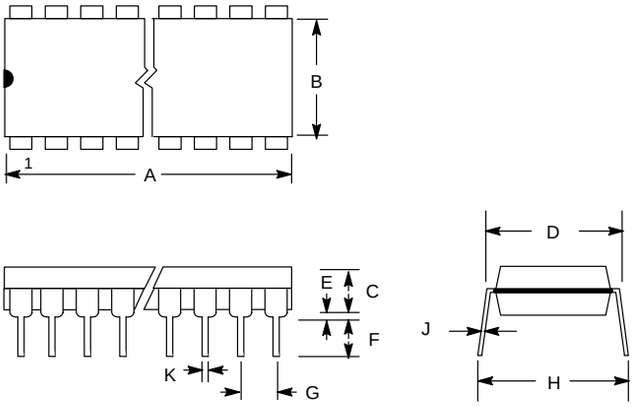
8– TO 28–PIN DIP (300 MIL)



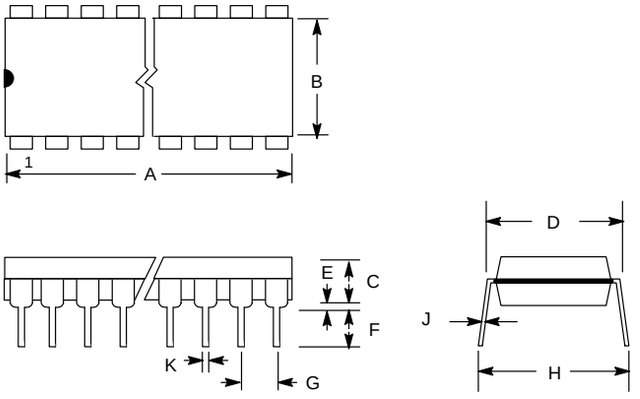
PKG	8-PIN		10-PIN		14-PIN		16-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A IN. MM	0.360 9.14	0.400 10.16	0.480 12.19	0.520 13.21	0.740 18.80	0.780 19.81	0.740 18.80	0.780 19.81
B IN. MM	0.240 6.10	0.260 6.60	0.240 6.10	0.260 6.60	0.240 6.10	0.260 6.60	0.240 6.10	0.260 6.60
C IN. MM	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56
D IN. MM	0.300 7.62	0.325 8.26	0.300 7.62	0.325 8.26	0.300 7.62	0.325 8.26	0.300 7.62	0.325 8.26
E IN. MM	0.015 0.38	0.040 1.02	0.015 0.38	0.040 1.02	0.015 0.38	0.040 1.02	0.015 0.38	0.040 1.02
F IN. MM	0.120 3.04	0.140 3.56	0.110 2.79	0.130 3.30	0.120 3.04	0.140 3.56	0.120 3.04	0.140 3.56
G IN. MM	0.090 2.29	0.110 2.79	0.090 2.29	0.110 2.79	0.090 2.29	0.110 2.79	0.090 2.29	0.110 2.79
H IN MM	0.320 8.13	0.370 9.40	0.320 8.13	0.370 9.40	0.320 8.13	0.370 9.40	0.320 8.13	0.370 9.40
J IN MM	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30
K IN. MM	0.015 0.38	0.021 0.53	0.015 0.38	0.021 0.53	0.015 0.38	0.021 0.53	0.015 0.38	0.021 0.53

Continued on following page.

MECHANICAL DRAWINGS

PKG	18-PIN		20-PIN		24-PIN		28-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A IN. MM	0.890 22.61	0.920 23.36	0.970 24.63	1.040 26.42	1.150 29.21	1.260 32.00	1.345 34.16	1.370 34.80
B IN. MM	0.240 6.10	0.260 6.60	0.240 6.09	0.270 6.86	0.250 6.35	0.270 6.86	0.270 6.85	0.295 7.49
C IN. MM	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56	0.120 3.05	0.140 3.56
D IN. MM	0.300 7.62	0.325 8.26	0.295 7.49	0.325 8.26	0.300 7.62	0.325 8.26	0.300 7.62	0.325 8.26
E IN. MM	0.015 0.38	0.040 1.02	0.015 0.38	0.040 1.02	0.015 0.38	0.040 1.02	0.015 0.38	0.050 1.27
F IN. MM	0.120 3.04	0.140 3.56	0.120 3.04	0.140 3.56	0.125 3.18	0.135 3.48	0.125 3.18	0.135 3.48
G IN. MM	0.090 2.23	0.110 2.79	0.090 2.23	0.110 2.79	0.090 2.23	0.110 2.79	0.090 2.23	0.110 2.79
H IN MM	0.320 8.13	0.370 9.40	0.310 7.87	0.390 9.91	0.320 8.13	0.370 9.40	0.320 8.13	0.370 9.40
J IN MM	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30	0.008 0.20	0.012 0.30
K IN. MM	0.015 0.38	0.021 0.53	0.015 0.38	0.021 0.53	0.015 0.38	0.022 0.56	0.015 0.38	0.022 0.56

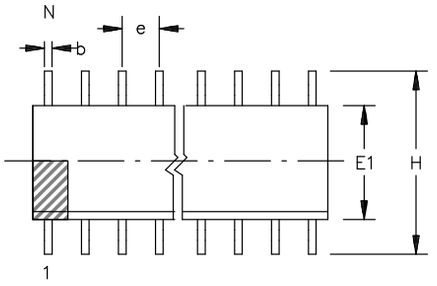
24– TO 40–PIN DIP (600 MIL)

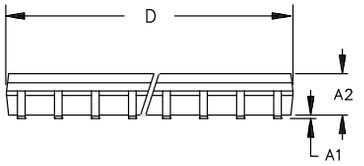


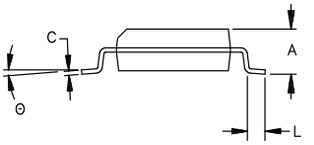
PKG	24-PIN		28-PIN		40-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX
A IN.	1.245	1.270	1.445	1.470	2.050	2.075
MM	31.62	32.25	36.70	37.34	52.07	52.71
B IN.	0.530	0.550	0.530	0.550	0.530	0.550
MM	13.46	13.97	13.46	13.97	13.46	13.97
C IN.	0.140	0.160	0.140	0.160	0.140	0.160
MM	3.56	4.06	3.56	4.06	3.56	4.06
D IN.	0.600	0.625	0.600	0.625	0.600	0.625
MM	15.24	15.88	15.24	15.88	15.24	15.88
E IN.	0.015	0.050	0.015	0.040	0.015	0.040
MM	0.380	1.27	0.380	1.02	0.380	1.02
F IN.	0.120	0.145	0.120	0.145	0.120	0.145
MM	3.05	3.68	3.05	3.68	3.05	3.68
G IN.	0.090	0.110	0.090	0.110	0.090	0.110
MM	2.29	2.79	2.29	2.79	2.29	2.79
H IN	0.625	0.675	0.625	0.675	0.625	0.675
MM	15.88	17.15	15.88	17.15	15.88	17.15
J IN	0.008	0.012	0.008	0.012	0.008	0.012
MM	0.20	0.30	0.20	0.30	0.20	0.30
K IN.	0.015	0.022	0.015	0.022	0.015	0.022
MM	0.38	0.56	0.38	0.56	0.38	.56

MECHANICAL DRAWINGS

8–, 14–, AND 16–PIN SOIC (.150” BODY WIDTH)

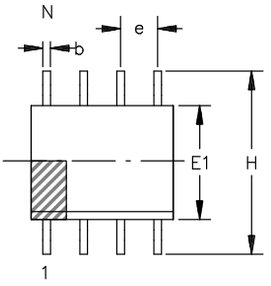


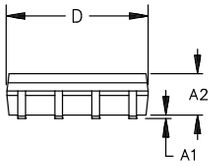


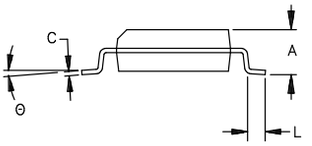


PKG	8-PIN		14-PIN		16-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX
A IN. MM	0.053 1.35	0.069 1.75	0.053 1.35	0.069 1.75	0.053 1.35	0.069 1.75
A1 IN. MM	0.004 0.10	0.010 0.25	0.004 0.10	0.010 0.25	0.004 0.10	0.010 0.25
A2 IN. MM	0.048 1.24	0.062 1.57	0.048 1.24	0.062 1.57	0.048 1.24	0.062 1.57
b IN. MM	0.012 0.030	0.020 0.50	0.012 0.30	0.020 0.50	0.012 0.30	0.020 0.50
C IN MM	0.007 0.17	0.011 0.28	0.007 0.17	0.011 0.28	0.007 0.17	0.011 0.28
D IN. MM	0.188 4.78	0.196 4.98	0.337 8.55	0.344 8.74	0.386 9.80	0.393 9.98
e IN. MM	0.050 BSC 1.27 BSC		0.050 BSC 1.27 BSC		0.050 BSC 1.27 BSC	
E1 IN. MM	0.150 3.81	0.158 4.01	0.150 3.81	0.158 4.01	0.150 3.81	0.158 4.01
H IN. MM	0.230 5.84	0.244 6.20	0.230 5.84	0.244 6.20	0.230 5.84	0.244 6.20
L IN. MM	0.016 0.40	0.050 0.89	0.016 0.40	0.050 0.89	0.016 0.40	0.050 0.89
Θ	0°	8°	0°	8°	0°	8°

8–PIN SOIC (208 MIL)



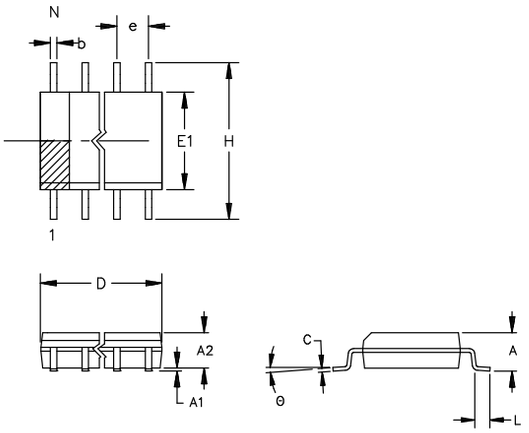




PKG	8-PIN	
DIM	MIN	MAX
A IN. MM	0.072 1.83	0.084 2.13
A1 IN. MM	0.004 0.102	0.010 0.25
A2 IN. MM	0.070 1.78	0.080 2.03
b IN. MM	0.013 0.33	0.020 0.51
C IN. MM	0.006 0.15	0.010 0.25
D IN. MM	0.203 5.16	0.215 5.46
e IN MM	0.050 BSC 1.27 BSC	
E1 IN MM	0.203 5.16	0.213 5.41
H IN. MM	0.302 7.67	0.318 8.07
L IN. MM	0.019 0.48	0.030 0.76
Θ	0°	8°

MECHANICAL DRAWINGS

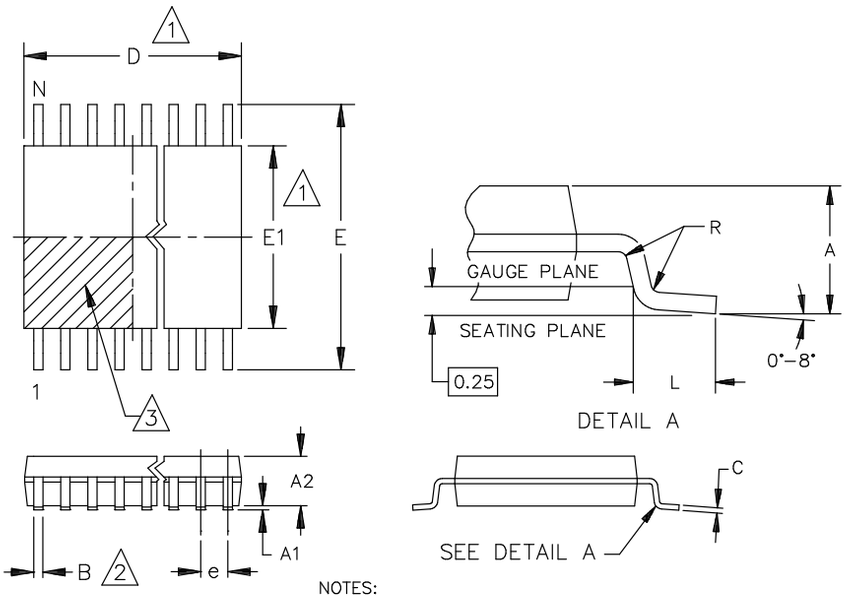
16–, 20–, 24–, 28–PIN SOIC (300 MIL)



The chamfer on the body is optional. If it is not present, a terminal 1 identifier must be positioned so that 1/2 or more of its area is contained in the hatched zone.

