

T01 SERIES

IMPEDANCE MATCHING TRANSFORMERS

Most of RF Power Sources are designed and optimized to best deliver power into an impedance of 50 Ohms. In a power delivering system where the source and load impedance differs by more than 2:1 a matching element can improve efficiency. T&C offers a range of LF Band matching transformers for high (and low) impedance load applications.

The table below presents some standard impedance ratios offers by T&C.

CASE OPTIONS:

1. W 4" x L 4" x H 3" (102mm x 102mm x 77mm). Deep Drawn enclosure, ZERO Corp.,#Z64-64A
2. Custom sizes and configurations on request
3. Connectors: "BNC" type input and output

T01-4

STEP-DOWN/STEP-UP TRANSFORMER
AIR COOLED
SUT 01 LF-4 (previous revision)

STEP UP MATCHING

(Z in = 50 Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz.
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

Z IN RF Input	Z OUT RF Output	Impedance ratio	OUT #	Continues P IN (Without cooling)
50 Ohms	200 (+/- 10%) Ohms	1 : 4	1	100 W
50 Ohms	450 (+/- 5%) Ohms	1 : 9	2	100 W
50 Ohms	800 (+/- 5%) Ohms	1 : 16	3	100 W
50 Ohms	1250 (+/- 5%) Ohms	1 : 25	4	100 W

STEP DOWN MATCHING

Reversing the INPUT with OUTPUT terminals.
 (Z in = 50 Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

RF Input to Terminal #	Z out RF Output	Impedance ratio	OUT	Continues P IN (Without cooling)
4 - 50 Ohms	2 (+/- 5%) Ohms	25 : 1	On RF IN	100 W
3 - 50 Ohms	3.1 (+/- 5%) Ohms	16 : 1	On RF IN	100 W
2 - 50 Ohms	5.6 (+/- 10%) Ohms	9 : 1	On RF IN	100 W
1 - 50 Ohms	12.5 (+/- 15%) Ohms	4 : 1	On RF IN	100 W

T01-4

SUT 01 LF-4

IMPEDANCE MATCHING TRANSFORMER



IN 50 Ohm			
<u>T01-4</u>			
Step-Up / Step-Down Transformer for Impedance Matching			
NOTE!			
Only One Output can be connected to the Load at a time !			
Out # 1 200 Ohm	Out # 2 450 Ohm	Out # 3 800 Ohm	Out # 4 1250 Ohm

T01-5A

STEP-DOWN/STEP-UP TRANSFORMER
AIR COOLED
SUT 01 LF-5A (previous revision)

STEP UP MATCHING

($Z_{in} = 50$ Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz.
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

Z IN RF Input	Z OUT RF Output	Impedance ratio	OUT #	Continues P IN (Without cooling)
50 Ohms	200 (+/- 10%) Ohms	1 : 4	1	100 W
50 Ohms	450 (+/- 5%) Ohms	1 : 9	2	100 W
50 Ohms	800 (+/- 5%) Ohms	1 : 16	3	100 W
50 Ohms	1250 (+/- 5%) Ohms	1 : 25	4	100 W
50 Ohms	1800 (+/- 5%) Ohms	1 : 36	5	80 W

STEP DOWN MATCHING

Reversing the INPUT with OUTPUT terminals.
 ($Z_{in} = 50$ Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

RF Input to Terminal #	Z OUT RF Output	Impedance ratio	OUT	Continues P IN (Without cooling)
5 - 50 Ohms	1.4 (+/- 5%) Ohms	36 : 1	On RF IN	80 W
4 - 50 Ohms	2 (+/- 5%) Ohms	25 : 1	On RF IN	100 W
3 - 50 Ohms	3.1 (+/- 5%) Ohms	16 : 1	On RF IN	100 W
2 - 50 Ohms	5.6 (+/- 10%) Ohms	9 : 1	On RF IN	100 W
1 - 50 Ohms	12.5 (+/- 15%) Ohms	4 : 1	On RF IN	100 W

T01-5A

SUT 01 LF-5A

IMPEDANCE MATCHING TRANSFORMER



T01-5A

(SUT 01 LF-5A)

Step-Up Transformer for Impedance Matching

NOTE!

Only One Output can be connected
to the Load at a time !

Out #1	Out #2	Out #3	Out #4	Out #4
200 Ω	450 Ω	800 Ω	1250 Ω	1800 Ω
12.5 Ω	5.6 Ω	3.1 Ω	2 Ω	1.4 Ω

T01-5B

STEP-DOWN/STEP-UP TRANSFORMER
AIR COOLED
SUT 01 LF-5B (previous revision)

STEP UP MATCHING

($Z_{in} = 50$ Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

Z IN RF Input	Z OUT RF Output	Impedance ratio	OUT #	Continues P IN (Without cooling)
50 Ohms	200 (+/- 10%) Ohms	1 : 4	1	100 W
50 Ohms	310 (+/- 5%) Ohms	1 : 6	2	100 W
50 Ohms	450 (+/- 5%) Ohms	1 : 9	3	100 W
50 Ohms	610 (+/- 5%) Ohms	1 : 12	4	100 W
50 Ohms	800 (+/- 5%) Ohms	1 : 16	5	80 W

STEP DOWN MATCHING

Reversing the INPUT with OUTPUT terminals.

($Z_{in} = 50$ Ohms) Frequency Range 0.2 MHz to 3 MHz, peak performance 0.4 to 2 MHz.
 Low power operation possible down to 0.1 MHz, up to 4 MHz at reduced power of 50W max.

RF Input to Terminal #	Z OUT RF Output	Impedance ratio	OUT	Continues P IN (Without cooling)
5 - 50 Ohms	3.1 (+/- 5%) Ohms	16 : 1	On RF IN	80 W
4 - 50 Ohms	4.2 (+/- 5%) Ohms	12 : 1	On RF IN	100 W
3 - 50 Ohms	5.6 (+/- 5%) Ohms	9 : 1	On RF IN	100 W
2 - 50 Ohms	8.3 (+/- 10%) Ohms	6 : 1	On RF IN	100 W
1 - 50 Ohms	12.5 (+/- 15%) Ohms	4 : 1	On RF IN	100 W

T01-5B

SUT 01 LF-5B

IMPEDANCE MATCHING TRANSFORMER



T01-5B

(SUT 01 LF-5A)

Step-Up Transformer for Impedance Matching

NOTE!

**Only One Output can be connected
to the Load at a time !**

Out #1	Out #2	Out #3	Out #4	Out #4
200 Ω	310 Ω	450 Ω	610 Ω	800 Ω
12.5 Ω	8.3 Ω	5.6 Ω	4.2 Ω	3.1 Ω