMENSION : MM / INCH

84-Lead Plastic Leaded Chip Carrier (PLCC)

PACKAGE INFORMATION

VQFP (Very Small Quad Flat Pack)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.35	1.60	.053	.063
A1	0.05	0.20	.002	.008
A2	1.30	1.50	.051	.059
b	0.15	0.26	.006	.010
c	0.10	0.18	.004	.007
HD	8.60	9.40	.339	.370
D	6.90	7.10	.272	.280
HE	8.60	9.40	.339	.370
E	6.90	7.10	.272	.280
e	0.50 TYP		.0197 TYP	
L	0.30	0.70	.012	.028
LE	0.90	1.10	.035	.043

1. CONTROLLING DIMENSIONS : MM
2. MAX COPLANARITY : .10mm (.004")

48-Lead Plastic Very Small Quad Flat Pack (VQFP)

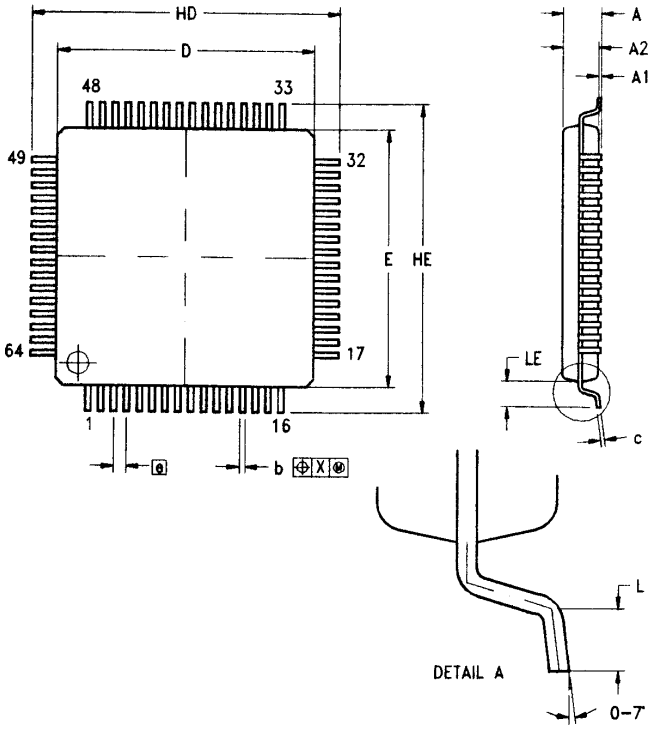
PACKAGE INFORMATION

VQFP (Very Small Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.40	1.60	0.055	0.063
A1	0.05	0.15	0.002	0.006
A2	1.35	1.45	0.053	0.057
b	0.17	0.27	0.007	0.011
c	0.09	0.20	0.004	0.008
HD	11.75	12.25	0.463	0.482
D	9.90	10.10	0.390	0.398
HE	11.75	12.25	0.463	0.482
E	9.90	10.10	0.390	0.398
e	0.50 TYP		0.0197 TYP	
L	0.45	0.75	0.018	0.030
LE	1.00 REF		0.039 REF	
X	–	0.13	–	0.005

1. CONTROLLING DIMENSIONS : mm
2. MAX. COPLANARITY : .10mm / 0.004"

64-Lead Plastic Very Small Quad Flat Pack (VQFP)

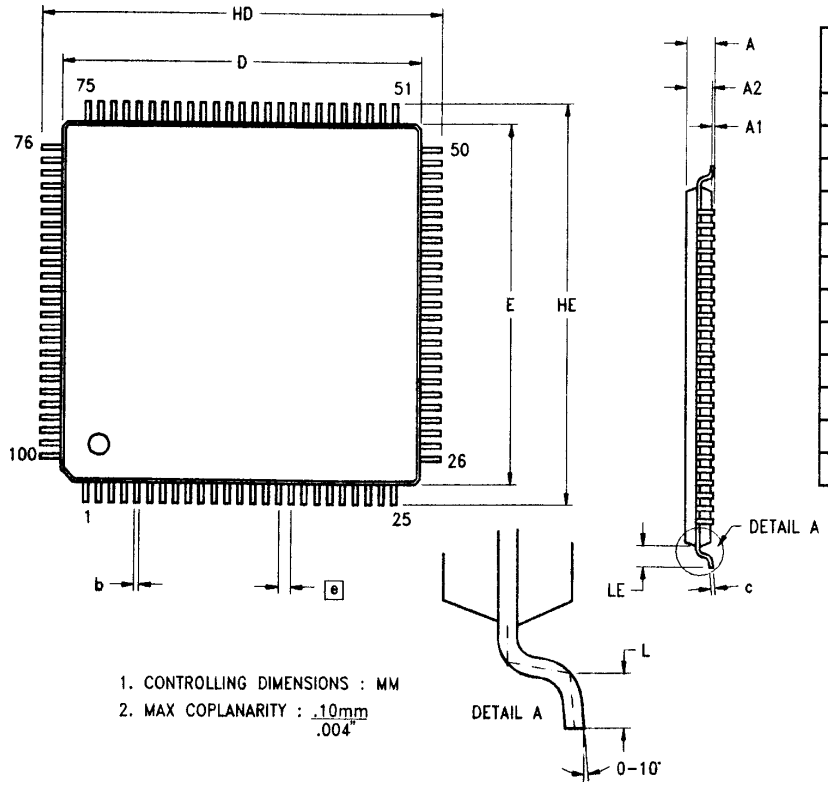
PACKAGE INFORMATION

VQFP (Very Small Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.35	1.60	.053	.063
A1	0.05	0.20	.002	.008
A2	1.30	1.50	.051	.059
b	0.15	0.26	.006	.010
c	0.10	0.20	.004	.008
HD	15.85	16.15	.624	.636
D	13.90	14.10	.547	.555
HE	15.85	16.15	.624	.636
E	13.90	14.10	.547	.555
e	0.50 TYP		.0197 TYP	
L	0.35	0.65	.014	.026
LE	0.90	1.10	.035	.043

100-Lead Plastic Very Small Quad Flat Pack (VQFP)

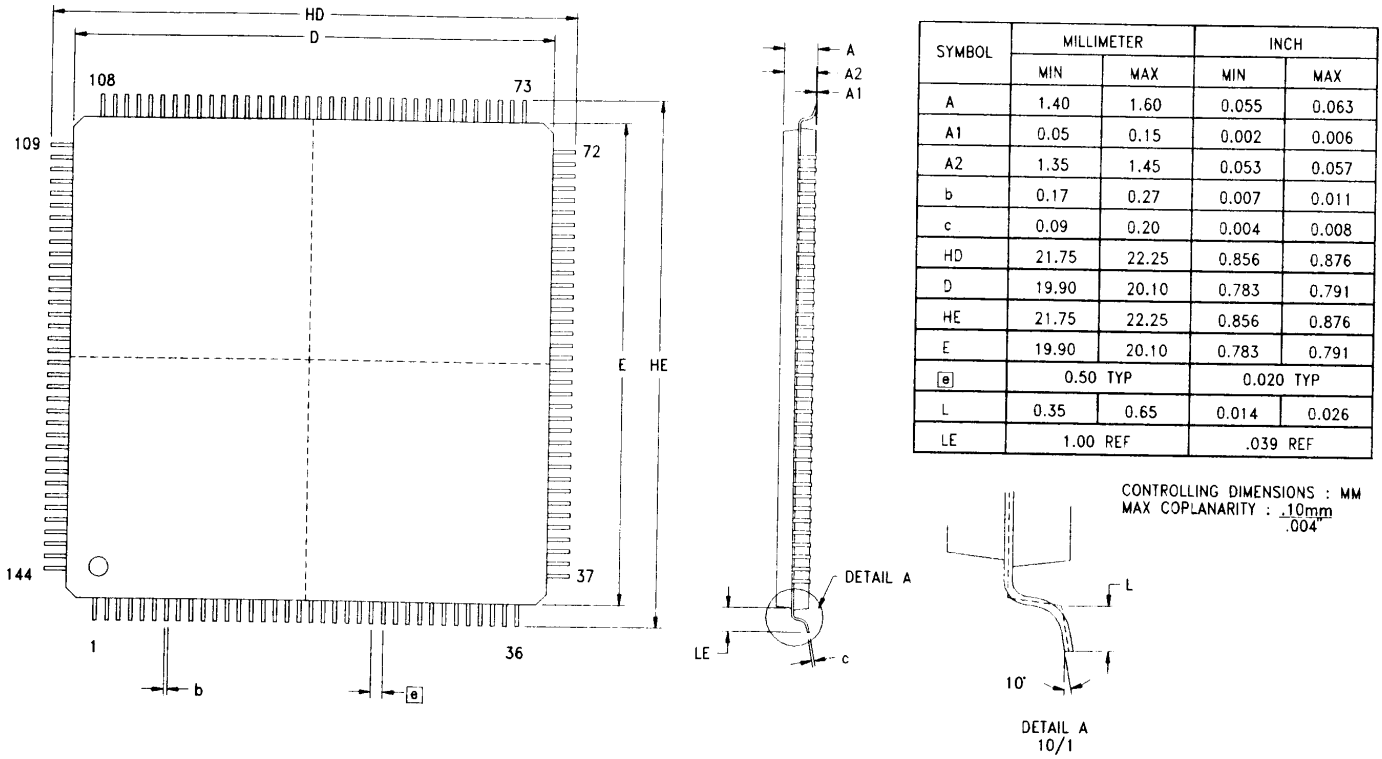
PACKAGE INFORMATION

VQFP (Very Small Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.40	1.60	0.055	0.063
A1	0.05	0.15	0.002	0.006
A2	1.35	1.45	0.053	0.057
b	0.17	0.27	0.007	0.011
c	0.09	0.20	0.004	0.008
HD	21.75	22.25	0.856	0.876
D	19.90	20.10	0.783	0.791
HE	21.75	22.25	0.856	0.876
E	19.90	20.10	0.783	0.791
e	0.50 TYP		0.020 TYP	
L	0.35	0.65	0.014	0.026
LE	1.00 REF		.039 REF	

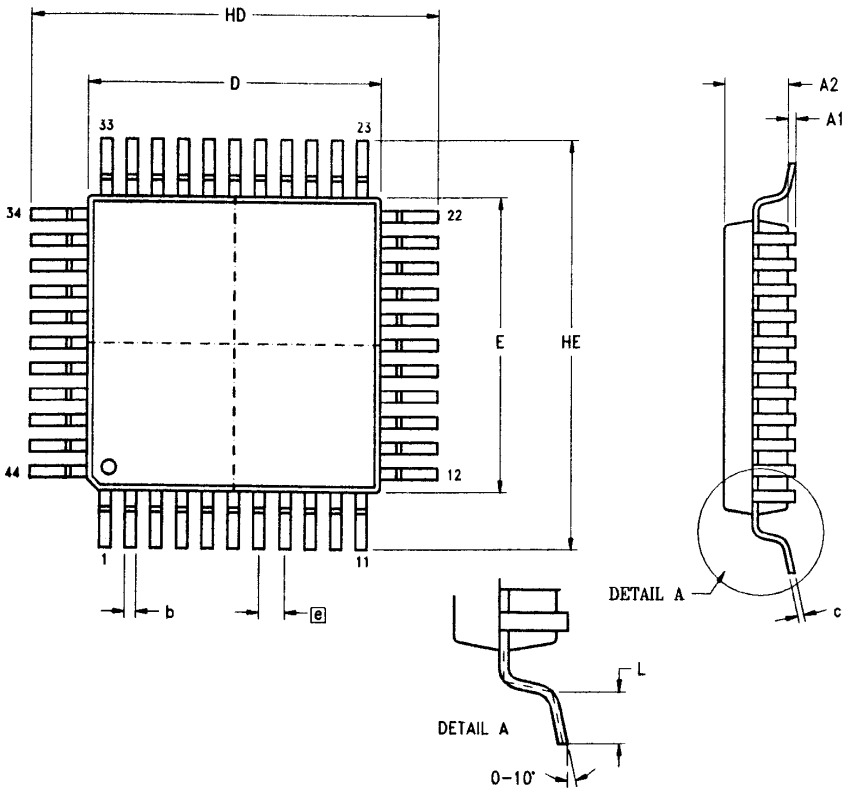
CONTROLLING DIMENSIONS : MM
MAX COPLANARITY : .10mm / .004"