PKG	16-PIN		20-PIN		24-PIN		28-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A IN. MM	0.094 2.38	0.105 2.68	0.094 2.38	0.105 2.68	0.094 2.38	0.105 2.68	0.094 2.39	0.105 2.67
A1 IN. MM	0.004 0.102	0.012 0.30	0.004 0.102	0.012 0.30	0.004 0.102	0.012 0.30	0.004 0.102	0.012 0.30
A2 IN. MM	0.089 2.26	0.095 2.41	0.089 2.26	0.095 2.41	0.089 2.26	0.095 2.41	0.089 2.26	0.095 2.41
b IN. MM	0.013 0.33	0.020 0.51	0.013 0.33	0.020 0.51	0.013 0.33	0.020 0.51	0.013 0.33	0.020 0.51
C IN MM	0.009 0.229	0.013 0.33	0.009 0.229	0.013 0.33	0.009 0.229	0.013 0.33	0.009 0.229	0.013 0.33
D IN. MM	0.398 10.11	0.412 10.46	0.498 12.65	0.511 12.99	0.598 15.19	0.612 15.54	0.698 17.73	0.712 18.08
e IN. MM	0.050 BSC 1.27 BSC						0.050 BSC 1.27 BSC	
E1 IN. MM	0.290 7.37	0.300 7.62	0.290 7.37	0.300 7.62	0.290 7.37	0.300 7.62	0.290 7.37	0.300 7.62
H IN MM	0.398 10.11	0.416 10.57	0.398 10.11	0.416 10.57	0.398 10.11	0.416 10.57	0.398 10.11	0.416 10.57
L IN MM	0.016 0.40	0.040 1.02	0.016 0.406	0.040 1.20	0.016 0.40	0.040 1.02	0.016 0.40	0.040 1.02
Θ	0°	8°	0°	8°	0°	8°	0°	8°

SSOP PACKAGE



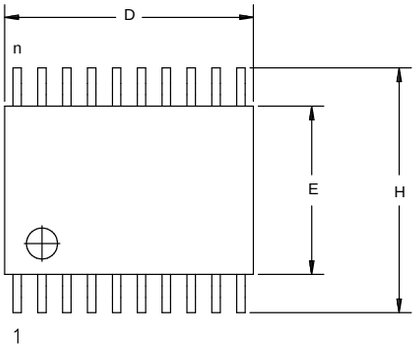
NOTES:

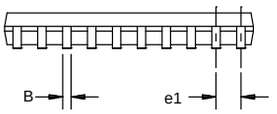
1. DIMENSIONS D & E1 DO NOT INCLUDE MOLD FLASH OR PROTRUSIONS, BUT DO INCLUDE MOLD MISMATCH AND ARE MEASURED AT THE PARTING LINE; MOLD FLASH OR PROTRUSION SHALL NOT EXCEED 0.20 MM PER SIDE.
2. DIMENSION B DOES NOT INCLUDE DAMBAR PROTRUSIONS. DAMBAR PROTRUSION TO BE 0.13 MM TOTAL IN EXCESS OF B AT MAXIMUM MATERIAL CONDITION.
3. VISUAL INDEX FEATURE WITHIN CROSSHATCHED AREA.

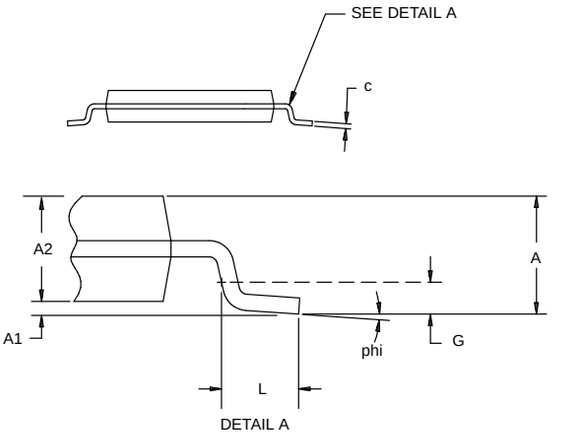
PKG	14/16-PIN		20–PIN		24–PIN		28–PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A	–	2.00	–	2.00	–	2.00	–	2.00
A1	0.05	0.25	0.05	0.25	0.05	0.25	0.05	0.25
A2	1.65	1.85	1.65	1.85	1.65	1.85	1.65	1.85
B	0.22	0.38	0.22	0.38	0.22	0.38	0.22	0.38
C	0.09	0.21	0.09	0.21	0.09	0.21	0.09	0.21
D	5.90	6.50	6.90	7.50	7.90	8.50	9.90	10.50
E	7.40	8.20	7.40	8.20	7.40	8.20	7.40	8.20
E1	5.00	5.60	5.00	5.60	5.00	5.60	5.00	5.60
e	0.65 BSC		0.65 BSC		0.65 BSC		0.65 BSC	
L	0.55	0.95	0.55	0.95	0.55	0.95	0.55	0.95
R	0.09	–	0.09	–	0.09	–	0.09	–

MECHANICAL DRAWINGS

–14, –20–PIN TSSOP

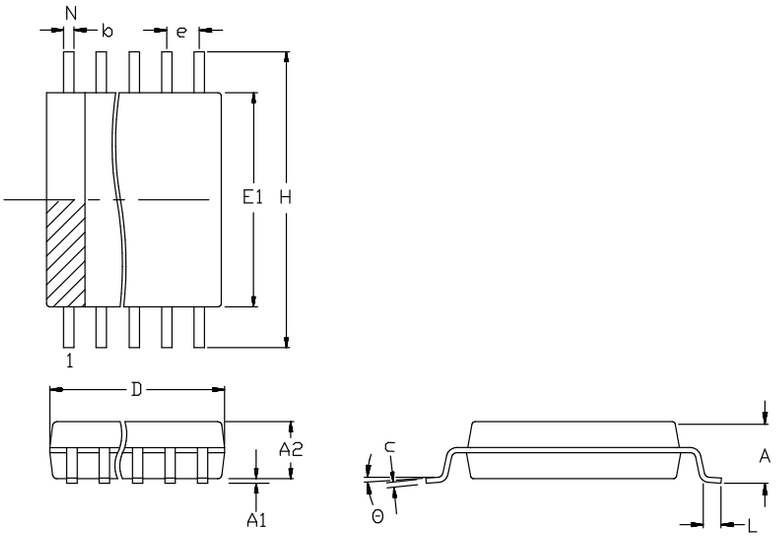






DIM	14–PIN		20–PIN	
	MIN	MAX	MIN	MAX
A MM	–	1.10	–	1.10
A1 MM	0.05	–	0.05	–
A2 MM	0.75	1.05	0.75	1.05
C MM	0.09	0.18	0.09	0.18
L MM	0.50	0.70	0.50	0.70
e1 MM	0.65 BSC		0.65 BSC	
B MM	0.18	0.30	0.18	0.30
D MM	4.90	5.10	6.40	6.90
E MM	4.40 NOM		4.40 NOM	
G MM	0.25 REF		0.25 REF	
H MM	6.25	6.55	6.25	6.55
phi	0°	8°	0°	8°
n	14		20	

24– AND 28–PIN 330 MIL SOIC

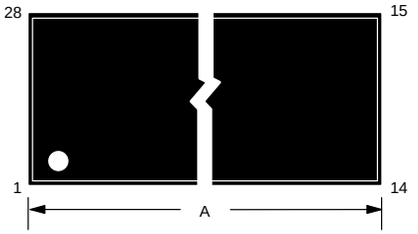


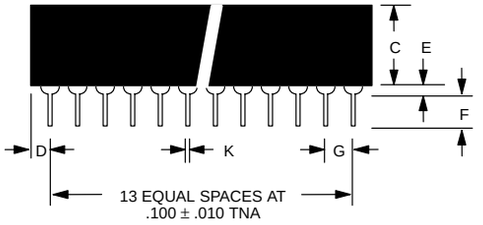
The chamfer on the body is optional. If it is not present, a terminal 1 identifier must be positioned so that 1/2 or more of its area is contained in the hatched zone.

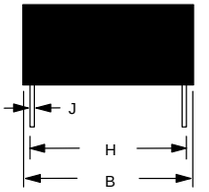
PKG	330 MIL BODY				350 MIL BODY	
	24-PIN		28-PIN		28-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX
A IN. MM	0.106 TYP 2.7				0.090 2.29	0.124 3.15
A1 IN. MM	.007 .19	.008 .21	0.007 0.19	0.008 0.21	0.002 0.051	0.014 0.356
A2 IN. MM	.0925 2.35	.104 2.65	0.093 2.35	0.104 2.65	0.086 2.18	0.110 2.79
b IN. MM	.012 .30	0.20 0.50	0.012 0.30	0.020 0.50	0.014 0.36	0.020 0.51
c IN MM	.004 .10	.008 0.20	0.004 0.10	0.008 0.20	0.006 0.152	0.013 0.32
D IN. MM	.594 15.10	.602 15.30	0.697 17.7	0.705 17.9	0.706 17.93	0.728 18.49
e IN. MM	0.050 BSC 1.27				0.050 BSC 1.27	
E1 IN. MM	.327 8.30	.335 8.50	0.327 8.3	0.335 8.5	0.338 8.58	0.350 8.89
H IN MM	0.452 11.5	.477 12.1	0.452 11.5	0.477 12.1	0.460 11.68	0.480 12.19
L IN. MM	0.039 TYP 1.0		0.039 TYP 1.0		0.020 0.51	0.050 1.27
Θ	0°	8°	0°	8°	0°	8°

