AP Circuits: 3 day turn http://www.apcircuits.com/

Turn time for US is Order placed to boards Received. "3 day" includes shipping!

1. Min trace width should be as follows:
   - Normal..... 0.007 inch (0.1778mm)
   - Guaranteed limit..... 0.007 inch (0.1778mm)
   - Yield limit (~95%)..... 0.006 inch (0.1524mm)
   - (We can over-order to get useable units)
2. Minimum copper to copper spacing:
   (Same as trace widths)
3. Hole diameters
   - Minimum..... 0.015 inch (0.3810mm)
   - Maximum..... 0.250 inch (6.3500mm)

Largest drilled+plated. Larger holes can be routed or routed+plated

4. Prefered hole diameters
   See table, RED is prefered / BLACK is available
5. Thickness..... 0.062inch (1.5748mm)
6. Layers..... Top etch
   Bottom etch
   Outline (Board outline and drill symbols)
   NCDrill
7. Finish..... Sheared to the board outline +0.100/+0.010 inch.
   (Provide crop marks, board must be finished trimmed by us)

Solder mask, CNC routing and multilayer boards are available as options, Visit the web site and try the pricing calculator too!

Proto Express: 1,2,3,4,5 day turn http://www.protoexpress.com/

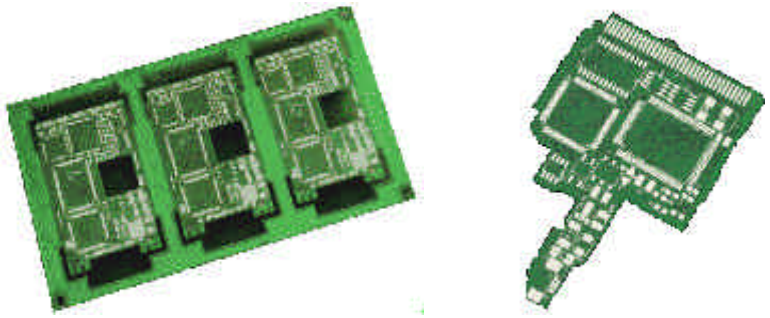
1. Min trace width should be as follows:
   - Normal..... 0.007 inch (0.1778mm)
2. Minimum copper to copper spacing:
   (Same as trace widths)
3. Minimum/Maximum hole diameter
   - Minimum..... 0.012 inch (0.3048mm)
   - Maximum..... 0.375 inch (9.525mm)
4. Prefered diameters..... None
5. Thickness..... 0.062inch (1.5748mm)
6. Layers..... Top etch
   Bottom etch
   Top mask (Green LPI)
   Bottom mask (Green LPI)
   Top silk (Nomenclature White)
   Bottom silk (Nomenclature, White)
   Outline (Board and drill symbols)
   NCDrill
7. Finish..... Routed to final size +/- 0.005inch (0.1270mm)

Number	Inch	Number	Inch	Number	Inch	Number	Inch	Number	Inch	Number	Inch
76	.0200	74	.0225	72	.0250	70	.0280	69	.0292	68	.0310
67	.0320	66	.0330	65	.0350	64	.0360	63	.0370	62	.0380
61	.0390	60	.0400	59	.0410	58	.0420	57	.0430	56	.0465
55	.0520	54	.0550	53	.0595	52	.0635	51	.0670	50	.0700
49	.0730	48	.0760	47	.0785	46	.0810	45	.0820	44	.0860
43	.0890	42	.0935	41	.0960	40	.0980	39	.0995	38	.1015
37	.1040	36	.1065	35	.1100	34	.1110	33	.1130	32	.1160
31	.1200	1/8 in	.1250	30	.1285	29	.1360	28	.1405	27	.1440
26	.1470	25	.1495	24	.1520	23	.1540	22	.1570	21	.1590
20	.1610	19	.1660	18	.1695	17	.1730	16	.1770	15	.1800
14	.1820	13	.1850	12	.1890	11	.1910	9	.1960	8	.1990
7	.2010	6	.2040	5	.2055	4	.2090	3	.2130	2	.2210
1	.2280	1/4 in	.2500								

Proto 2 service allows for any 6 drills between .020 thru .228 Proto 2 also uses the .052 and .125 for tooling holes. You may use them as well, thus providing any 6 PLUS the two tooling drills with out additional expence. Proto 2 - sizes larger than the .228 or .250 diameters will be ROUTED OUT after processing and will not be plated through.

STANDARD ROUTER TOOLS FOR PROTO 2

.050 .092 .125



On all Proto 2 orders basic routing service is included in the tooling fee. In cases where there are complex curves, cutouts etc. An extra fee of $5.50 ($3.65 US) is added per coordinate point pairs (enter/exit/direction change).

All Proto 2 orders are returned in a non "Break Out" panel format unless otherwise specified. All Proto 2 orders are setup for maximum board yield per panel. If you plan to run the boards through an automated placement and or soldering system please instruct us on the quantity of the width/length of the strength members to prevent panel sag during placement and soldering processes. These strength members will reduce the board yield per panel and increase the billed square inches for your order.

MINIMUM SLOT WIDTH IS .050 in. and is available only as a P2 option

Slots are Routed after processing and are NOT PLATED

Scoring services are not available

Fundamental Rules for Dimensioning

Show enough dimensions so that the intended size and shape can be determined without calculating or assuming any

distances

- State each dimension clearly so that it can be interpreted in only one way
- Show the dimensions between lines which have a necessary and specific relation to each other or which control the location of other components or mating parts
- Select and arrange dimensions to avoid accumulations of tolerances that may permit various interpretations and cause unsatisfactory mating of parts and failure in use
- Show each dimension only once
- Where possible, dimension each feature in the view where it appears in profile and where its true shape is evident
- Do not show dimensions to lines representing hidden surfaces

Click Here for a ZIP file of Information on our services

Please contact our Webmaster with questions or comments about this WEB site.