144-Lead Plastic Very Small Quad Flat Pack (VQFP)

PACKAGE INFORMATION

QFP (Plastic Quad Flat Pack)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.05	0.25	.002	.010
A2	2.00	2.25	.078	.089
b	0.25	0.45	.010	.018
c	0.13	0.20	.005	.008
HD	13.70	14.15	.539	.557
D	9.90	10.10	.390	.398
HE	13.70	14.15	.539	.557
E	9.90	10.10	.390	.398
e	0.80 TYP		.0315 TYP	
L	0.60	1.20	.024	.047

NOTES:
1. CONTROLLING DIMENSIONS : MILLIMETER
2. LEAD COPLANARITY : MAX .10 (.004")

44-Lead Plastic Quad Flat Pack (QFP)

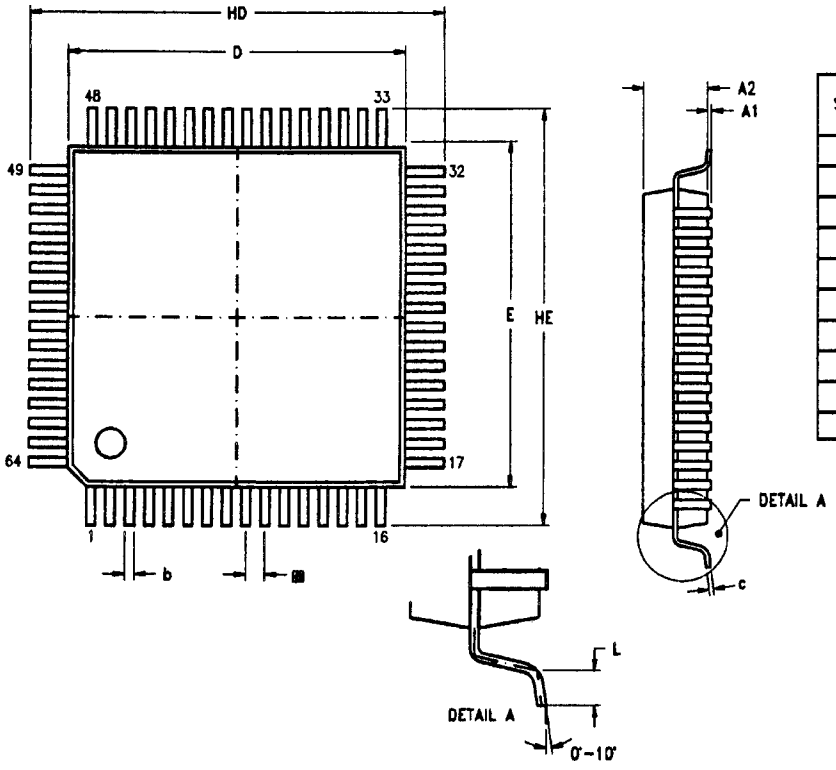
PACKAGE INFORMATION

QFP (Plastic Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.10	0.25	.004	.010
A2	2.55	3.05	.100	.108
b	0.30	0.45	.012	.018
c	0.13	0.23	.005	.010
HD	16.95	17.45	.667	.687
D	13.90	14.10	.547	.555
HE	16.95	17.45	.667	.687
E	13.90	14.10	.547	.555
e	0.80 TYP		.0315 TYP	
L	0.63	1.03	.025	.041

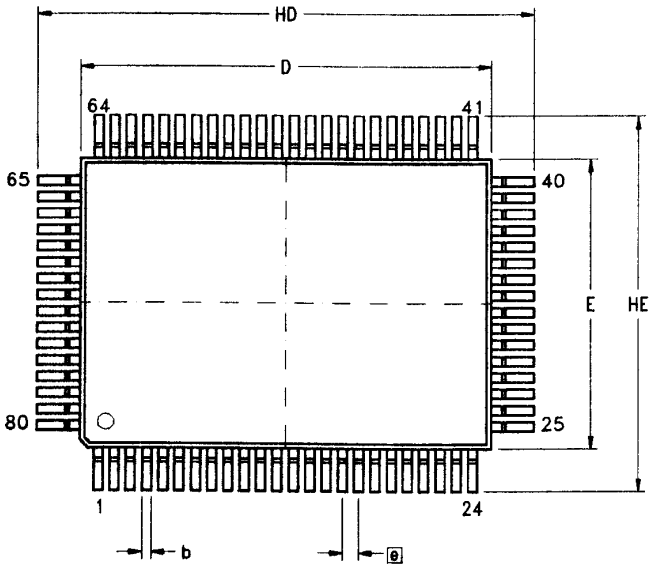
NOTES:
1. CONTROLLING DIMENSIONS : MILLIMETER
2. LEAD COPLANARITY : MAX .10 / .004"

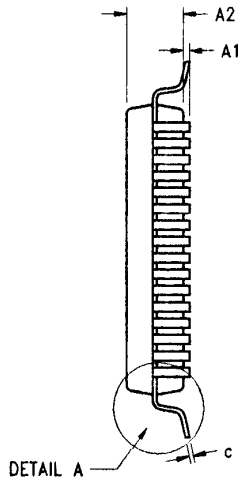
64-Lead Plastic Quad Flat Pack (QFP)

PACKAGE INFORMATION

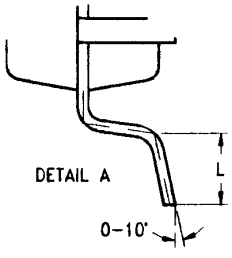
QFP (Plastic Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.
3. Coplanarity — Maximum 4 mils deviation





SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.10	0.30	.004	.012
A2	2.60	2.80	.102	.110
b	0.30	0.45	.012	.018
c	0.13	0.20	.005	.008
HD	23.70	24.15	.933	.951
D	19.90	20.10	.783	.791
HE	17.70	18.15	.697	.715
E	13.90	14.10	.547	.555
e	0.80 TYP		.0315 TYP	
L	0.70	1.10	.028	.043



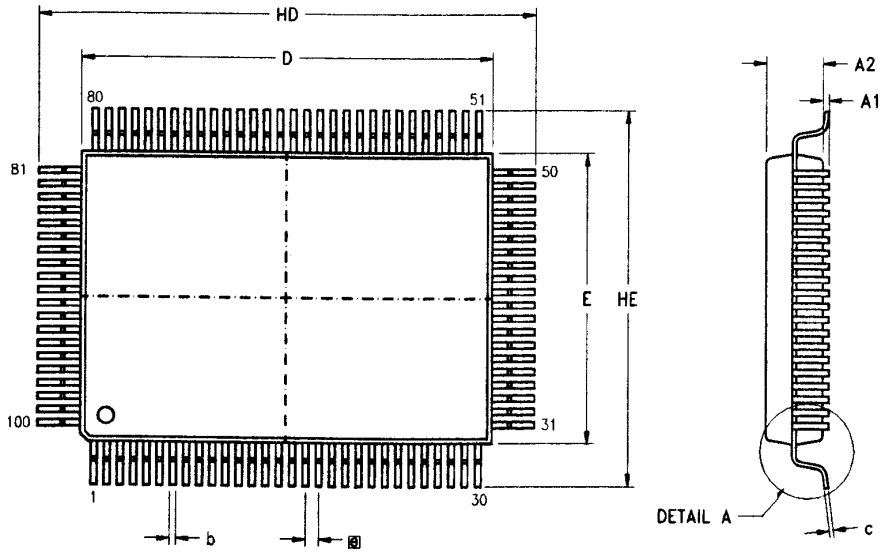
NOTES:
1. CONTROLLING DIMENSIONS: MILLIMETER
2. MAX COPLANARITY: .10 / .004

80-Lead Plastic Quad Flat Pack (QFP)

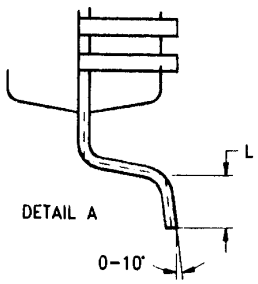
PACKAGE INFORMATION

QFP (Plastic Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.10	0.30	.004	.012
A2	2.60	2.80	.102	.110
b	0.25	0.40	.010	.016
c	0.13	0.20	.005	.008
HD	23.70	24.15	.933	.951
D	19.90	20.10	.783	.791
HE	17.70	18.15	.697	.715
E	13.90	14.10	.547	.555
[e]	0.65 TYP		.0256 TYP	
L	0.70	1.10	.028	.043



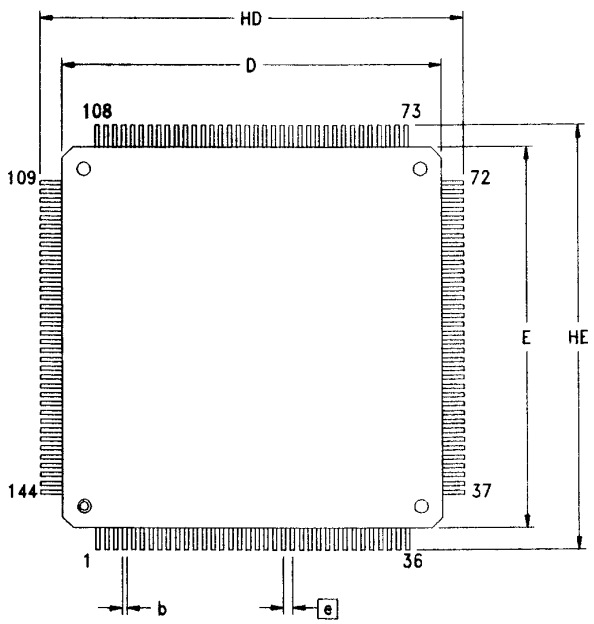
NOTES:
1. CONTROLLING DIMENSIONS : MILLIMETER
2. MAX COPLANARITY : .10 / .004

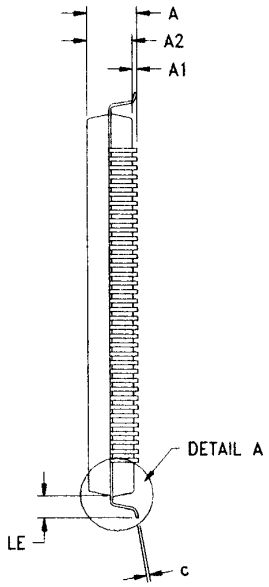
100-Lead Plastic Quad Flat Pack (QFP)

PACKAGE INFORMATION

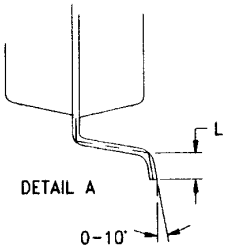
QFP (Plastic Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.
3. Coplanarity — Maximum 4 mils deviation





SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	3.42	4.07	.135	.160
A1	0.25	–	.010	–
A2	3.17	3.67	.125	.144
b	0.22	0.38	.009	.015
c	0.13	0.23	.004	.009
HD	30.95	31.45	1.219	1.238
D	27.90	28.10	1.098	1.106
HE	30.95	31.45	1.219	1.238
E	27.90	28.10	1.098	1.106
e	0.65 TYP		.026 TYP	
L	0.65	0.95	.026	.037
LE	1.60 REF		.063 REF	



CONTROLLING DIMENSIONS : MM
MAX COPLANARITY : .10mm / .004"

144-Lead Plastic Quad Flat Pack (QFP)

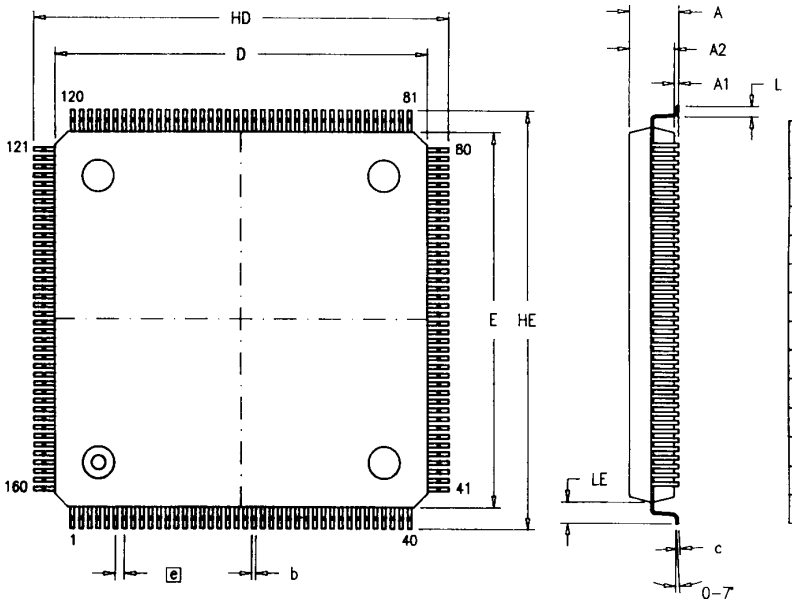
PACKAGE INFORMATION

QFP (Plastic Quad Flat Pack) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	–	4.07	–	0.160
A1	0.25	–	0.010	–
A2	3.17	3.67	0.125	0.144
b	0.23	0.38	0.009	0.015
c	0.13	0.23	.005	.009
HD	30.95	31.45	1.219	1.238
D	27.90	28.10	1.098	1.106
HE	30.95	31.45	1.219	1.238
E	27.90	28.10	1.098	1.106
e	0.65 TYP		.0256 TYP	
L	0.65	0.95	0.026	0.037
LE	1.60 REF		0.063	

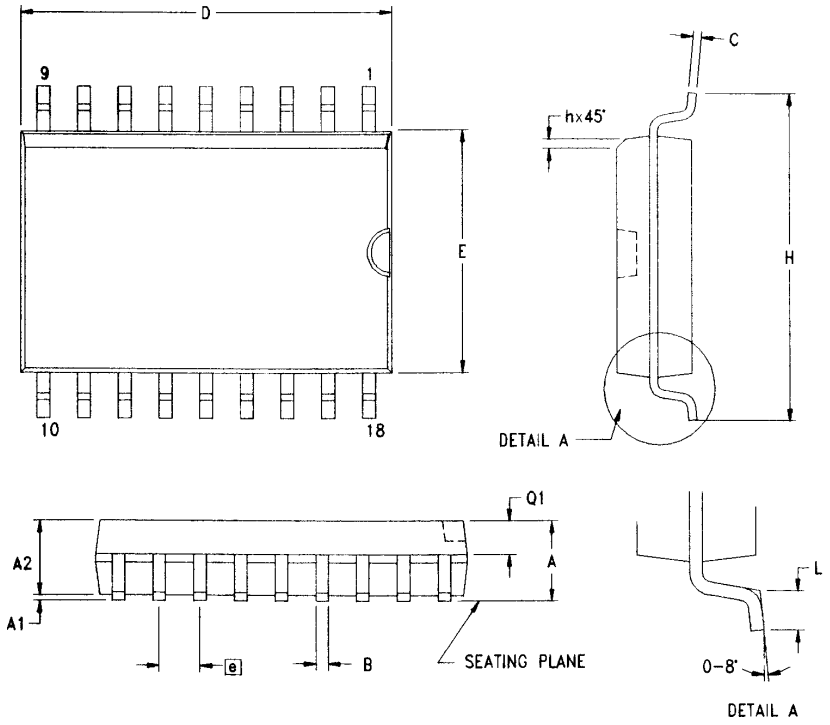
1. CONTROLLING DIMENSIONS : mm
2. MAX. COPLANARITY : 10mm / 0.004"

160-Lead Plastic Quad Flat Pack (QFP)

PACKAGE INFORMATION

SOIC (Small Outline Integrated Circuit)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age
2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.
3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	2.40	2.65	0.094	0.104
A1	0.10	0.30	0.004	0.012
A2	2.24	2.44	0.088	0.096
B	0.36	0.46	0.014	0.018
C	0.23	0.30	0.009	0.012
D	11.40	11.75	0.449	0.463
E	7.40	7.60	0.291	0.299
e	1.27 TYP		0.050 TYP	
H	10.00	10.65	0.394	0.419
h	0.30	0.50	0.012	0.020
L	0.60	1.00	0.024	0.039
Q1	0.97	1.07	0.038	0.042

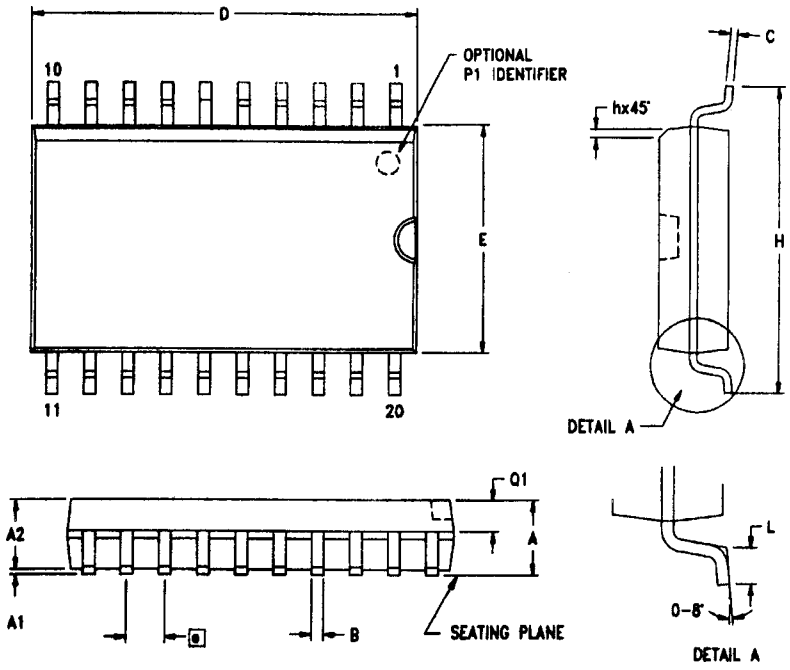
CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH.

18-Lead Small Outline Integrated Circuit (SOIC)

PACKAGE INFORMATION

SOIC (Small Outline Integrated Circuit) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into Alpha 2110 at 63-70°C. 30 sec. duration each soak. Mech. brush after each soak.
3. Coplanarity	Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	2.40	2.65	.094	.104
A1	0.10	0.30	.004	.012
A2	2.24	2.44	.088	.096
B	0.36	0.46	.014	.018
C	0.23	0.30	.009	.012
D	12.60	12.95	.496	.510
E	7.40	7.60	.291	.299
⊕	1.27 TYP		.050 TYP	
H	10.00	10.65	.394	.419
h	0.30	0.40	.012	.016
L	0.60	1.00	.024	.039
Q1	0.97	1.07	.038	.042

CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH.

20-Lead Small Outline Integrated Circuit (SOIC)

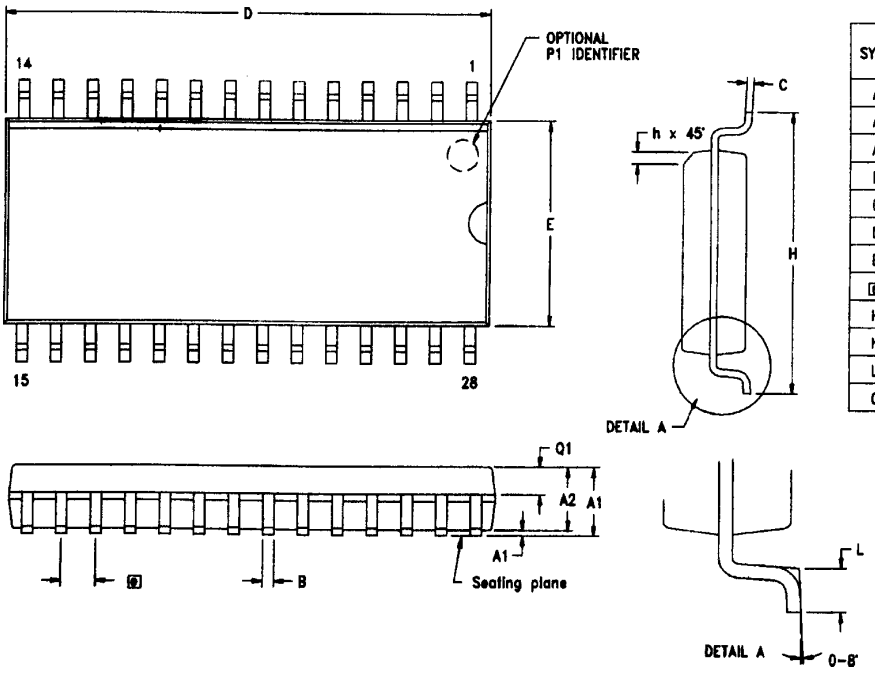
PACKAGE INFORMATION

SOIC (Small Outline Integrated Circuit) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	2.40	2.64	.094	.104
A1	0.10	0.30	.004	.012
A2	2.24	2.44	.088	.096
B	0.36	0.46	.014	.018
C	0.23	0.30	.009	.012
D	17.78	18.00	.700	.710
E	7.40	7.60	.291	.299
e	1.27 typ		.050 typ	
H	10.00	10.65	.394	.419
h	0.30	0.71	.012	.028
L	0.61	1.00	.024	.039
Q1	0.97	1.07	.038	.042

CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH.

28-Lead Plastic Small Outline Integrated Circuit (SOIC)

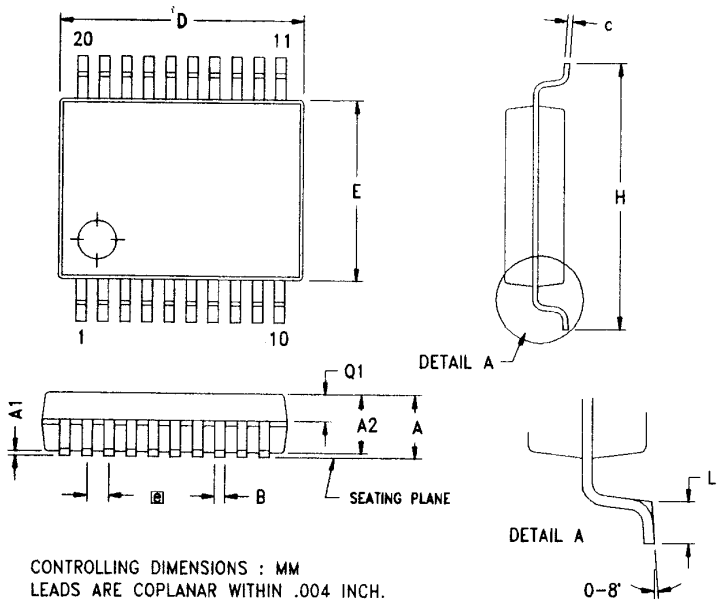
PACKAGE INFORMATION

SSOP (Slim Small Outline Package)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.