MECHANICAL DRAWINGS

28–PIN (720 MIL) MODULE

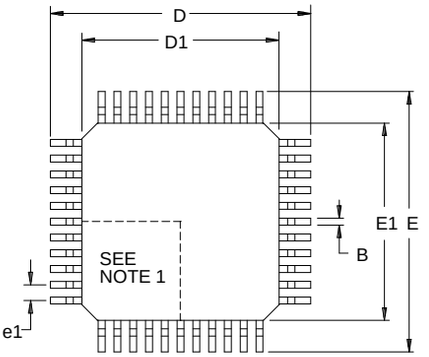






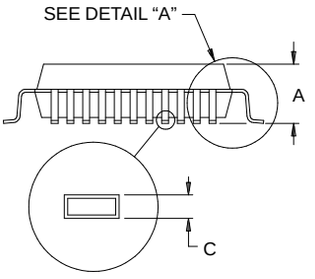
PKG	28-PIN	
DIM	MIN	MAX
A IN.	1.520	1.540
MM	38.61	39.12
B IN.	0.695	0.720
MM	17.65	18.29
C IN.	0.350	0.375
MM	8.89	9.52
D IN.	0.100	0.130
MM	2.54	3.30
E IN.	0.015	0.030
MM	0.38	0.76
F IN.	0.110	0.140
MM	2.79	3.56
G IN.	0.090	0.110
MM	2.29	2.79
H IN.	0.590	0.630
MM	14.99	16.00
J IN.	0.008	0.012
MM	0.20	0.30
K IN.	0.015	0.021
MM	0.38	0.53

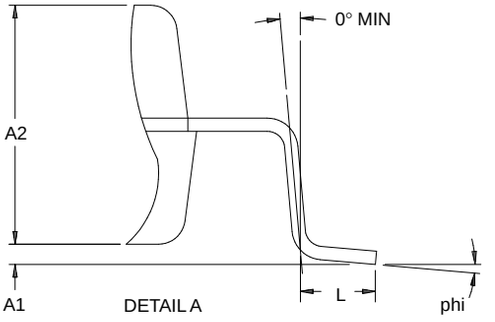
44–PIN METRIC QUAD FLAT PACK (PRELIMINARY)



NOTES:

1. DETAILS OF PIN 1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.

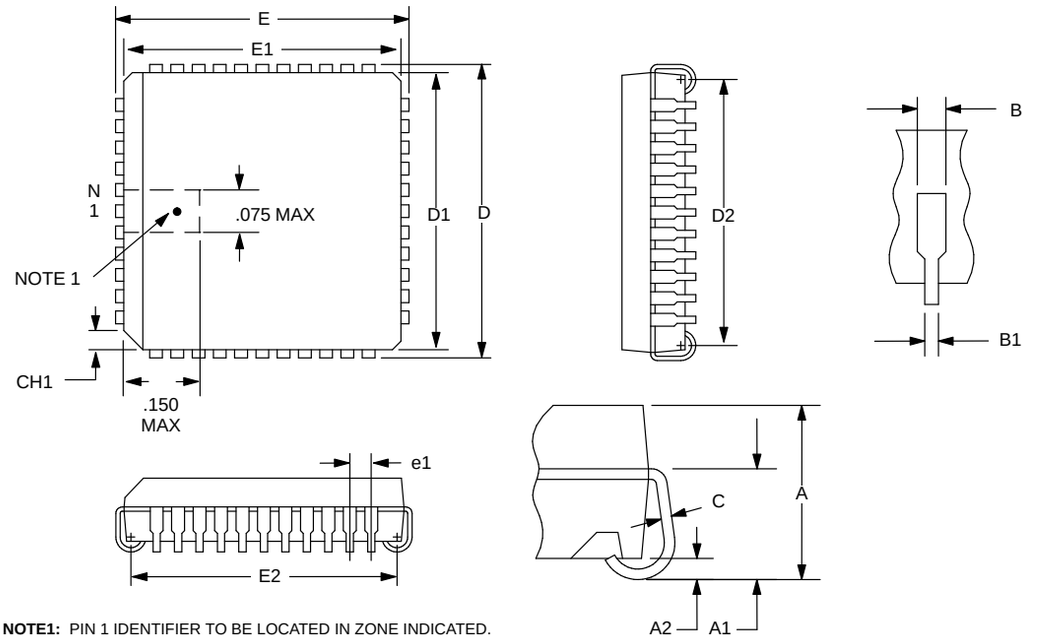




PKG	10 X 10 X 2 BODY		14 X 14 BODY	
DIM	MIN	MAX	MIN	MAX
A MM	–	2.45	0.50	3.10
A1 MM	0.10	–	0.05	–
B MM	0.30	0.45	0.20	0.50
C MM	0.13	0.23	0.10	0.20
D MM	13.65	14.30	17.20	18.00
E MM	13.65	14.30	17.20	18.00
D1 MM	9.90	10.10	13.80	14.20
E1 MM	9.90	10.10	13.80	14.20
L MM	0.63	1.03	0.50	1.10
e1 MM	0.80 BSC		1.00 BSC	
phi	0°	8°	0°	12°

MECHANICAL DRAWINGS

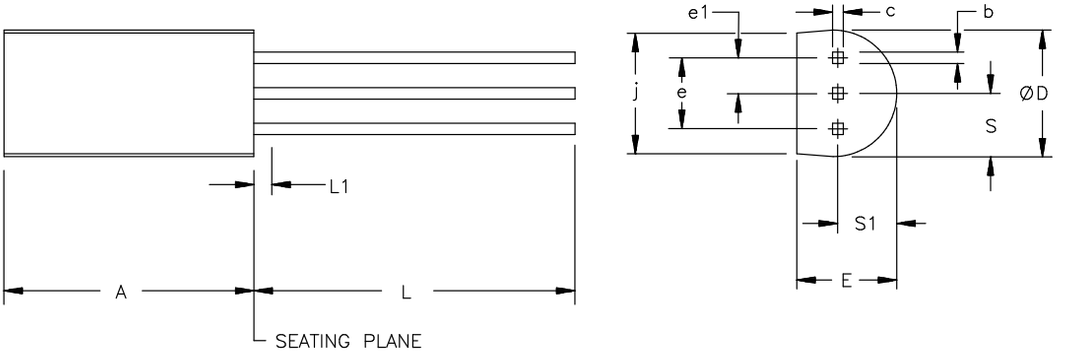
44–PIN PLCC



NOTE1: PIN 1 IDENTIFIER TO BE LOCATED IN ZONE INDICATED.

DIM	INCHES	
	MIN	MAX
A	0.165	0.180
A1	0.090	0.120
A2	0.020	–
B	0.026	0.033
B1	0.013	0.021
C	0.009	0.012
CH1	0.042	0.048
D	0.685	0.695
D1	0.650	0.656
D2	0.590	0.630
E	0.685	0.695
E1	0.650	0.656
E2	0.590	0.630
e1	0.050 BSC	

PR35 PACKAGE



NOTES:

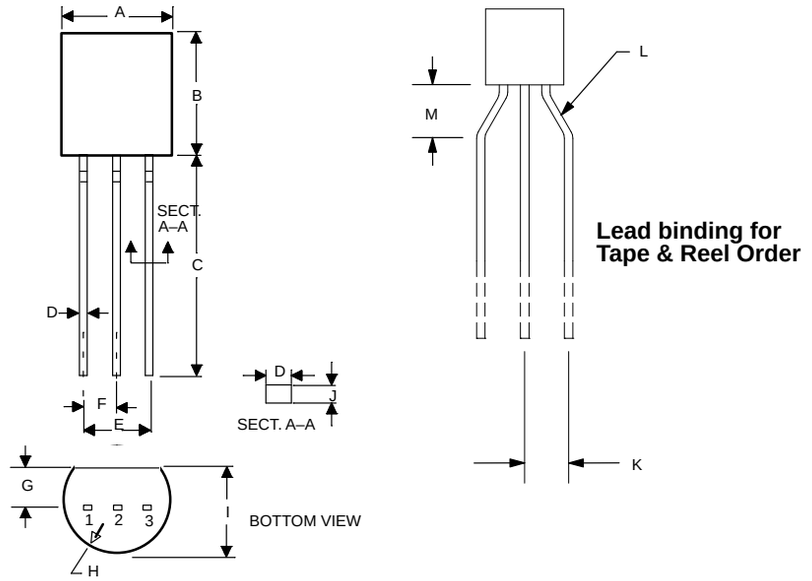
1. TERMINAL DIMENSIONS ARE UNCONTROLLED WITHIN L1.
2. S DIMENSION IS DISTANCE FROM TRUE POSITION CENTER LINE OF THE MIDDLE LEAD POSITION TO THE EXTREMITY OF THE BODY.
3. FLAT INDEX SURFACE FOR MAKING.

PKG	PR35			
DIM	MIN	TYP	MAX	NOTE
A in. mm	0.348 8.84	0.350 8.89	0.353 8.97	
b IN. MM	0.015 0.38	–	0.022 0.56	
c IN. MM	0.014 0.36	–	0.020 0.51	
D IN. MM	0.178 4.52	0.180 4.57	0.183 4.65	
E IN. MM	0.115 2.92	0.120 3.05	0.125 3.18	
e IN. MM	0.095 2.41	0.100 2.54	0.105 2.67	
e1 IN. MM	0.045 1.14	0.050 1.27	0.055 1.40	
j IN. MM	0.160 4.06	–	–	3
L IN. MM	0.420 10.67	–	–	
L1 IN. MM	–	–	0.050 1.27	1
S IN. MM	0.083 2.11	0.090 2.29	0.099 2.51	2
S1 IN. MM	0.080 2.03	0.0825 2.10	0.090 2.29	2

56–G0004–001

MECHANICAL DRAWINGS

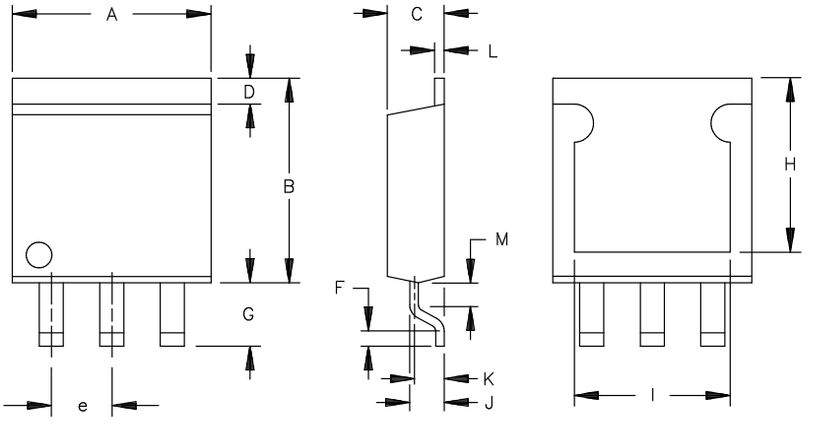
TO-92 PACKAGE



Lead binding for Tape & Reel Order

PKG	TO-92	
DIM	MIN	MAX
A IN. MM	0.175 4.45	0.195 4.96
B IN. MM	0.170 4.32	0.195 4.96
C IN. MM	0.500 12.70	0.610 15.49
D IN. MM	0.016 0.406	0.022 0.559
E IN. MM	0.095 2.41	0.105 2.67
F IN. MM	0.045 1.14	0.060 1.52
G IN. MM	0.45 1.14	0.060 1.52
H IN MM	0.085 2.16	0.095 2.41
I IN MM	0.130 3.30	0.155 3.94
J IN MM	0.014 0.35	0.020 0.51
K IN MM	0.093 2.36	0.115 2.92
L IN MM	45°	60°
M IN MM	0.118 TYPICAL 3.00	

3L D2PAK (TO–220 TABLESS)

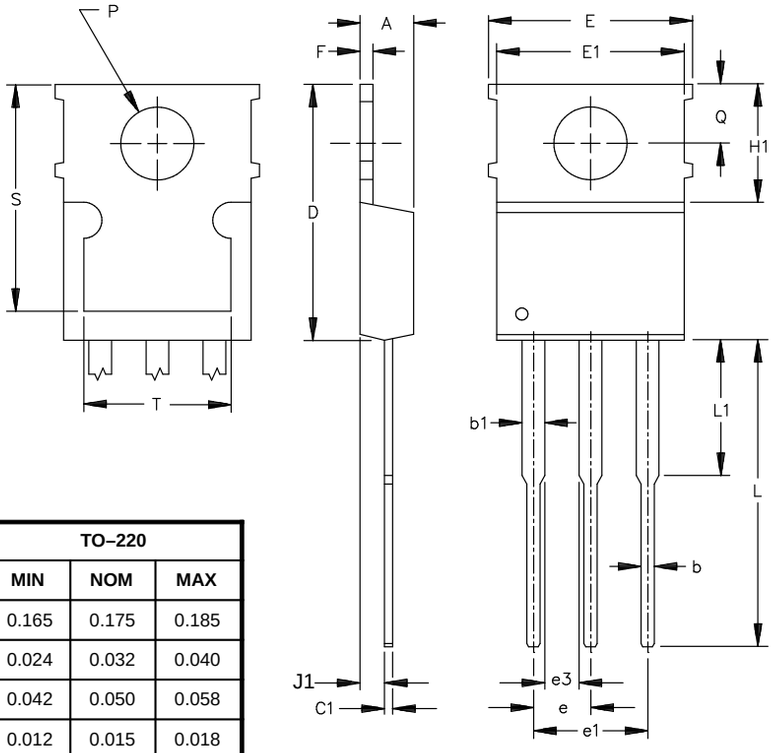


NOTES:
1. Dimensions F and M are measured to the center of radius.
2. All dimensions are shown in inches.

