

## Microstrip Transmission Lines

ATP offers three different types of 50 Ohm transmission lines: single line, single line with two rows of tuning pads, and single line with four rows of tuning pads. ATP Transmission Lines have a fixed width and adjustable lengths, no mask purchase required. Lines are continuous and can therefore be diced to any size. In-stock lengths are in 0.010" (0.254mm) increments, up to 0.500" (12.70mm).

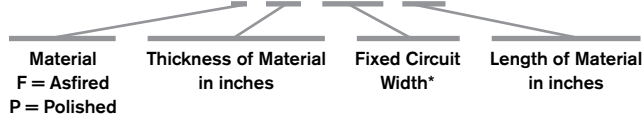
**Material:** Asfired Alumina 99.6% (polished Alumina available upon request)

**Metallization front and back sides:**  
 TiW = 300–800Å (0.03µm–0.08µm)  
 Au = 120µ" (3 microns) minimum

**Delivery:** Ships in 24–48 hours (in-stock lengths only) for Asfired Alumina. Polished Alumina will be special order.

### Single Transmission Lines

Part number definition = ATP-M-TTT-WWW-LLL



Thickness of Material	Fixed Line Width*	Fixed Circuit Width*
0.005" (0.127mm)	0.005" (0.127mm)	0.050" (1.27mm)
0.010" (0.254mm)	0.010" (0.254mm)	0.050" (1.27mm)
0.015" (0.381mm)	0.015" (0.381mm)	0.050" (1.27mm)
0.020" (0.508mm)	0.020" (0.508mm)	0.060" (1.52mm)
0.025" (0.635mm)	0.025" (0.635mm)	0.060" (1.52mm)

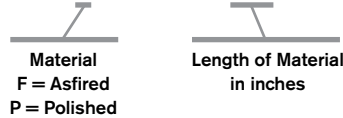


Single Line

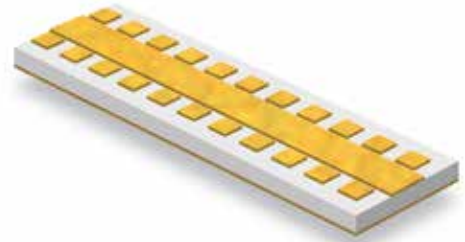
\*Once thickness of material is determined (TTT), both line width and circuit width (WWW) are fixed. Use the table above to find the Fixed Circuit Width (WWW). Only material (M), thickness of material (TTT) and length of material (LLL) can be specified.

### Single Transmission Lines with Two Rows of Tuning Pads

Part number definition = ATP-WP2-M-010-030-LLL



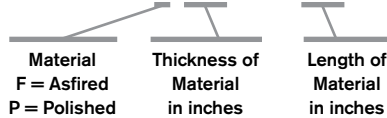
Thickness of Material	Fixed Line Width	Fixed Circuit Width
0.010" (0.254mm)	0.010" (0.254mm)	0.030" (0.762mm)



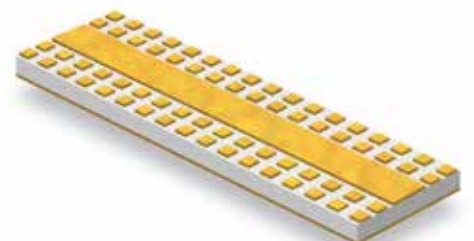
Single Line with Two Rows of Tuning Pads

### Single Transmission Lines with Four Rows of Tuning Pads

Part number definition = ATP-WP4-M-TTT-050-LLL



Thickness of Material	Fixed Line Width	Fixed Circuit Width
0.015" (0.381mm)	0.015" (0.381mm)	0.050" (1.27mm)
0.025" (0.635mm)	0.024" (0.610mm)	0.050" (1.27mm)



Single Line with Four Rows of Tuning Pads

Data sheets available upon request.

## Microstrip Transmission Lines Engineering Kits

Applied Thin-Film Products (ATP) is pleased to offer new Microstrip Transmission Lines Engineering Kits to help your bread-boarding needs with a cost effective solution.



Material is As-Fired Al<sub>2</sub>O<sub>3</sub> Metalization A & B Side:

- TiW = 400 to 800 Å (0.04–0.08 Microns)

- Au = 120 μ" (3.05 Microns) minimum

Note: By design, these parts may occasionally have burrs/tails since ATP is dicing through Au. There is no pullback in these designs.