3. Coplanarity — Maximum 4 mils deviation



SYMBOL	MILLIMETER			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.73	1.85	1.98	0.068	0.073	0.078
A1	0.05	0.13	0.21	0.002	0.005	0.008
A2	1.68	1.73	1.83	0.066	0.068	0.072
B	0.25	0.30	0.38	0.010	0.012	0.015
C	0.13	0.15	0.22	0.005	0.006	0.009
D	7.07	7.20	7.33	0.278	0.283	0.289
E	5.20	5.30	5.38	0.205	0.209	0.212
e	0.65 TYP			0.0256 TYP		
H	7.65	7.80	7.90	0.301	0.307	0.311
L	0.56	0.75	0.94	0.022	0.030	0.037
Q1	0.74	0.78	0.82	0.029	0.031	0.032

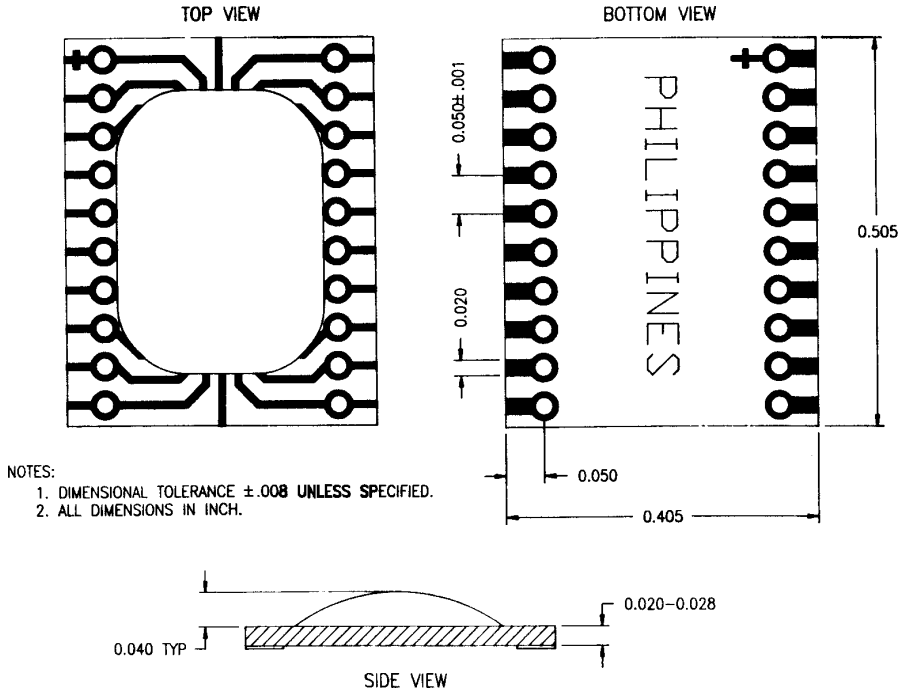
20-Lead Slim Small Outline Package (SSOP)

PACKAGE INFORMATION

I (PCB Chip Carrier)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.



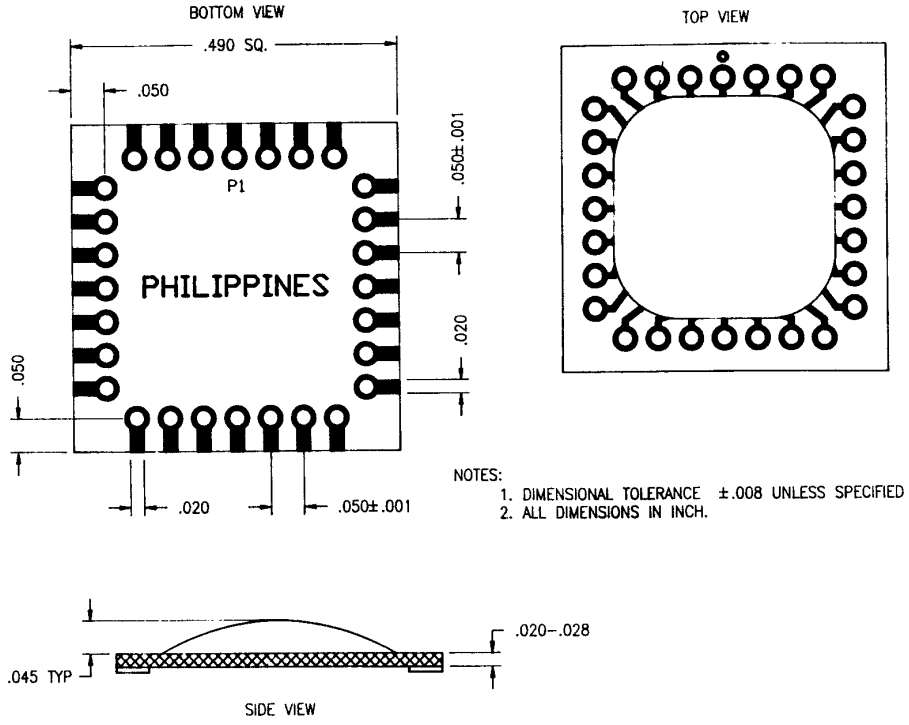
20-Lead PCB Chip Carrier

PACKAGE INFORMATION

I (PCB Chip Carrier) (Continued)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into Alpha 2110 at 63-70°C.
   30 sec. duration each soak.
   Mech. brush after each soak.

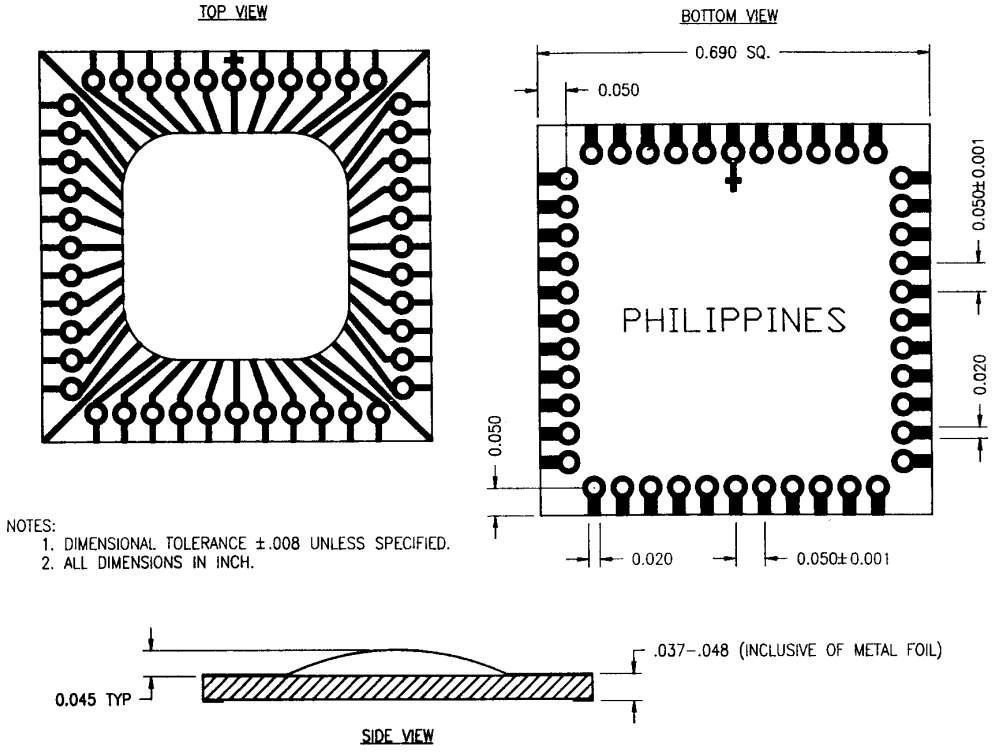


28-Lead PCB Chip Carrier

PACKAGE INFORMATION

I (PCB Chip Carrier) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into Alpha 2110 at 63-70°C. 30 sec. duration each soak. Mech. brush after each soak.



44-Lead PCB Chip Carrier

PACKAGE INFORMATION

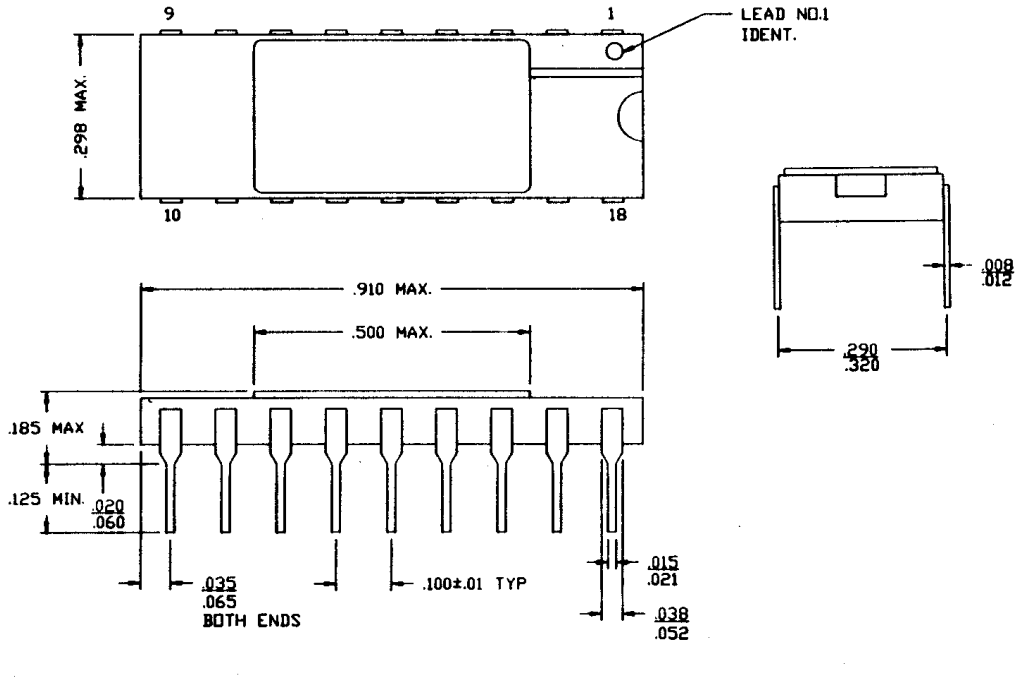
C (Ceramic Sidebrazed)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