PKG	TO–220		
DIM	MIN	NOM	MAX
A	0.386	0.396	0.406
B	0.410	0.420	0.430
C	0.160	0.170	0.180
D	0.035	0.045	0.055
e	0.095	0.105	0.115
F	0.025	0.035	0.045
G	0.125	0.135	0.145
H	0.265	0.275	0.285
I	0.195	0.205	0.215
J	0.088	0.098	0.108
K	0.080	0.090	0.100
L	0.040	0.050	0.060
M	0.070	0.080	0.090

MECHANICAL DRAWINGS

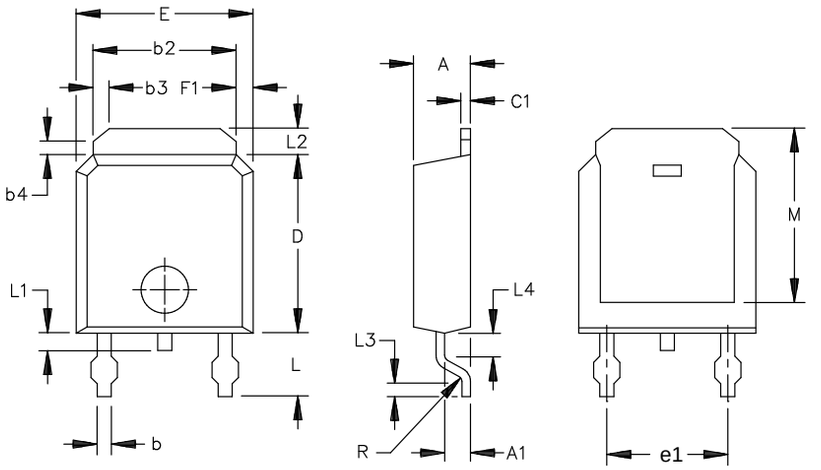
3L TO–220



PKG	TO–220		
DIM	MIN	NOM	MAX
A	0.165	0.175	0.185
b	0.024	0.032	0.040
b1	0.042	0.050	0.058
C1	0.012	0.015	0.018
D	0.573	0.588	0.603
E	0.394	0.404	0.414
E1	0.390	0.400	0.410
e	0.090	0.100	0.110
e1	0.190	0.200	0.210
e3	0.045	0.050	0.055
F	0.045	0.050	0.055
H1	0.236	0.248	0.260
J1	0.095	0.105	0.115
L	0.535	0.545	0.555
L1	0.220	0.230	0.240
P	0.146	0.151	0.156
Q	0.100	0.108	0.116
S	0.465	0.475	0.485
T	0.195	0.205	0.215

All dimensions are shown in inches.

3L DPAK (TO–252)

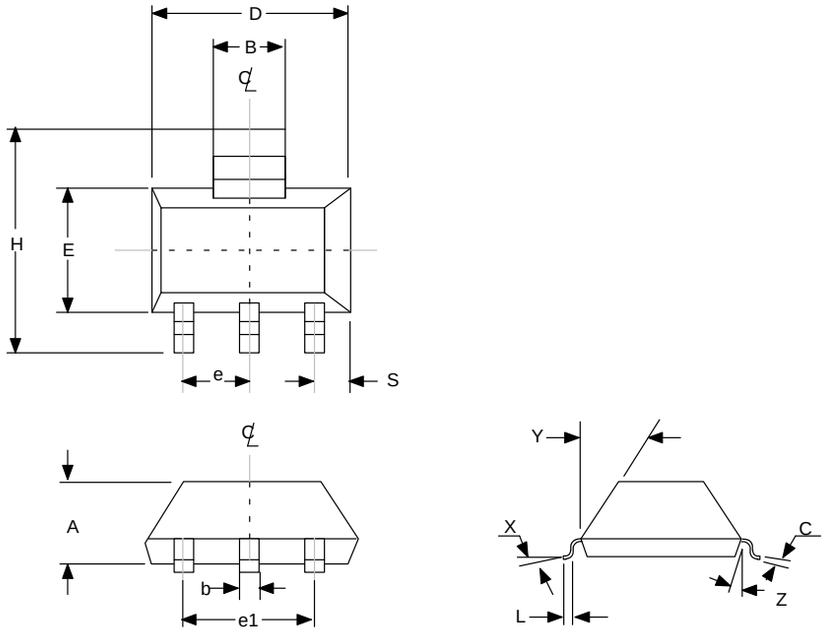


PKG	TO–252		
DIM	MIN	NOM	MAX
A	0.080	0.090	0.100
A1	0.035	0.040	0.045
b	0.025	0.030	0.035
b2	0.205	0.210	0.215
b3	0.030	0.035	0.040
b4	0.020	0.025	0.030
C1	0.018	0.020	0.023
D	0.230	0.240	0.250
E	0.250	0.260	0.270
F1	0.020	0.025	0.030
L	0.090	0.100	0.110
L1	0.010	0.025	0.040
L2	0.030	0.040	0.050
L3	0.021	0.024	0.028
L4	0.033	0.038	0.043
M	0.165	0.175	0.185
e1	0.170	0.180	0.190
R	0.008	0.010	0.012

NOTE:
1. Dimensions L3 and L4 are measured to the center of radius.
2. All dimensions are shown in inches.

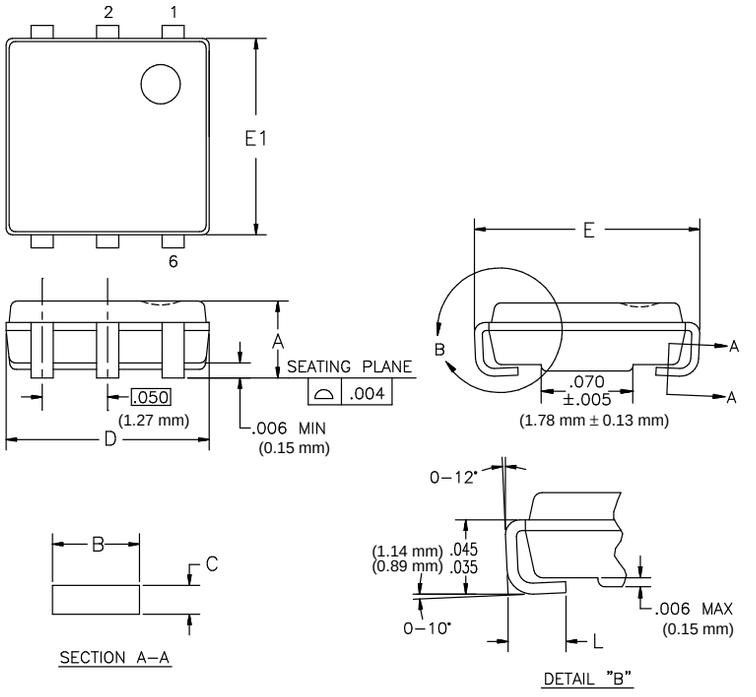
MECHANICAL DRAWINGS

SOT–223 PACKAGE



PKG	SOT–223	
DIM	MIN	MAX
A IN. MM	–	0.067 1.70
b IN. MM	0.025 0.64	0.033 0.84
B IN MM	0.116 2.95	0.124 3.15
C IN. MM	0.009 0.23	0.013 0.33
D IN. MM	0.248 6.30	0.263 6.68
e IN MM	0.0905 TYP 2.30 TYP	
e1 IN. MM	0.181 TYP 4.60 TYP	
E IN. MM	0.130 3.30	0.145 3.68
H IN MM	0.264 6.71	0.287 7.29
L IN. MM	0.016 0.41	0.036 0.91
S IN. MM	0.033 0.84	0.041 1.04
X	10° MAX	
Y	10°	20°
Z	10°	20°

6–PIN TSOC (C–LEAD)



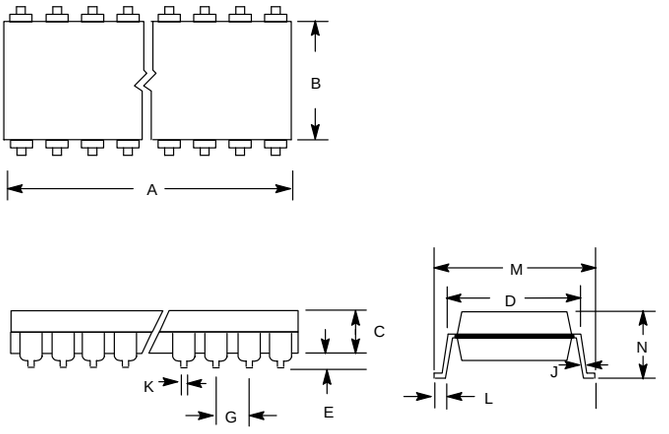
PKG	6–PIN C–LEAD (TSOC)			
DIM	MIN	NOM	MAX	NOTE
A IN. MM	0.051 1.30	0.055 1.40	0.059 1.50	
B IN. MM	0.016 0.41	0.017 0.43	0.019 0.48	3
C IN MM	0.005 0.13	0.006 0.15	0.008 0.20	
D IN. MM	0.153 3.89	0.155 3.94	0.157 3.99	2
E IN. MM	0.163 4.14	0.169 4.29	0.175 4.45	
E1 IN. MM	0.144 3.66	0.150 3.81	0.152 3.86	2
L IN. MM	0.025 0.64	0.032 0.81	0.039 0.99	

NOTES:

1. CONTROLLING DIMENSIONS: INCHES.
2. DIMENSIONS D AND E1 ARE MEASURED AT THE PARTING LINE AND DO NOT INCLUDE FLASH AND PROTRUSIONS; FLASH AND PROTRUSIONS NOT TO EXCEED .008 (0.20 mm) PER SIDE ON DIM. D AND .011 (0.28 mm) PER SIDE ON DIM. E1.
3. EXCLUSIVE OF DAMBAR PROTRUSION AND INTRUSION; DAMBAR PROTRUSION AND INTRUSION NOT TO BE POSITIONED ON FOOT OR LOWER RADIUS OF LEAD.