50 ohm impedance and data available upon request. Inquire with ATP Sales for special pricing and quick turns on the following Kits:

### Kit for Single Transmission Lines

Available on As-Fired Alumina in the following thicknesses:

- 0.005" (0.127mm)
- 0.010" (0.254mm)
- 0.015" (0.381mm)
- 0.020" (0.508mm)
- 0.25" (0.635mm)

Transmission lines in lengths of:

- 0.050" (1.270mm)
- 0.075" (1.905mm)
- 0.100" (2.540mm)
- 0.125" (3.175mm)
- 0.150" (3.810mm)
- 0.200" (5.080mm)
- 0.250" (6.350mm)
- 0.500" (12.700mm)

Circuit widths are fixed at:

- 0.050" (1.270mm) and • 0.060" (1.524mm) depending on material thickness.

Part numbers:

- ATP-F-005-050-ENGKIT
- ATP-F-010-050-ENGKIT
- ATP-F-015-050-ENGKIT
- ATP-F-020-050-ENGKIT
- ATP-F-025-050-ENGKIT

P/N List (Inches)	P/N List (mm)	Quantity
ATP-F-XXX-050-050	ATP-F-XXX-1.270-1.270	15
ATP-F-XXX-050-075	ATP-F-XXX-1.270-1.905	15
ATP-F-XXX-050-100	ATP-F-XXX-1.270-2.540	10
ATP-F-XXX-050-125	ATP-F-XXX-1.270-3.175	10
ATP-F-XXX-050-150	ATP-F-XXX-1.270-3.810	10
ATP-F-XXX-050-200	ATP-F-XXX-1.270-5.080	5
ATP-F-XXX-050-250	ATP-F-XXX-1.270-6.350	5
ATP-F-XXX-050-500	ATP-F-XXX-1.270-12.700	5

### Kit for Transmission Lines with Two Rows of Tuning Pads

Available on As-Fired Alumina in the following thicknesses:

- 0.010" (0.254mm)

Transmission lines in lengths of:

- 0.050" (1.270mm)
- 0.075" (1.905mm)
- 0.100" (2.540mm)
- 0.125" (3.175mm)
- 0.150" (3.810mm)
- 0.200" (5.080mm)
- 0.250" (6.350mm)
- 0.500" (12.700mm)

Circuit widths are fixed at 0.030" (0.762mm).

Part numbers:

- ATP-WP2-F-010-030-ENGKIT

P/N List (Inches)	P/N List (mm)	Quantity
ATP-WP2-F-010-030-050	ATP-WP2-F-0.254-0.762-1.270	15
ATP-WP2-F-010-030-075	ATP-WP2-F-0.254-0.762-1.905	15
ATP-WP2-F-010-030-100	ATP-WP2-F-0.254-0.762-2.540	10
ATP-WP2-F-010-030-125	ATP-WP2-F-0.254-0.762-3.175	10
ATP-WP2-F-010-030-150	ATP-WP2-F-0.254-0.762-3.810	10
ATP-WP2-F-010-030-200	ATP-WP2-F-0.254-0.762-5.080	5
ATP-WP2-F-010-030-250	ATP-WP2-F-0.254-0.762-6.350	5
ATP-WP2-F-010-030-500	ATP-WP2-F-0.254-0.762-12.700	5

### Kit for Transmission Lines with Four Rows of Tuning Pads

Available on As-Fired Alumina in the following thicknesses:

- 0.015" (0.381mm)
- 0.025" (0.635mm)

Transmission lines in lengths of:

- 0.050" (1.270mm)
- 0.075" (1.905mm)
- 0.100" (2.540mm)
- 0.125" (3.175mm)
- 0.150" (3.810mm)
- 0.200" (5.080mm)
- 0.250" (6.350mm)
- 0.500" (12.700mm)

Circuit widths are fixed at 0.050" (1.270mm).

Part number:

- ATP-WP4-F-015-030-ENGKIT
- ATP-WP4-F-025-050-ENGKIT

P/N List (Inches)	P/N List (mm)	Quantity
ATP-WP4-F-XXX-050-050	ATP-WP4-F-XXXX-1.270-1.270	15
ATP-WP4-F-XXX-050-075	ATP-WP4-F-XXXX-1.270-1.905	15
ATP-WP4-F-XXX-050-100	ATP-WP4-F-XXXX-1.270-2.540	10
ATP-WP4-F-XXX-050-125	ATP-WP4-F-XXXX-1.270-3.175	10
ATP-WP4-F-XXX-050-150	ATP-WP4-F-XXXX-1.270-3.810	10
ATP-WP4-F-XXX-050-200	ATP-WP4-F-XXXX-1.270-5.080	5
ATP-WP4-F-XXX-050-250	ATP-WP4-F-XXXX-1.270-6.350	5
ATP-WP4-F-XXX-050-500	ATP-WP4-F-XXXX-1.270-12.700	5