2. Mark Permanency — 3X soak into trichlorethane 1.1.1
   1 min. duration each soak.
   Mech. brush after each soak

3. Hermeticity — 5 X 10E-8 CC/SEC
   MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



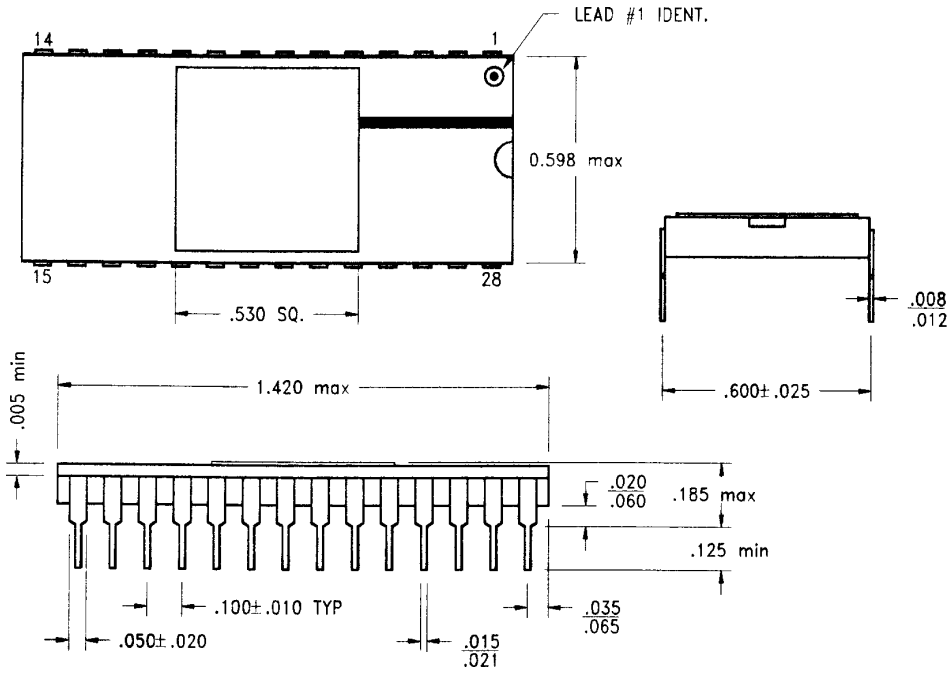
18-Lead Ceramic Sidebrazed Dual-In-Line Package

PACKAGE INFORMATION

C (Ceramic Sidebrazed) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



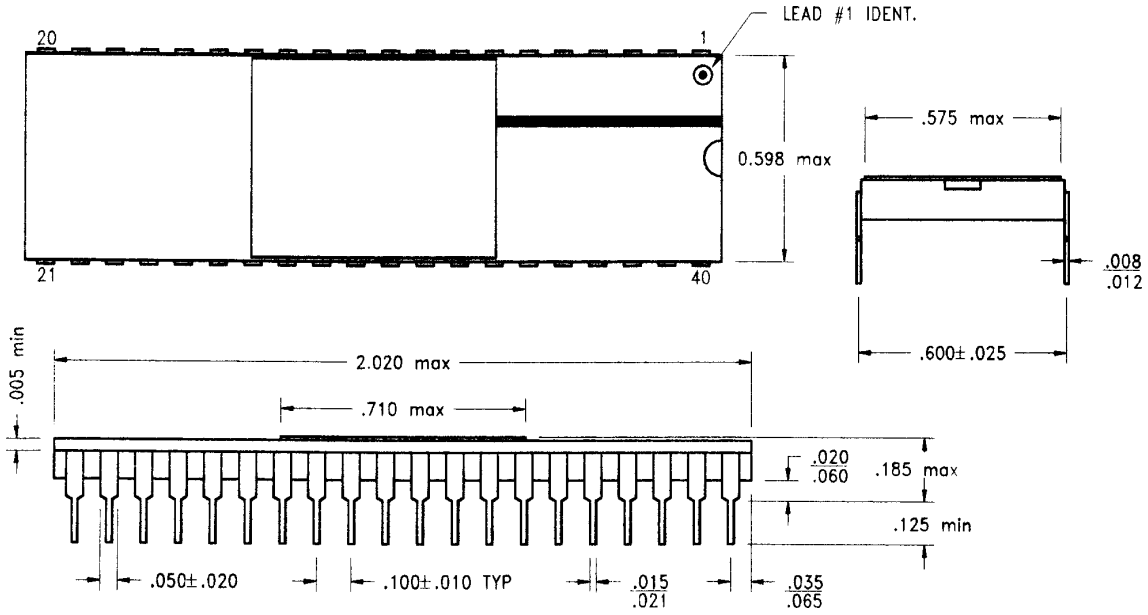
28-Lead Ceramic Sidebrazed Dual-In-Line Package

PACKAGE INFORMATION

C (Ceramic Sidebrazed) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



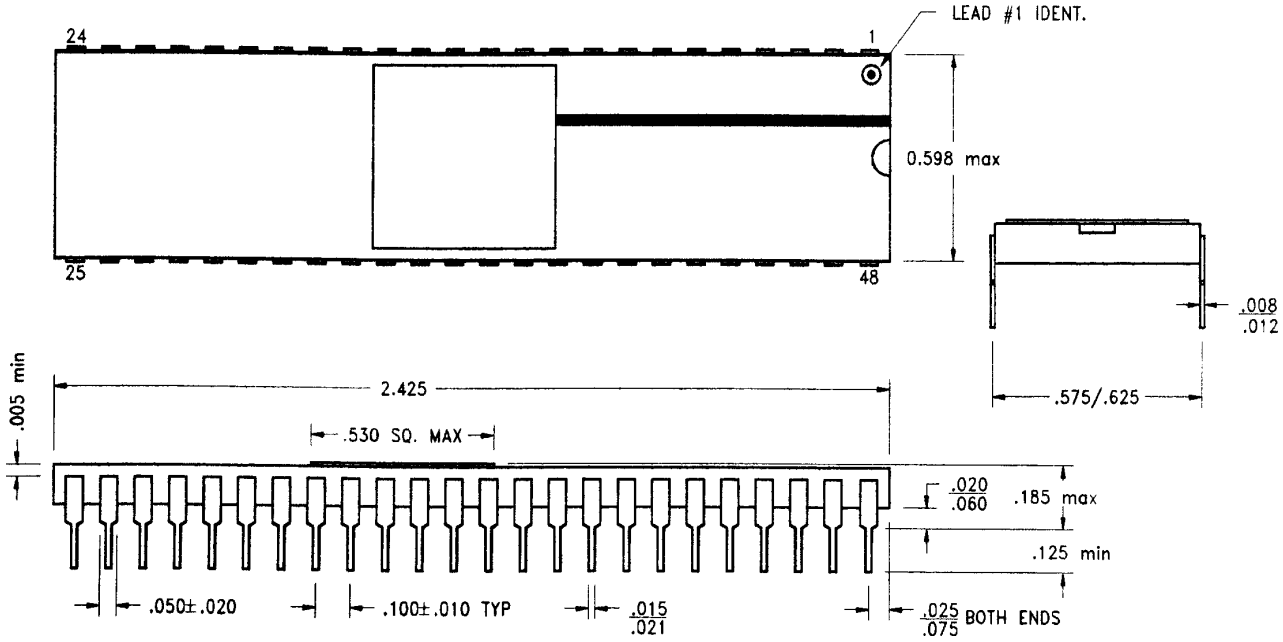
40-Lead Ceramic Sidebrazed Dual-In-Line Package

PACKAGE INFORMATION

C (Ceramic Sidebrazed) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



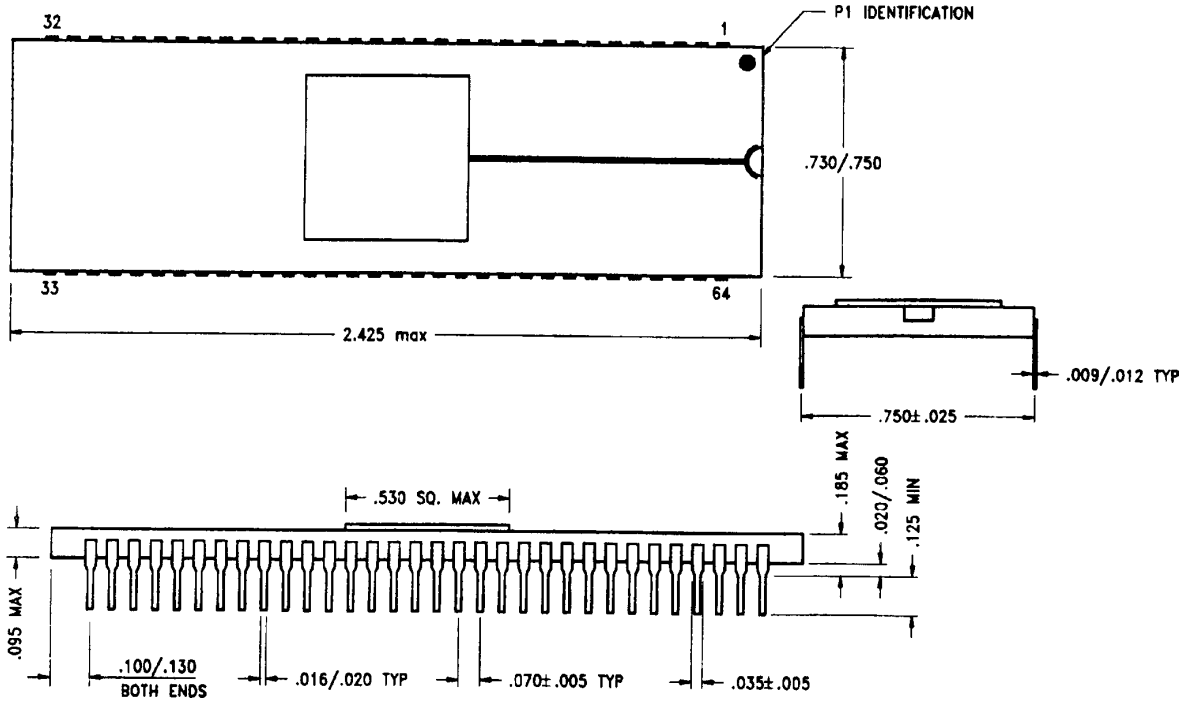
48-Lead Ceramic Sidebrazed Dual-In-Line Package

PACKAGE INFORMATION

C (Ceramic Sidebrazed) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



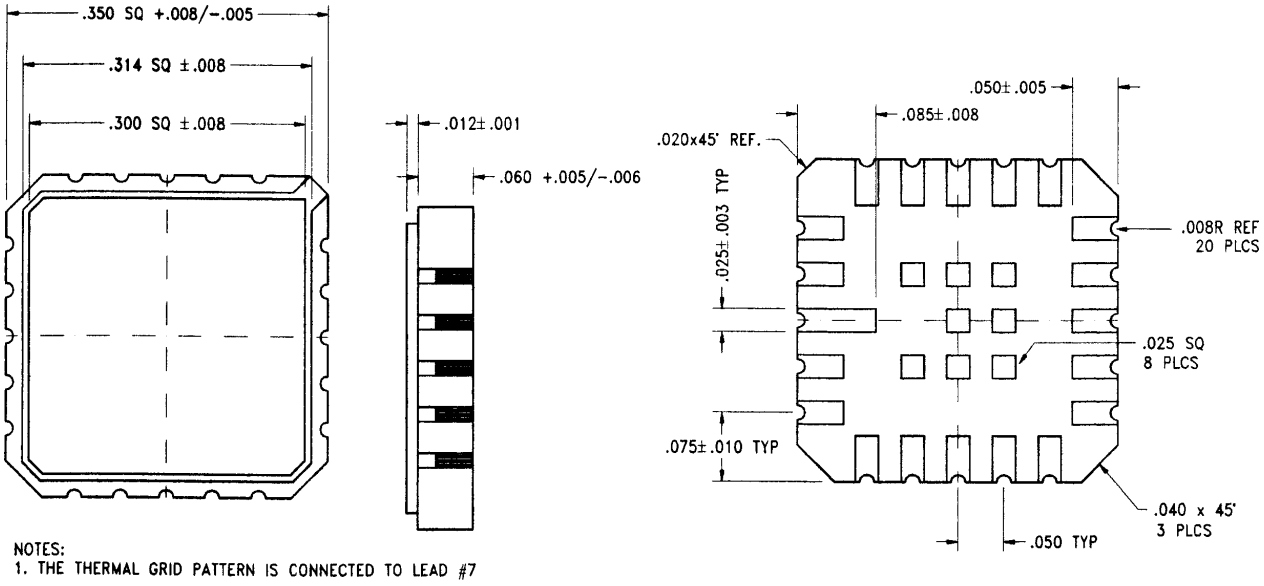
64-Lead Ceramic Sidebrazed Dual-In-Line Package with 0.070" Lead Centers