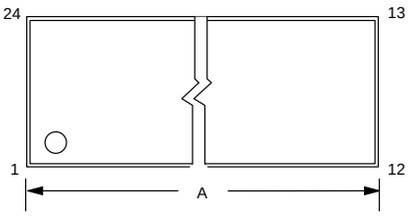
MECHANICAL DRAWINGS

8- TO 20-PIN GULLWING (300 MIL)

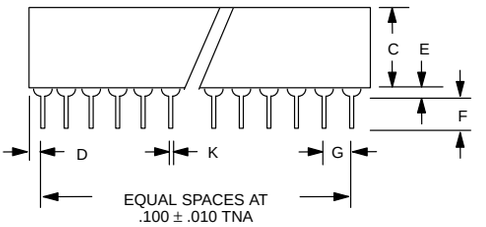


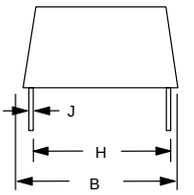
PKG	8-PIN		14-PIN		16-PIN		20-PIN	
DIM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
A IN.	0.345	0.400	0.740	0.780	0.740	0.780	0.960	1.040
MM	8.76	10.16	12.19	13.20	18.79	9.81	24.38	26.41
B IN.	0.240	0.260	0.240	0.260	0.240	0.260	0.240	0.260
MM	6.10	6.60	6.10	6.60	6.10	6.60	6.10	6.60
C IN.	0.120	0.140	0.120	0.140	0.120	0.140	0.120	0.140
MM	3.05	3.56	3.05	3.56	3.05	3.56	3.05	3.56
D IN.	0.300	0.325	0.300	0.325	0.300	0.325	0.300	0.325
MM	7.62	8.26	7.62	8.26	7.62	8.26	7.62	8.26
E IN.	0.020	0.040	0.020	0.040	0.020	0.040	0.020	0.040
MM	0.51	1.02	0.51	1.02	0.51	1.02	0.51	1.02
G IN.	0.090	0.110	0.090	0.110	0.090	0.110	0.090	0.110
MM	2.29	2.79	2.29	2.79	2.29	2.79	2.29	2.79
J IN.	0.008	0.012	0.008	0.012	0.008	0.012	0.008	0.012
MM	0.20	0.30	0.20	0.30	0.20	0.30	0.20	0.30
K IN.	0.015	0.021	0.015	0.021	0.015	0.021	0.015	0.021
MM	0.38	0.53	0.38	0.53	0.38	0.53	0.38	0.53
L IN.	0.030	0.050	0.030	0.050	0.030	0.050	0.030	0.050
MM	0.76	1.27	0.76	1.27	0.76	1.27	0.76	1.27
M IN.	0.370	0.420	0.370	0.420	0.370	0.420	0.370	0.420
MM	9.40	10.67	9.40	10.67	9.40	10.67	9.40	10.67
N IN.	0.160	0.180	0.160	0.180	0.160	0.180	0.160	0.180
MM	4.06	4.57	4.06	4.57	4.06	4.57	4.06	4.57

16- AND 24- PIN ENCAPSULATED PACKAGE (FLUSH BOTTOM – 450 MIL.)



NOTE: On 16–pin package, pins 1 and 16 are missing by design. On 24–pin package, pins 1 and 24 are missing by design.

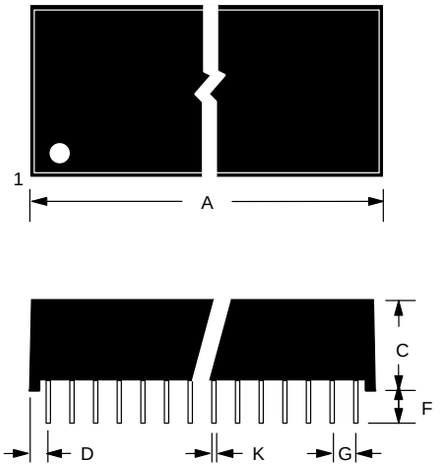




PKG	16-PIN		24-PIN	
DIM	MIN	MAX	MIN	MAX
A IN. MM	0.820 20.83	0.840 21.34	1.310 33.27	1.330 33.78
B IN. MM	0.440 11.18	0.460 11.68	0.440 11.18	0.460 11.68
C IN. MM	0.330 8.38	0.370 9.40	0.330 8.38	0.370 9.40
D IN. MM	0.180 4.57	0.210 5.33	0.215 5.46	0.245 6.22
E IN. MM	0.020 0.51	0.040 1.02	0.020 0.51	0.040 1.02
F IN. MM	0.110 2.79	0.140 3.56	0.110 2.79	0.140 3.56
G IN. MM	0.090 2.29	0.110 2.79	0.090 2.29	0.110 2.79
H IN MM	0.330 8.38	0.380 9.65	0.330 8.38	0.380 9.65
J IN MM	0.008 0.20	0.012 0.31	0.008 0.20	0.012 0.31
K IN. MM	0.015 0.38	0.021 0.53	0.015 0.38	0.021 0.53

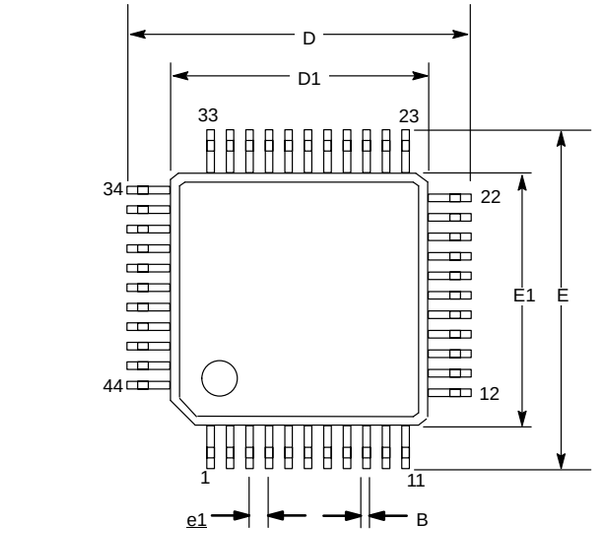
MECHANICAL DRAWINGS

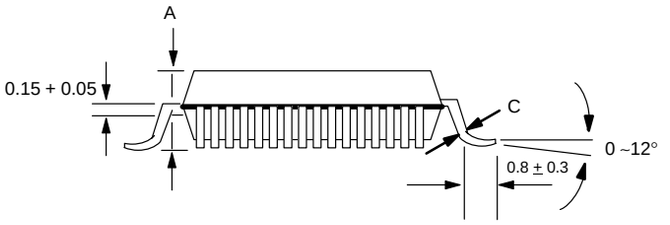
32–PIN NONVOLATILE SRAM (740 MIL)



PKG	32-PIN	
DIM	MIN	MAX
A IN.	1.720	1.740
MM	43.69	44.20
B IN.	0.720	0.740
MM	18.29	18.80
C IN.	0.395	0.415
MM	10.03	10.54
D IN.	0.090	0.120
MM	2.29	3.05
E IN.	0.017	0.030
MM	0.43	0.76
F IN.	0.120	0.160
MM	3.05	4.06
G IN.	0.090	0.110
MM	2.29	2.79
H IN.	0.590	0.630
MM	14.99	16.00
J IN.	0.008	0.012
MM	0.20	0.30
K IN.	0.015	0.021
MM	0.38	0.53

44–PIN QUAD FLAT PACK (PRELIMINARY)

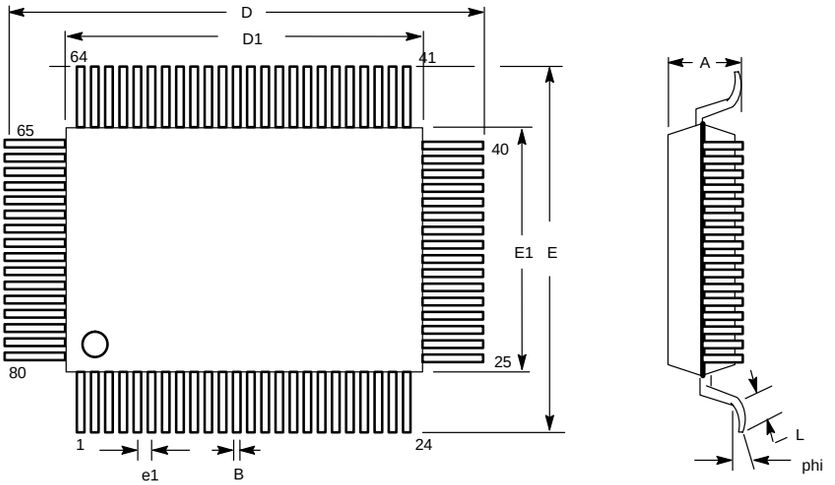




PKG	10 X 10 BODY		14 X 14 BODY	
DIM	MIN	MAX	MIN	MAX
A MM	–	2.45	–	3.4
B MM	0.30	0.45	0.20	0.50
C MM	0.13	0.23	0.10	0.20
D MM	13.65	14.35	16.95	18.00
E MM	13.65	14.35	16.95	18.00
D1 MM	9.90	10.10	13.80	14.20
E1 MM	9.90	10.10	13.80	14.20
L MM	0.65	0.95	0.50	1.10
e1 IN MM	0.315 0.80 BSC		0.039 1.00 BSC	

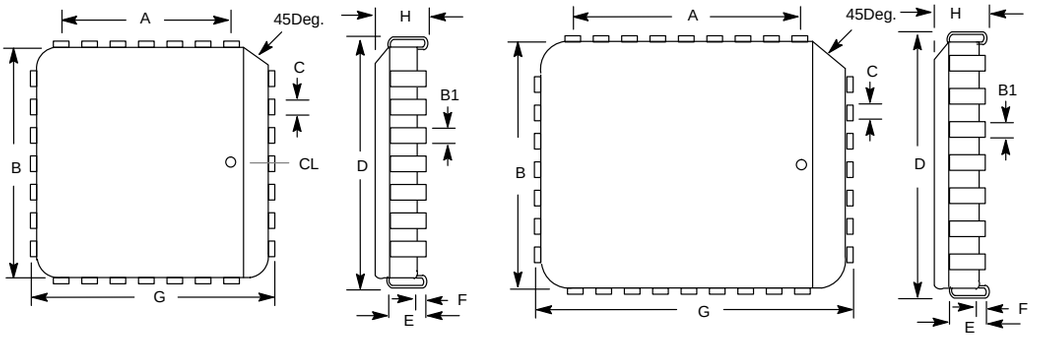
MECHANICAL DRAWINGS

80-PIN QUAD FLAT PACK (14.0 MM X 20.0 MM)



PKG	80-PIN	
DIM	MIN	MAX
A IN. MM	0.11 2.80	0.128 3.25
B IN. MM	0.010 0.25	0.020 0.45
e1 IN. MM	0.031 BSC 0.80 BSC	
D1 IN. MM	0.781 19.85	0.793 20.15
E1 IN. MM	0.545 13.85	0.557 14.15
E IN. MM	0.688 17.50	0.720 18.30
D IN. MM	0.921 23.40	0.953 24.20
L IN MM	0.025 0.65	0.038 0.95
phi	0°	8°

