

TC2-1TX+ Datasheet

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DiGi Electronics Part Number	TC2-1TX+-DG
Manufacturer	Mini-Circuits
Manufacturer Product Number	TC2-1TX+
Description	1:2 CORE & WIRE TRANSFORMER, 3 -
Detailed Description	RF Balun 3MHz ~ 300MHz 1:2 5-SMD Module

This model TC2-1TX+ is available at DiGi Electronics.

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RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

TC2-1TX+

Series:

-

Frequency Range:

3MHz ~ 300MHz

Phase Difference:

4°

Return Loss (Min):

15dB

Mounting Type:

Surface Mount

Manufacturer:

Mini-Circuits

Product Status:

Active

Impedance - Unbalanced/Balanced:

1:2

Insertion Loss (Max):

1.0dB

Package / Case:

5-SMD Module

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.31.2000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



SURFACE MOUNT

RF Transformer

TC2-1TX+

50Ω

3 to 300 MHz

Mini-Circuits

FEATURES

- Good return loss
- Excellent amplitude unbalance (0.5 dB typ) and phase unbalance (4 deg. typ) in 1 dB bandwidth
- Plastic base with leads
- Aqueous washable



Generic photo used for illustration purposes only

CASE STYLE: AT1521

+RoHS Compliant

The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- Impedance matching
- Balanced to unbalanced transformation
- Push-pull amplifier

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		
Frequency Range		3		300	MHz
Insertion Loss*	—		3		dB
	—		2		
	3-300		1		
Amplitude Unbalance	3-300		0.5		dB
Phase Unbalance	3-300		4		Degree

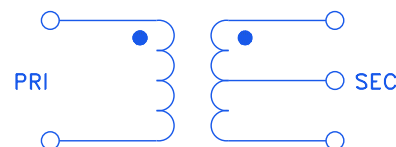
* Insertion Loss is referenced to mid-band loss, 0.4 dB typ.

MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

Permanent damage may occur if any of these limits are exceeded.

CONFIG. A





SURFACE MOUNT



RF Transformer

TC2-1TX+

Mini-Circuits

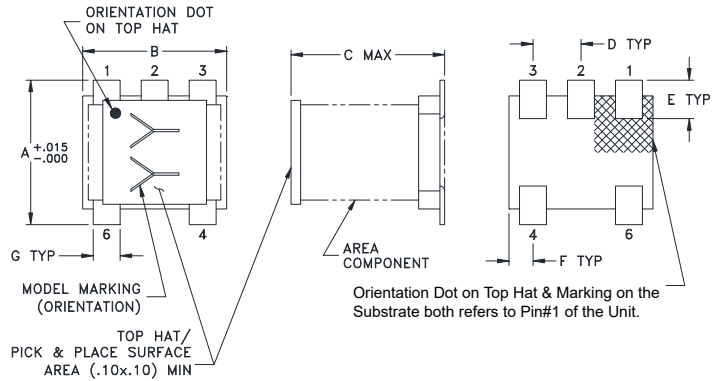
50Ω 3 to 300 MHz

PIN CONNECTIONS

PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
SECONDARY CT	2

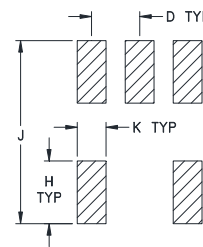
OPTIONAL PRODUCT MARKING: CA or CE

OUTLINE DRAWING



Top-hat total thickness: .013 inches MAX.

PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	E	F	G	H	J	K
.150	.150	.160	.050	.040	.025	.028	.065	.190	.030
3.81	3.81	4.06	1.27	1.02	0.64	0.71	1.65	4.83	0.76

Weight: 0.15 grams

TAPE & REEL INFORMATION: F17



SURFACE MOUNT

RF Transformer

TC2-1TX+

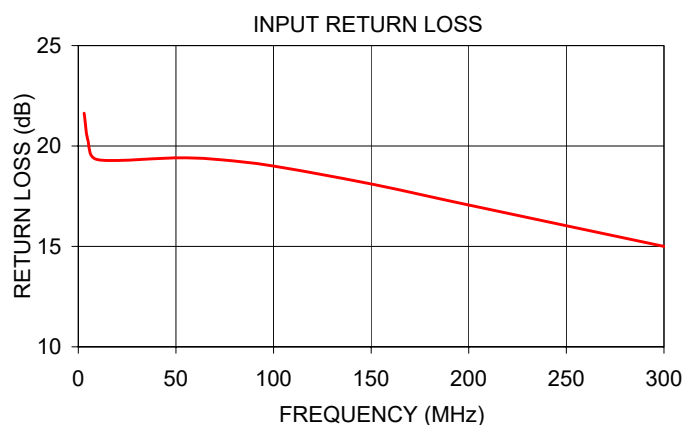
Mini-Circuits

50Ω

3 to 300 MHz

TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
3.00	0.38	21.63	0.05	0.54
5.00	0.33	20.24	0.04	0.57
10.00	0.34	19.32	0.02	0.45
50.00	0.37	19.41	0.03	0.56
70.00	0.40	19.34	0.04	0.64
100.00	0.44	19.00	0.07	0.86
150.00	0.52	18.11	0.14	1.30
200.00	0.60	17.06	0.25	1.68
300.00	0.80	15.00	0.53	2.44



NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

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