PACKAGE INFORMATION

LCC (Ceramic Leadless Chip Carrier)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



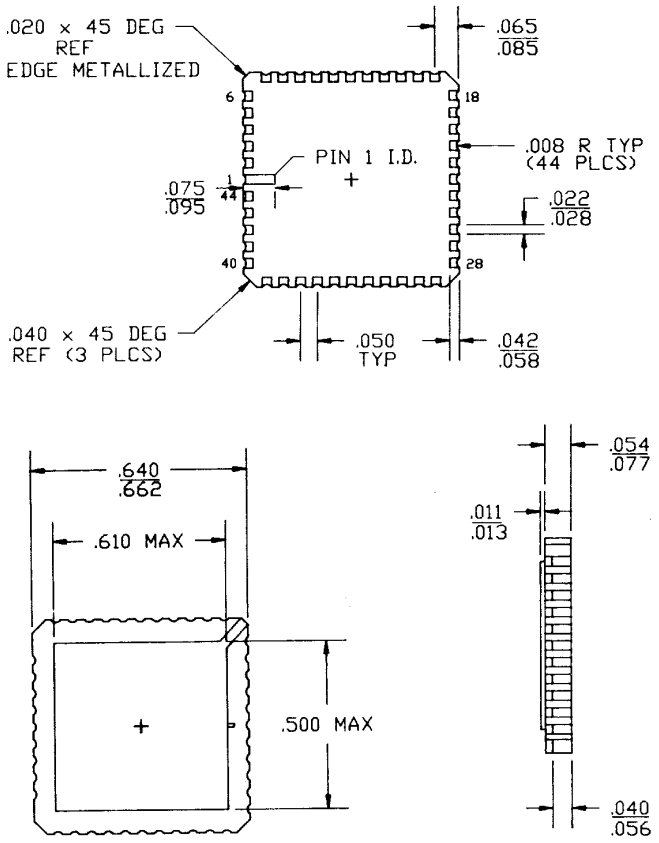
20-Lead Ceramic Leadless Chip Carrier (LCC)

PACKAGE INFORMATION

LCC (Ceramic Leadless Chip Carrier) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



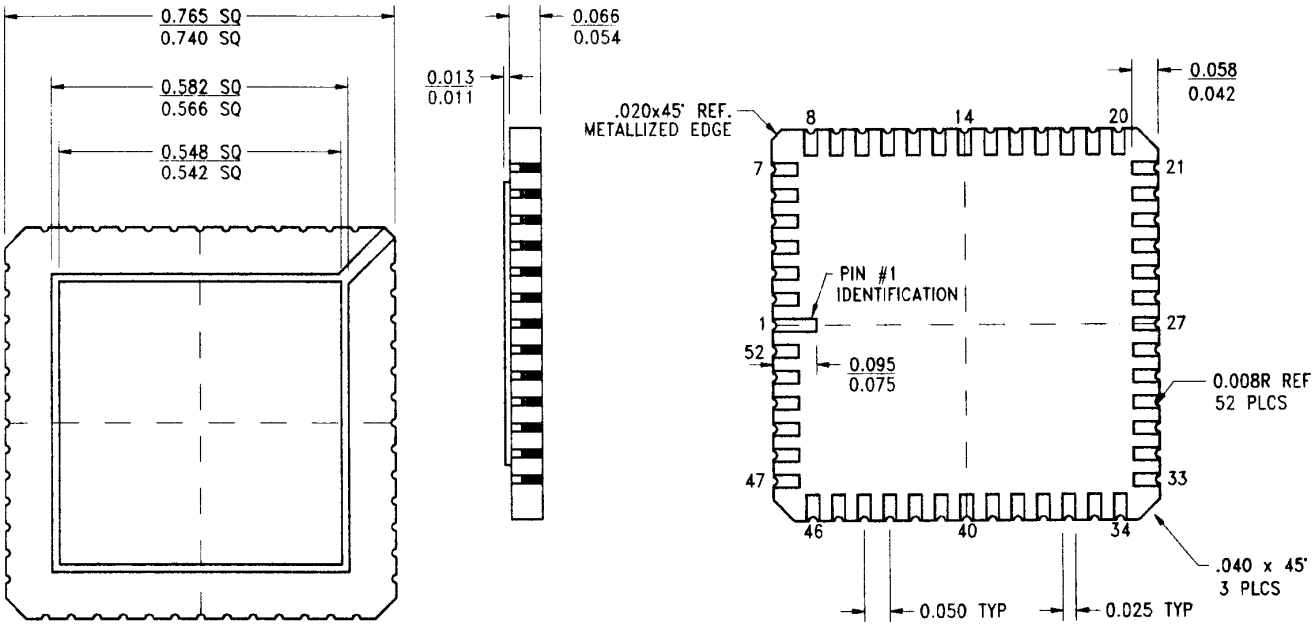
44-Lead Ceramic Leadless Chip Carrier (LCC)

PACKAGE INFORMATION

LCC (Ceramic Leadless Chip Carrier) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



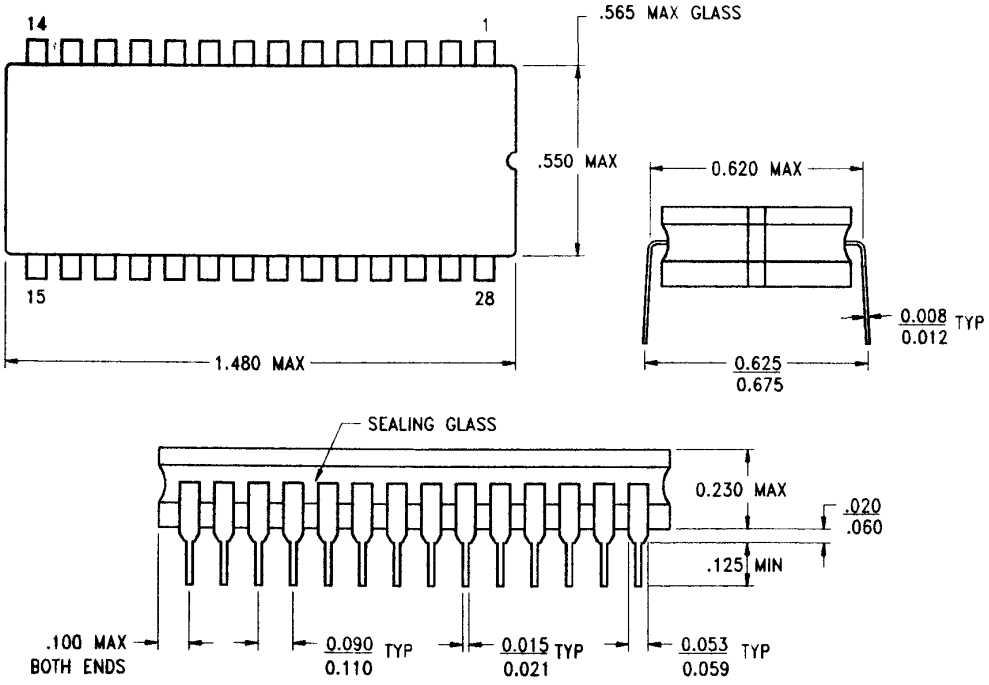
52-Lead Ceramic Leadless Chip Carrier (LCC)