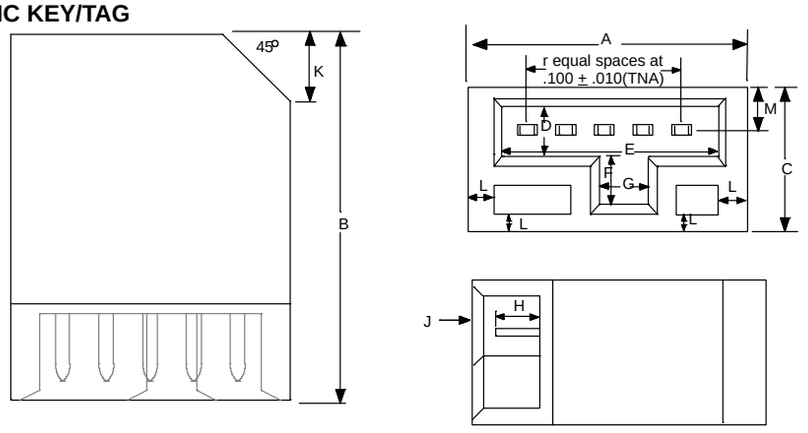
28- AND 32- PIN PLASTIC LEADED CHIP CARRIERS (PLCC)



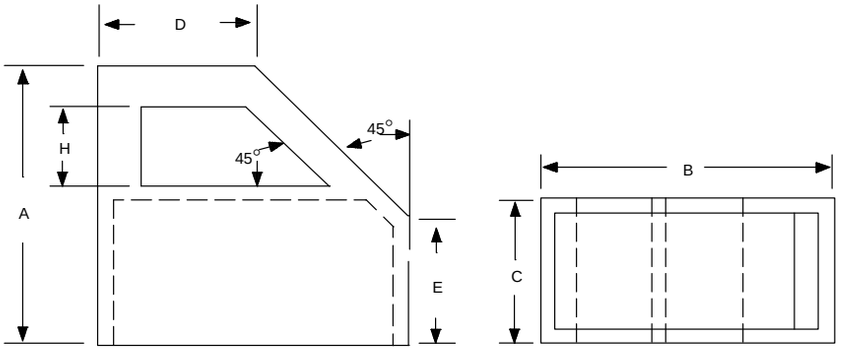
PKG	28-PIN		32-PIN	
DIM	MIN	MAX	MIN	MAX
A IN. MM	0.300 BSC 7.62		0.400 BSC 10.16	
B IN. MM	0.445 11.30	0.460 11.68	0.442 11.30	0.460 11.68
B1 IN MM	0.013 0.33	0.021 0.53	0.013 0.33	0.021 0.53
C IN MM	0.027 0.68	0.33 0.84	0.027 0.68	0.33 0.84
D IN. MM	0.480 12.19	0.500 12.70	0.480 12.19	0.500 12.70
D2 IN. MM	0.390 9.91	0.430 10.92	0.390 9.91	0.430 10.92
E IN. MM	0.090 2.29	0.120 3.05	0.060 1.52	0.095 2.41
E2 IN. MM	0.390 9.91	0.430 10.92	0.490 12.45	0.530 13.46
F IN. MM	0.020 0.51		0.015 0.38	
G IN MM	0.480 12.19	0.500 12.70	0.580 14.7	0.600 15.24
H IN MM	0.165 4.19	0.180 4.57	0.100 2.54	0.140 3.56

MECHANICAL DRAWINGS

ELECTRONIC KEY/TAG

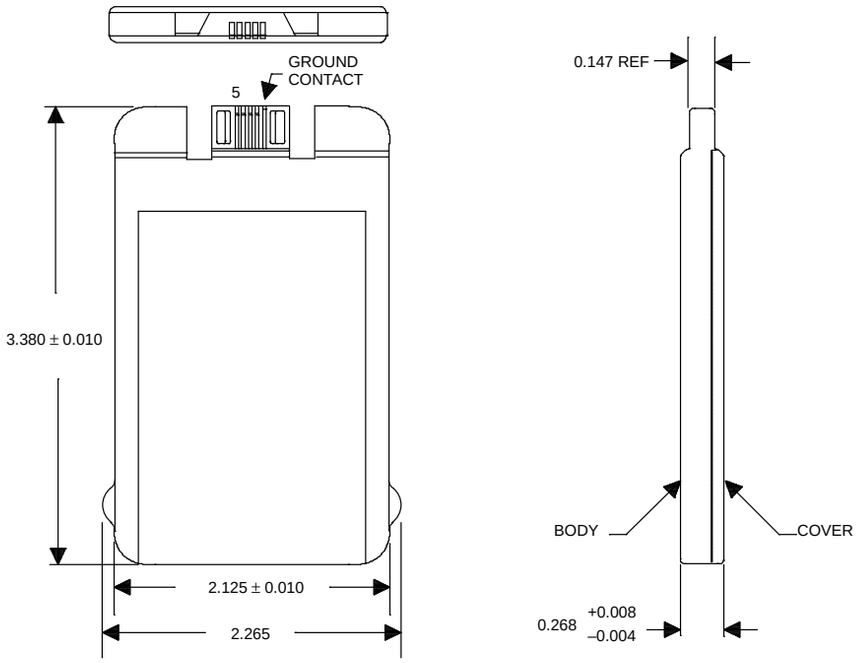


KEY/TAG CAP

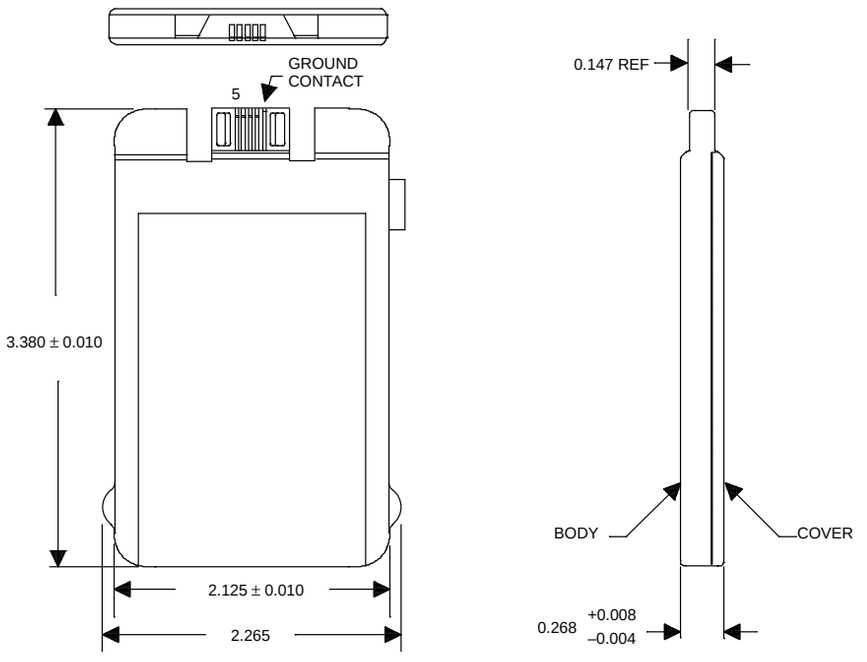


PKG	ELECTRONIC KEY/TAG		KEY/TAG CAP	
DIM	**MIN**	**MAX**	**MIN**	**MAX**
A IN.	0.610	0.650	0.790	0.810
MM	15.50	16.51	20.07	20.57
B IN.	0.740	0.760	0.680	0.700
MM	18.80	19.30	17.27	17.78
C IN.	0.310	0.355	0.405	0.425
MM	7.87	9.02	10.29	10.80
D IN.	0.100	0.110	0.290	0.310
MM	2.54	2.79	7.37	7.87
E IN.	0.505	0.515	0.410	0.430
MM	12.83	13.08	10.41	10.92
F IN.	0.100	0.110		
MM	2.54	2.79		

