

# Current carrying capacity For Printed Circuit Boards

Here are some simple guidelines that you can give to your Customers about current carrying capabilities of trace Widths for your double sided PCB's.

This chart shows temperature rise of a external circuit relative to current in a given trace width at 1oz/CU. Consideration must be given to adjacent circuitry and ability for dissipation of heat.

<\*> Negligible temperature rise USE THIS VALUE TO BE SAFE

Trace width	<*>°C	10°C	20°C	30°C	45°C	60°C
.005	200mA	400mA	500mA	650mA	800mA	1.0A
.010	400mA	800mA	1.0A	1.3A	1.6A	1.9A
.015	600mA	1.2A	1.5A	1.8A	2.1A	2.8A
.020	750mA	1.5A	1.7A	2.0A	2.5A	3.1A
.025	850mA	1.7A	2.2A	3.0A	3.5A	3.5A
.050	1.6A	3.2A	3.9A	4.8A	5.7A	6.5A
.100	2.4A	4.8A	6.2A	8.0A	9.5A	10.4A
.150	3.0A	6.0A	8.5A	11.0A	12.6A	13.5A
.200	4.0A	8.0A				
.250	5.0A					

Multilayer PCB's INTERNAL LAYER'S

.005		175mA	200mA	225mA	250mA	275mA
.010		350mA	400mA	450mA	600mA	750mA
.015		450mA	550mA	600mA	750mA	1.0A
.020		575mA	650mA	700mA	800mA	1.2A
.025		600mA	750mA	1.0A	1.2A	1.7A
.050		1.3A	1.5A	1.7A	2.2A	2.8A
.100		1.6A	2.2A	3.1A	3.7A	4.5A
.150		2.0A	3.0A	4.0A	5.2A	6.1A

## TRACE SPACING

TRACE SPACING IS BASED ON PEAK VOLTAGE.

CONSIDERATION SHOULD BE MADE BASED ON MANUFACTURABILITY, LIFE EXPECTANCY AND ENVIRONMENT.

PEAK VOLTAGE	MIN GAP
0-100	.005
101-300	.015
300-500	.030

OR USE PEAK VOLTAGE MULTIPLIED BY .00012

I WILL UPDATE THIS CHART FOR YOU AS I GAIN MORE INFORMATION-

Pat Garrett