PACKAGE INFORMATION

D (Cerdip)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



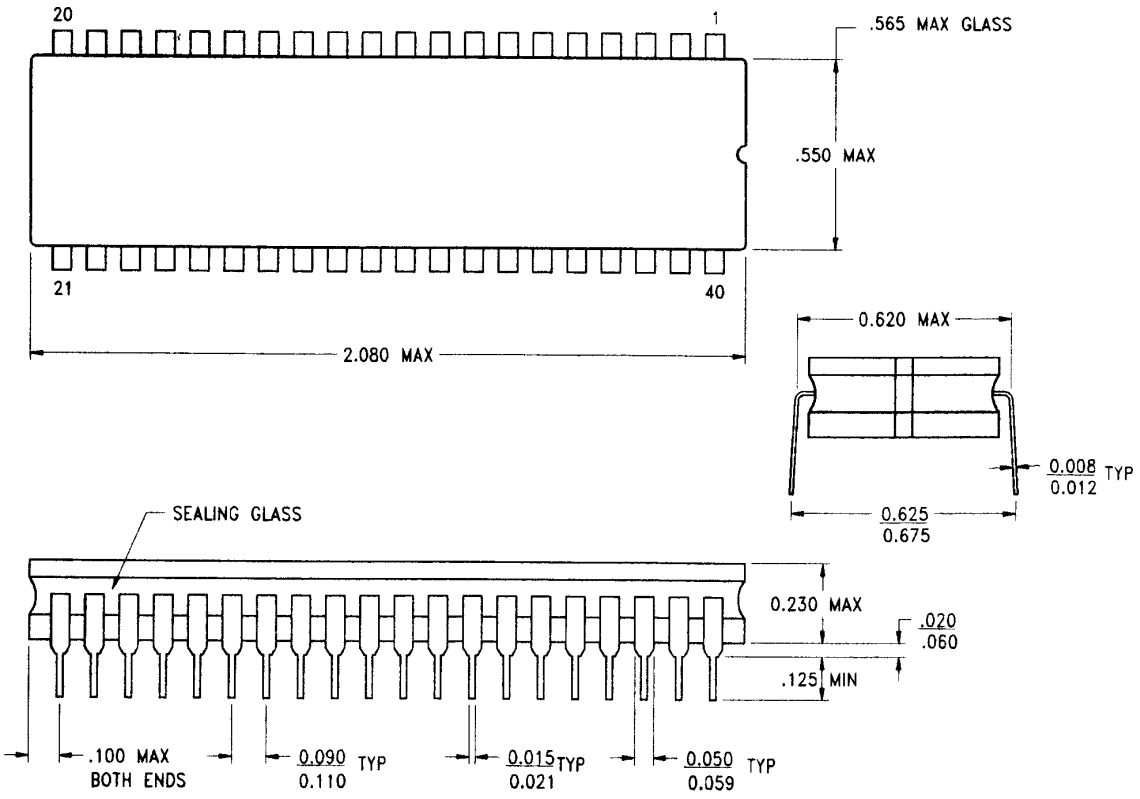
28-Lead Cerdip Dual-In-Line Package

PACKAGE INFORMATION

D (Cerdip) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



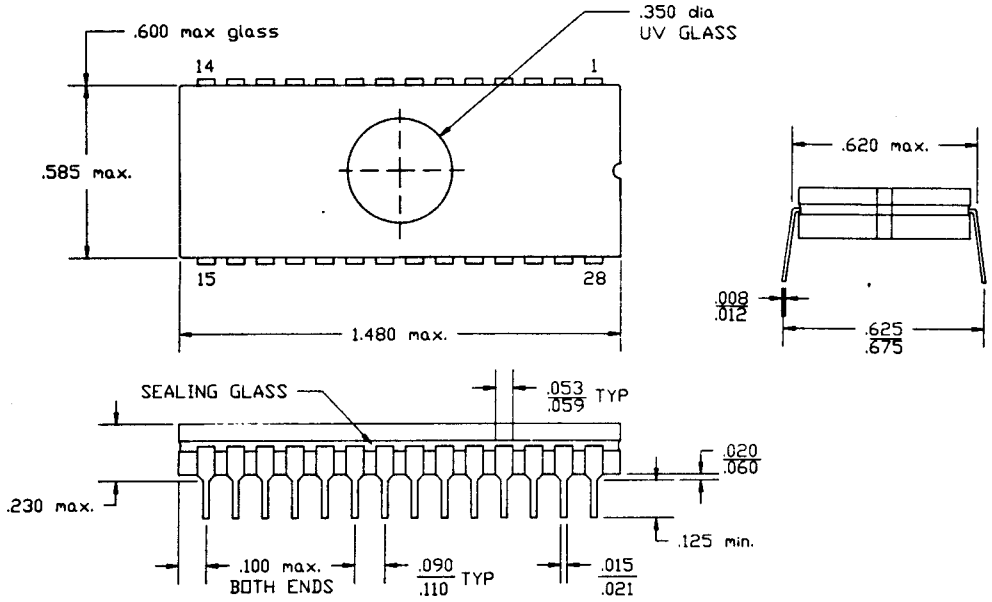
40-Lead Cerdip Dual-In-Line Package

PACKAGE INFORMATION

K (Cerdip Window)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



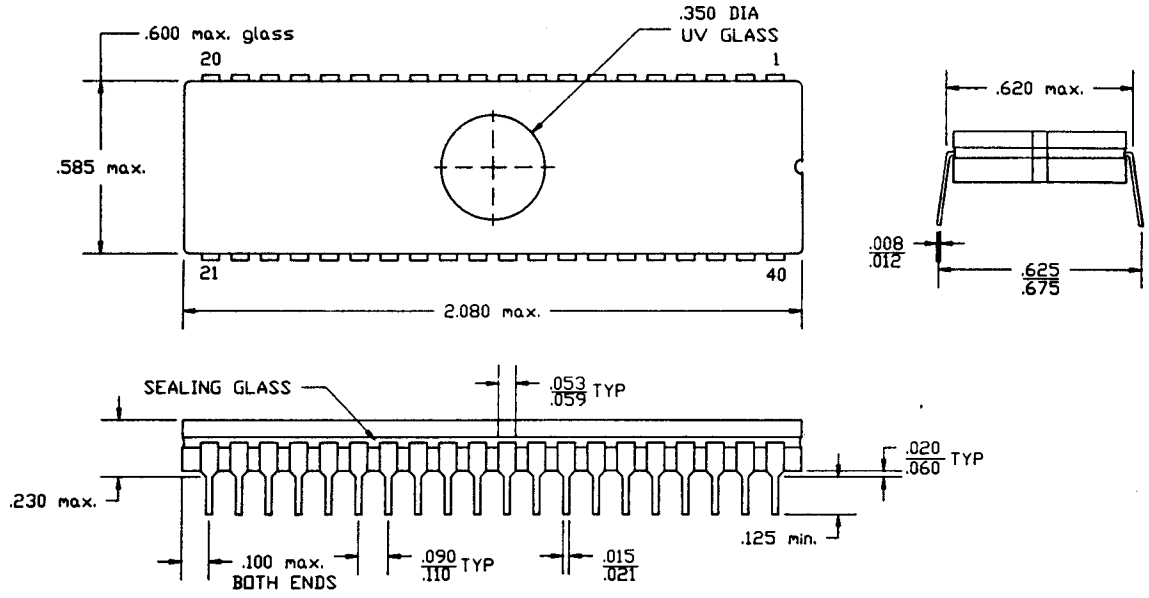
28-Lead Cerdip Window Lid Package

PACKAGE INFORMATION

K (Cerdip Window) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



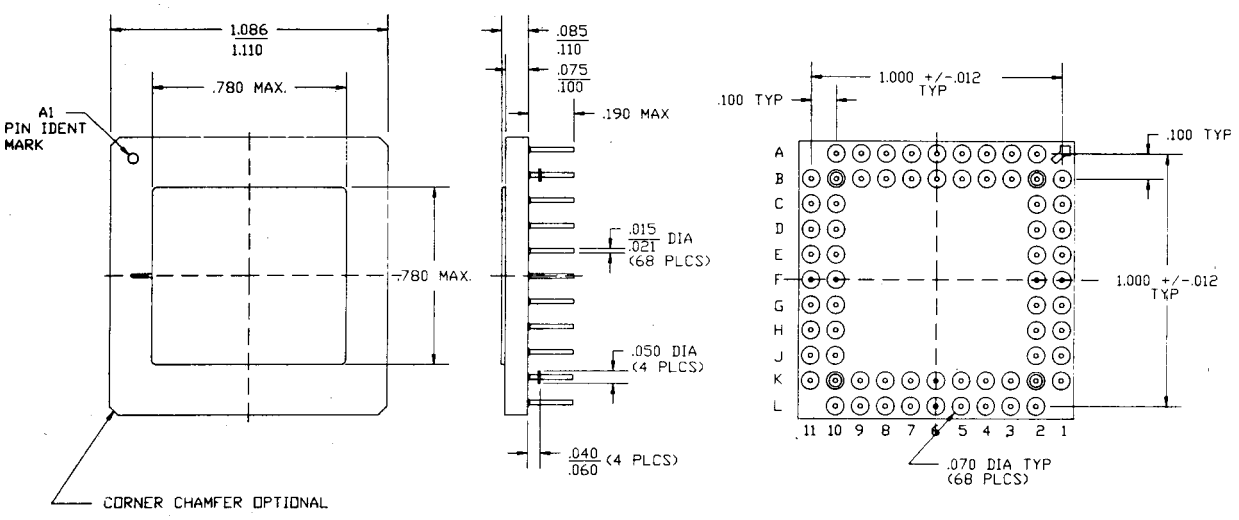
40-Lead Cerdip Window Lid Package

PACKAGE INFORMATION

G (Ceramic Pin Grid Array)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



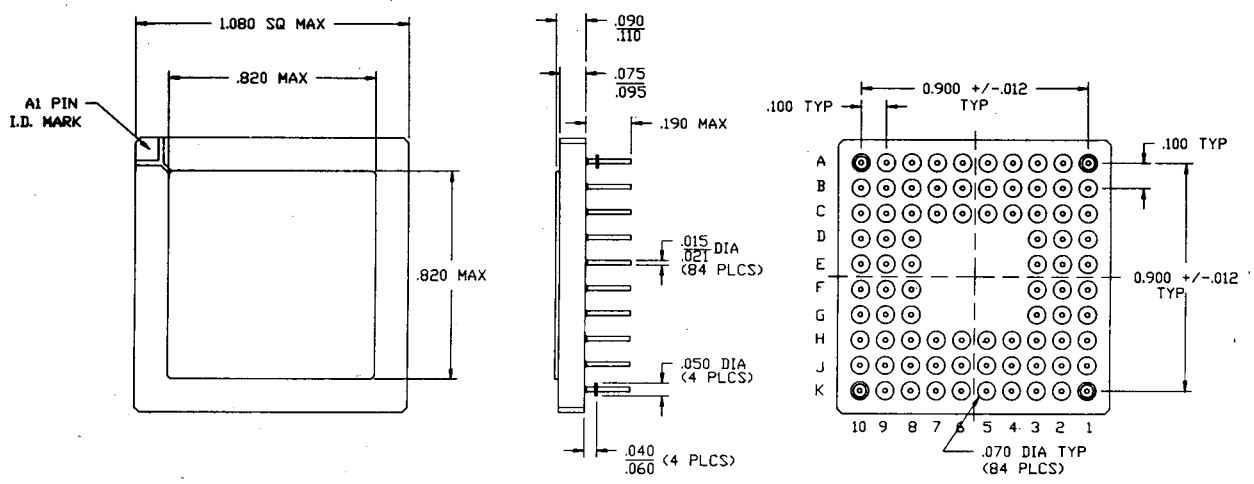
68-Lead Ceramic Pin Grid Array (PGA)

PACKAGE INFORMATION

G (Ceramic Pin Grid Array) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



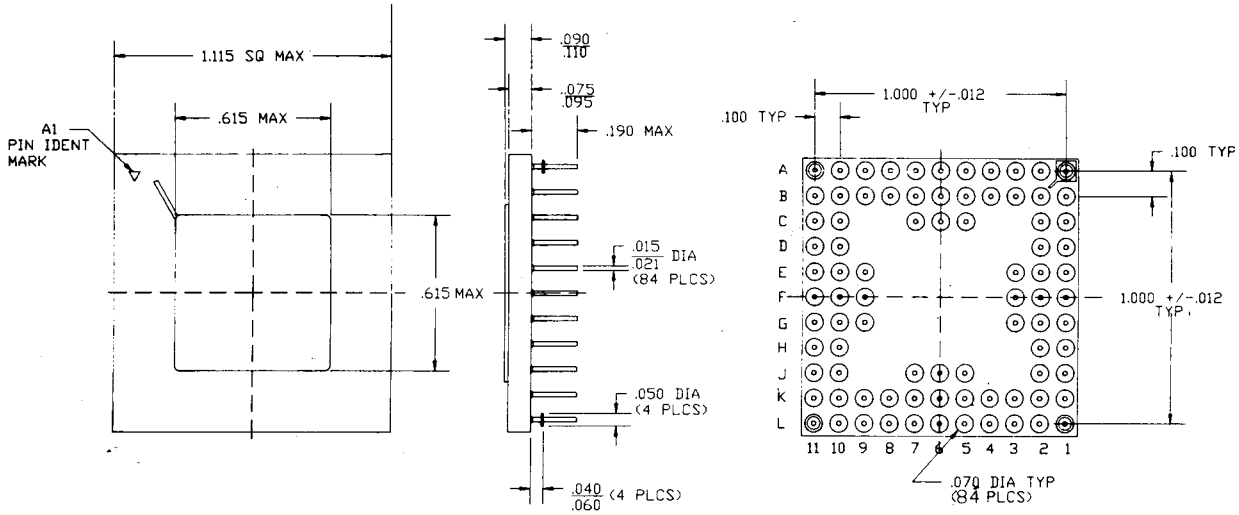
84-Lead Ceramic Pin Grid Array (10X10) (PGA)
Device Z86C12

PACKAGE INFORMATION

G (Ceramic Pin Grid Array)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



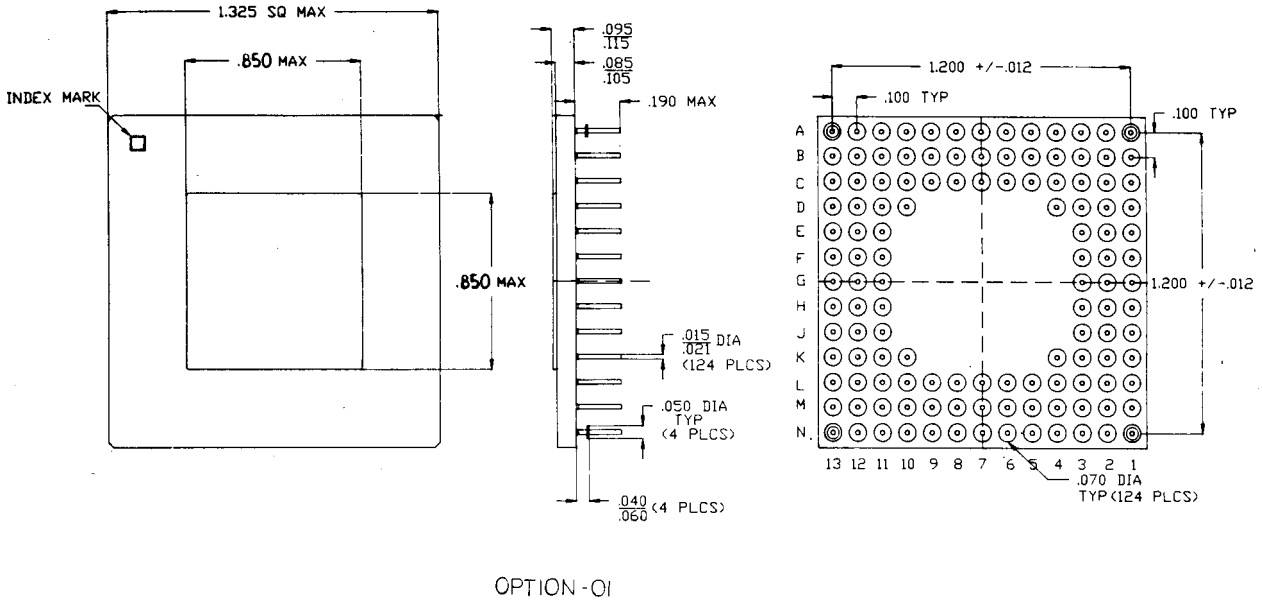
84-Lead Ceramic Pin Grid Array (11X11) (PGA)
Device Z84C90

PACKAGE INFORMATION

G (Ceramic Pin Grid Array) (Continued)

1. Solderability	MIL-STD-883C Method 2003.5 Eight Hours Steam Age
2. Mark Permanency	3X soak into trichlorethane 1.1.1 1 min. duration each soak. Mech. brush after each soak
3. Hermeticity	5 X 10E-8 CC/SEC MIL-STD-883C Method 1014.8 Condition B

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4.