CYBERCARD PACKAGE, NON–POLARIZED

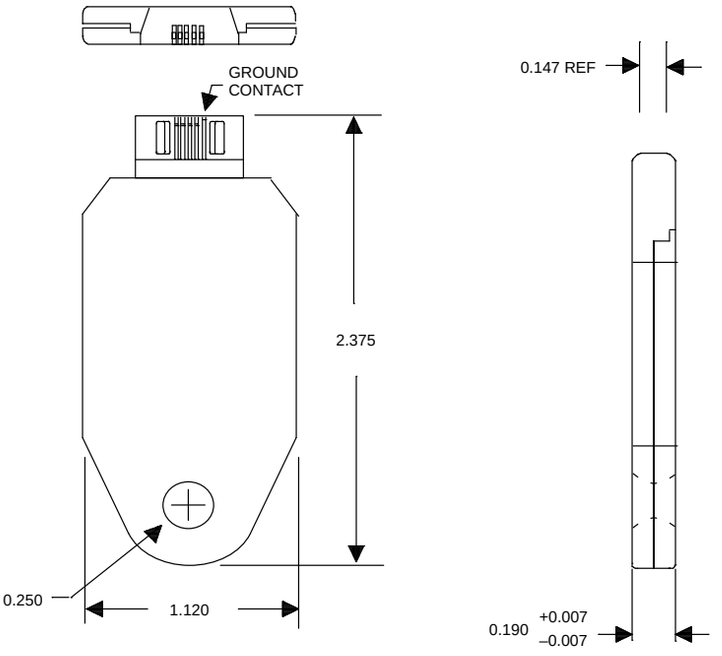


CYBERCARD PACKAGE, POLARIZED

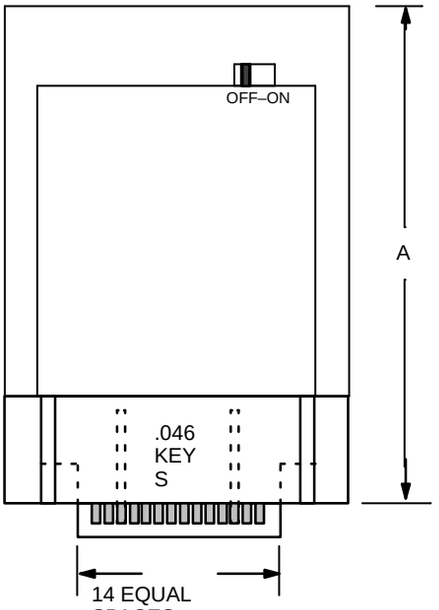


MECHANICAL DRAWINGS

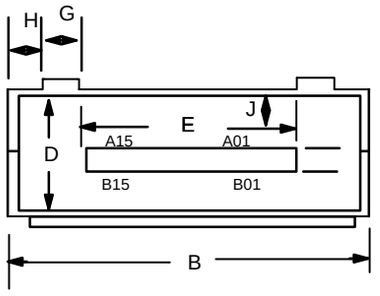
CYBERKEY PACKAGE

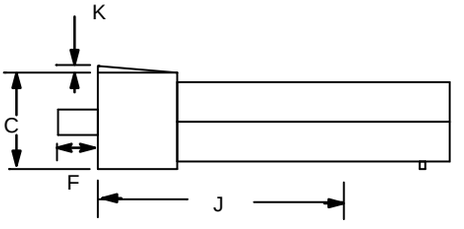


NON-VOLATILE READ/WRITE CARTRIDGE



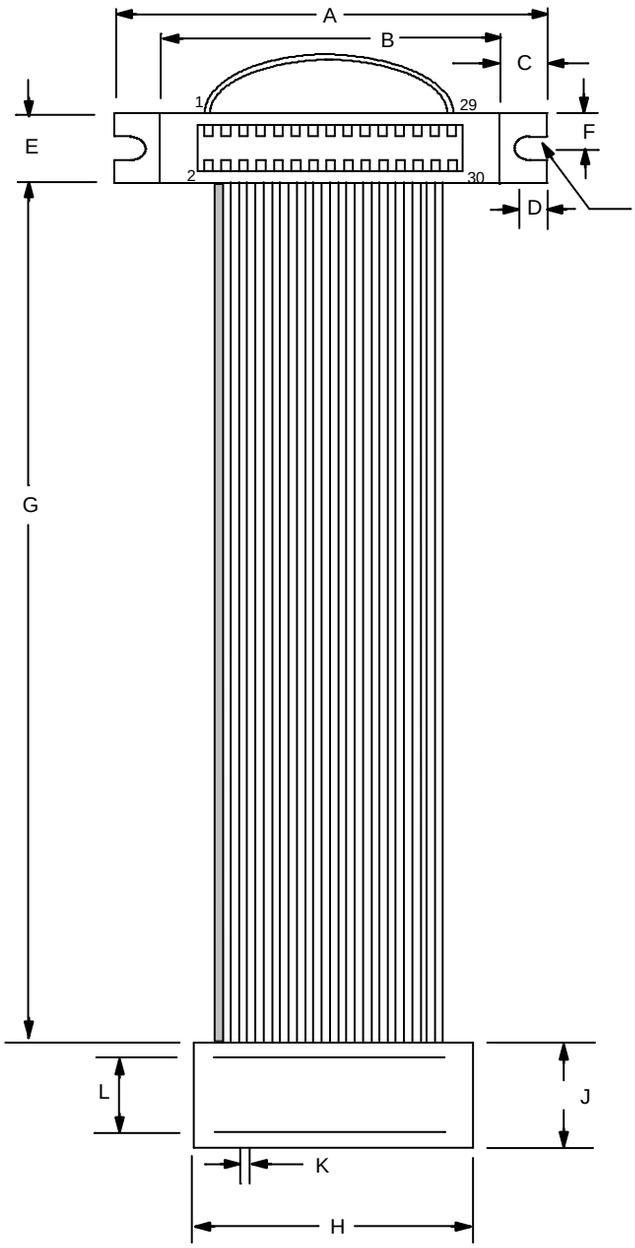
	INCHES	
DIM	MIN	MAX
A	3.020	3.040
B	2.275	2.295
C	0.600	0.630
D	0.440	0.460
E	1.590	1.607
F	0.115	0.135
G	0.115	0.135
H	0.140	0.160
J	1.760	1.790
K	0.040	0.060





MECHANICAL DRAWINGS

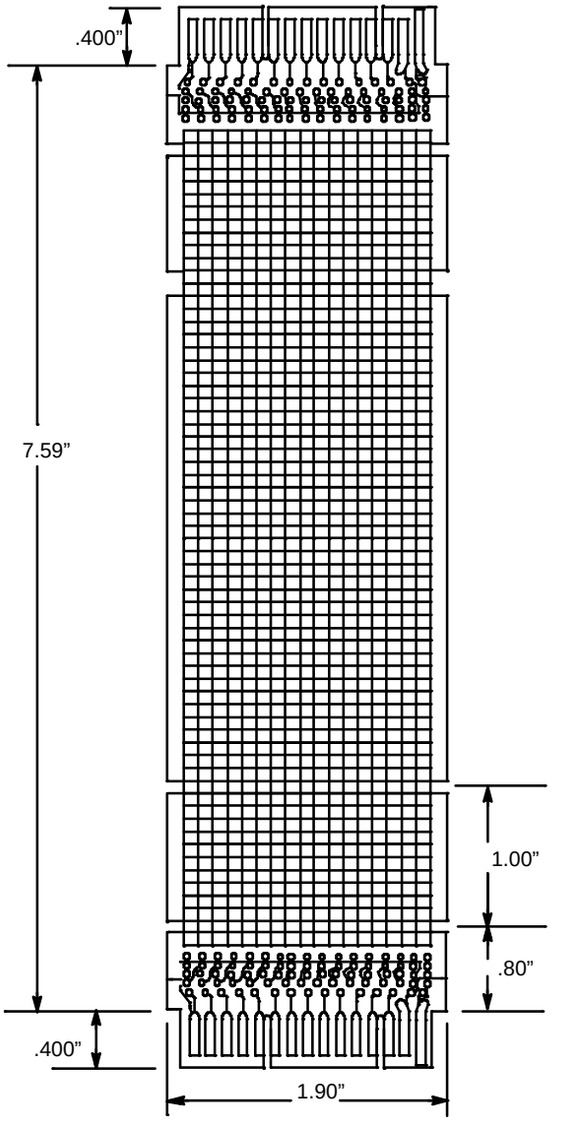
BYTEWIDE CABLE HARNESS



DIM.	INCHES	
	MIN.	MAX.
A	2.480	2.520
B	1.940	1.980
C	.260	.280
D	.160	.175
E	.395	.415
F	.195	.205
G	5.25	5.65
H	1.470	1.500
J	.715	.735
K	.090	.110
L	.590	.610

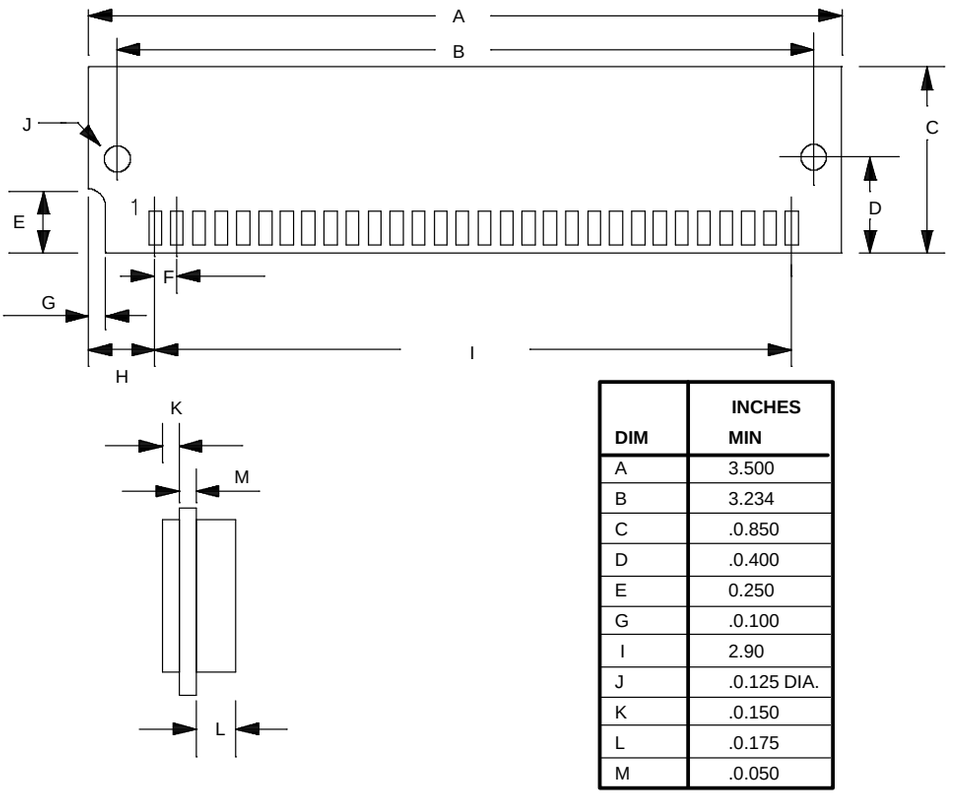
NOTES: COLOR STRIPE INDICATES PIN 1
END ON 28-PIN PULG.
DIMENSION L IS CENTER TO CENTER

DS9003
CARTRIDGE PROTO
BOARD



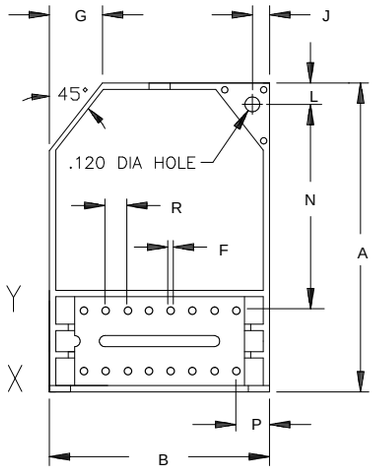
MECHANICAL DRAWINGS

SIPSTIK (30-PIN)



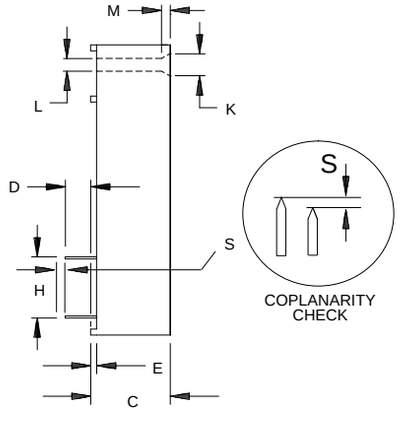
DIM	INCHES MIN
A	3.500
B	3.234
C	.0.850
D	.0.400
E	0.250
G	.0.100
I	2.90
J	.0.125 DIA.
K	.0.150
L	.0.175
M	.0.050

DS1260 SMART BATTERY

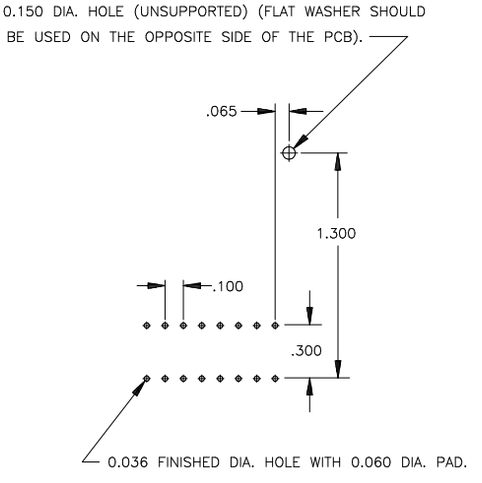


BOTTOM VIEW

DIM	INCHES	
	MIN	MAX
A	1.480	1.500
B	1.030	1.050
C	0.390	0.415
D	0.125	0.145
E	0.020	0.040
F	0.016	0.020
G	0.240	0.260
H	0.295	0.315
J	0.090	0.110
K	0.160	0.180
L	0.110	0.130
M	0.035	0.065
N	0.985	1.010
P	0.155	0.175
R	0.095	0.105
S	0.00	0.010