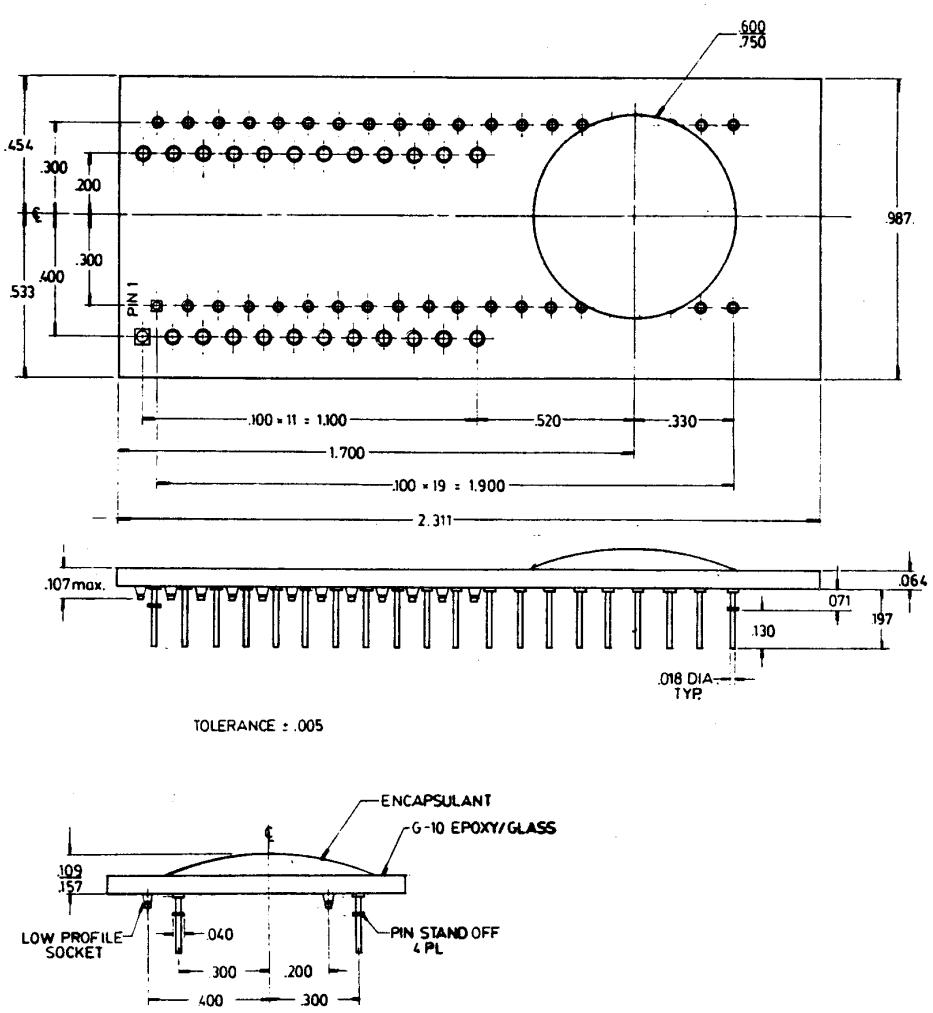
OPTION - OI

124-Lead Ceramic Pin Grid Array (PGA)

PACKAGE INFORMATION

T (Low Profile Protopak)

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4

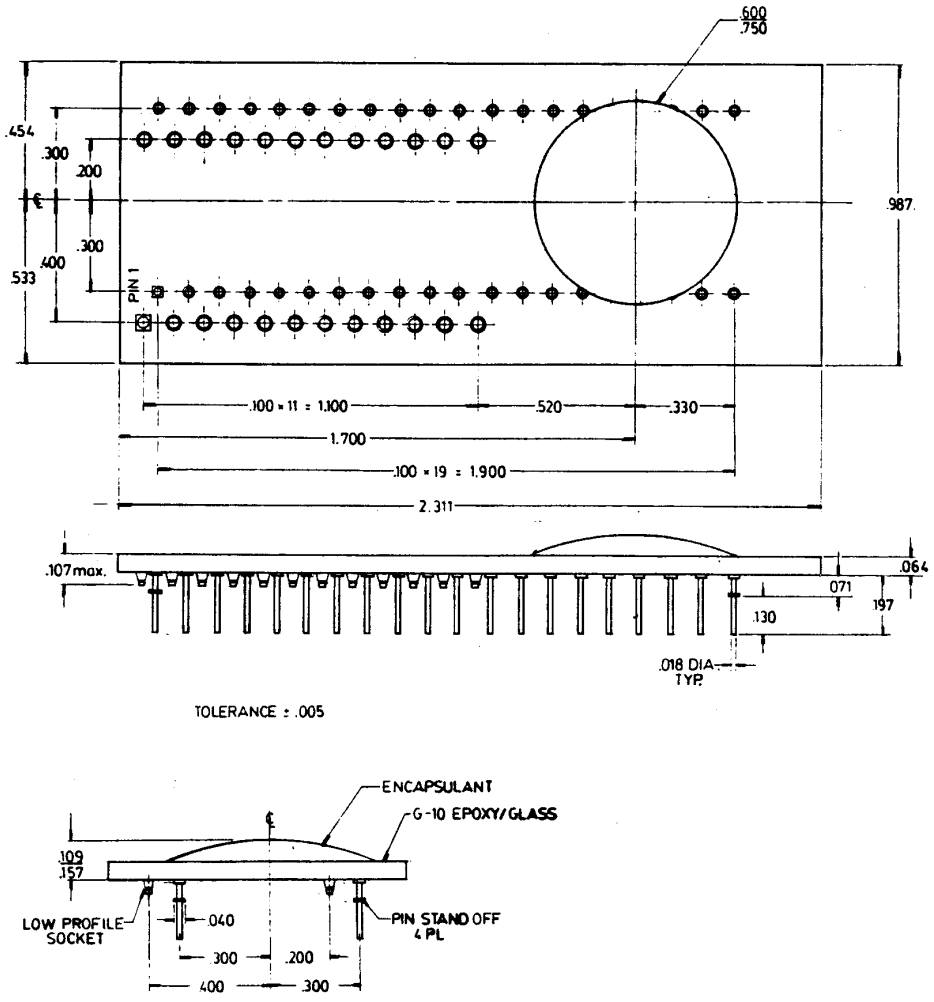


40/24-Lead Low Profile Protopak Package

PACKAGE INFORMATION

T (Low Profile Protopak)

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4



48/28-Lead Low Profile Protopak

PACKAGE INFORMATION

E (Ceramic Window Lid)

1. Solderability — MIL-STD-883C Method 2003.5
   Eight Hours Steam Age

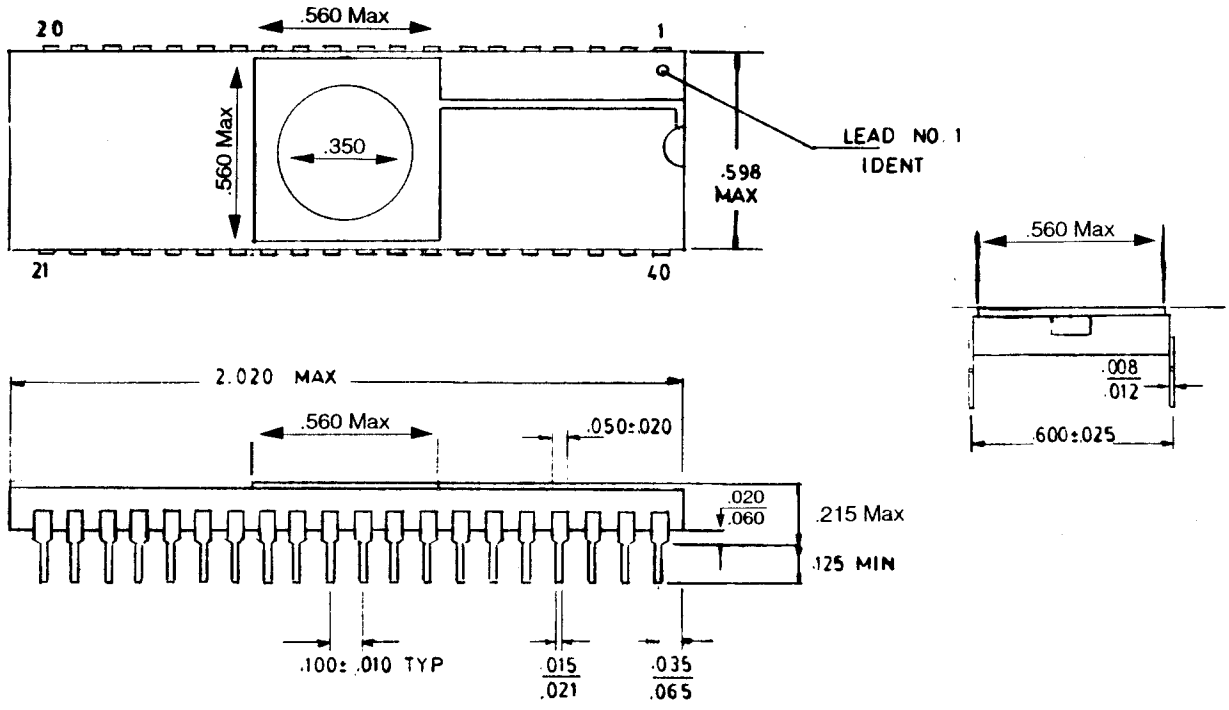
2. Mark Permanency — 3X Soak into trichlorethane 1.1.1
   1 Min. duration each soak
   Mech. brush after each soak

3. Hermeticity — 5X10E - 8 CC/SEC
   MIL-STD-883C Method 1014.8 Condition B

4. Lid will allow ultraviolet light erasure of EPROM circuit.

5. Glass will transmit 60% min. of ultraviolet light at wave length of 2537A.

Note:
Package dimensions are given in inches. To convert to millimeters, multiply by 25.4



40-Lead Ceramic Window Lid Package

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