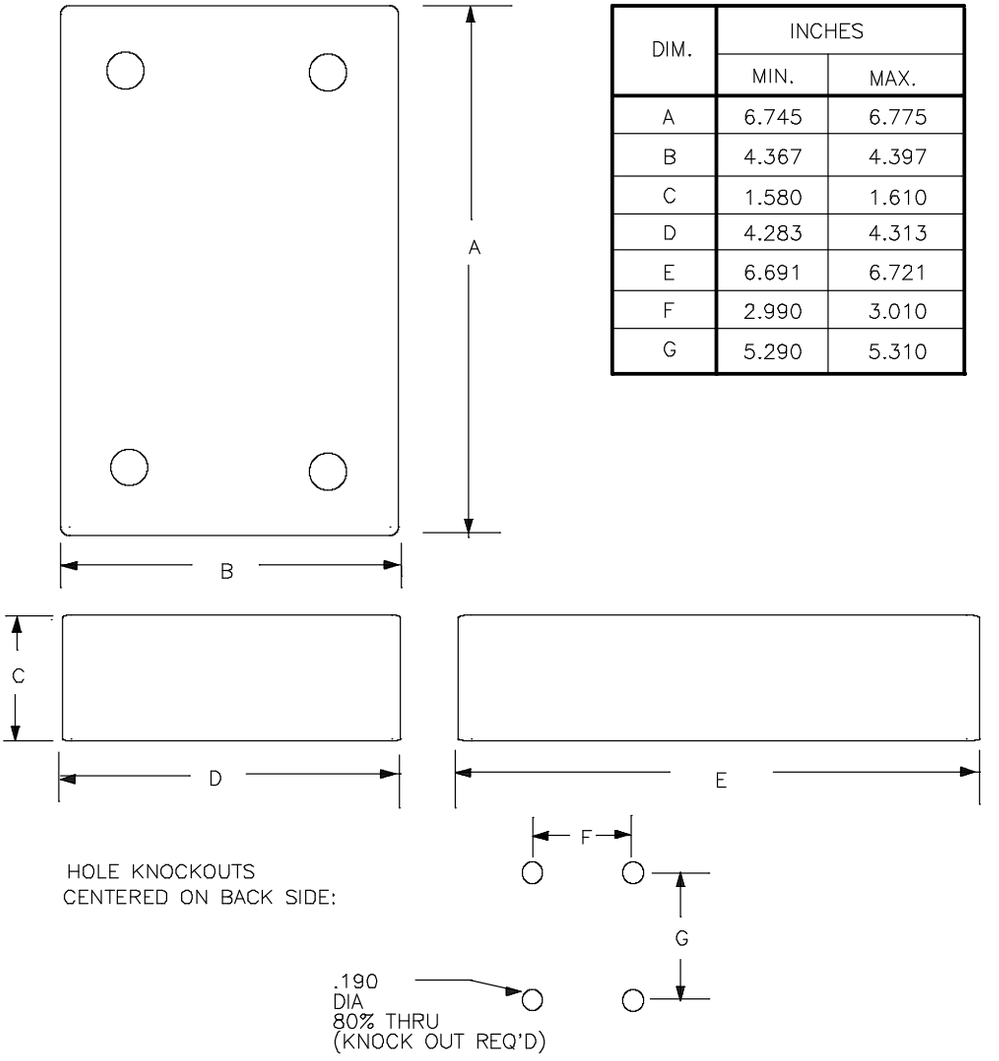


SIDE VIEW



MECHANICAL DRAWINGS

DS9005 EUROCARD ENCLOSURE

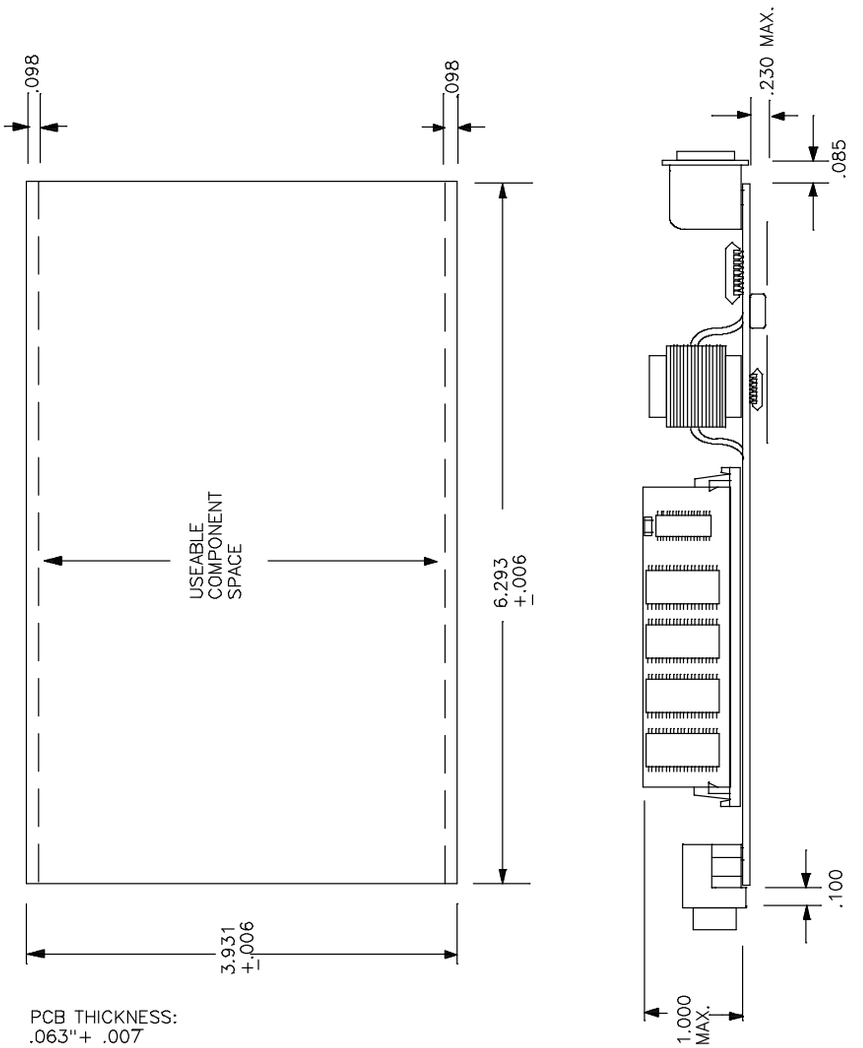


DIM.	INCHES	
	MIN.	MAX.
A	6.745	6.775
B	4.367	4.397
C	1.580	1.610
D	4.283	4.313
E	6.691	6.721
F	2.990	3.010
G	5.290	5.310

DS9006 SIP STIK™ MOTHERBOARD

ALL DIMENSIONS IN INCHES

TYPICAL LAYOUT FOR
DS9005 ENCLOSURE



PCB THICKNESS:
.063"+ .007

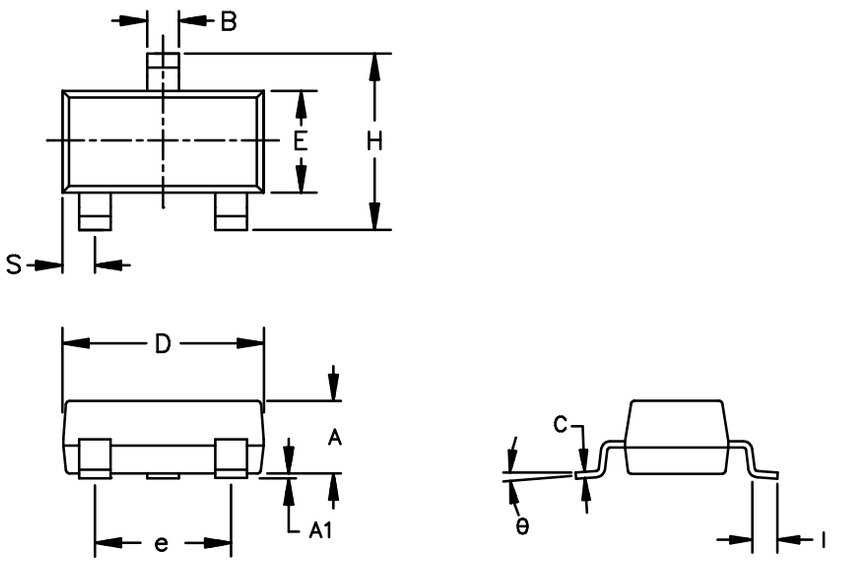
SUGGESTED CONNECTOR

PART NUMBERS:

RJ45– AMP #520252–4
9–PIN D–SUB FEMALE– AMP #745781–1
DIN–64 POS. FEMALE AMP# 531796–2

MECHANICAL DRAWINGS

SOT 23

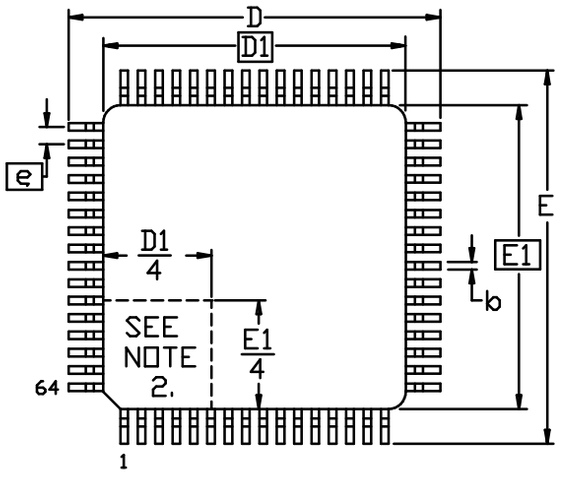


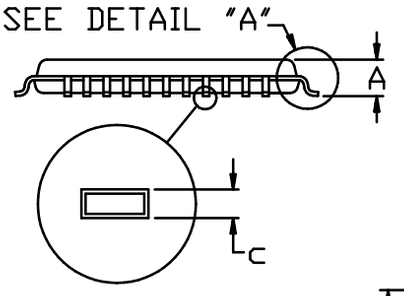
	INCHES	
LTR	MIN	MAX
A	0.030	0.040
A1	0.001	0.006
B	0.015	0.022
C	0.003	0.008
D	0.100	0.120
E	0.040	0.060
e	0.070	0.085
H	0.080	0.100
l	0.005	0.015
S	0.015	0.025
θ	0°	8°

NOTES:
1. PACKAGE OUTLINE EXCLUSIVE OF ANY MOLD FLASHES DIMENSION.
2. PACKAGE OUTLINE EXCLUSIVE OF BURR DIMENSION.

56-G2017-001

64 TOFP



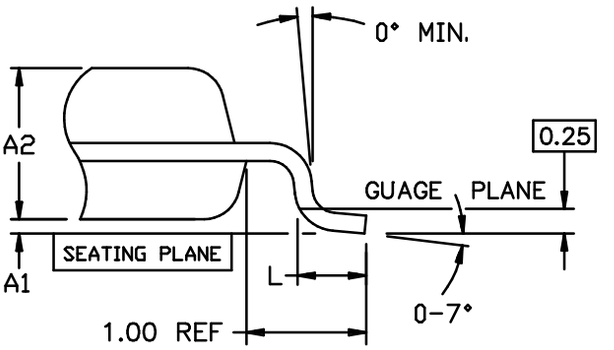


NOTES:

1. DIMENSIONS D1 AND E1 INCLUDE MOLD MISMATCH, BUT DO NOT INCLUDE MOLD PROTRUSION; ALLOWABLE PROTRUSION IS 0.254 MM ON D1 AND E1.
2. DETAILS OF PIN 1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.
3. ALLOWABLE DAMBAR PROTRUSION IS 0.08 MM TOTAL IN EXCESS OF THE B DIMENSION AT MAXIMUM MATERIAL CONDITION. PROTRUSION NOT TO BE LOCATED ON LOWER RADIUS OR FOOT OF LEAD.

DIM	MIN	NOM	MAX
A	–	–	1.20
A1	0.05	0.10	0.15
A2	0.95	1.00	1.05
b	0.17	0.22	0.27
c	0.09	–	0.20
D	11.80	12.00	12.20
D1	10.00 BSC		
E	11.80	12.00	12.20
E1	10.00 BSC		
e	0.50 BSC		
L	0.45	0.60	0.75

56–G4013–001



DETAIL A

DIMENSIONS ARE IN MILLIMETERS

MECHANICAL DRAWINGS

TSOC LAND PATTERN