

TC16-161T+ Datasheet

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DiGi Electronics Part Number	TC16-161T+-DG
Manufacturer	Mini-Circuits
Manufacturer Product Number	TC16-161T+
Description	1:16 CORE & WIRE TRANSFORMER, 0.
Detailed Description	RF Balun 600kHz ~ 160MHz 1:16 5-SMD Module

This model TC16-161T+ is available at DiGi Electronics.

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RFQ Email: Info@DiGi-Electronics.com

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Purchase and inquiry

Manufacturer Product Number:

TC16-161T+

Series:

-

Frequency Range:

600kHz ~ 160MHz

Phase Difference:

0.5°

Return Loss (Min):

7.18dB

Mounting Type:

Surface Mount

Manufacturer:

Mini-Circuits

Product Status:

Active

Impedance - Unbalanced/Balanced:

1:16

Insertion Loss (Max):

3dB

Package / Case:

5-SMD Module

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.31.4035

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



SURFACE MOUNT

RF Transformer

TC16-161T+

50Ω 0.6 to 160 MHz

FEATURES

- Plastic base with solder plated leads
- Excellent amplitude unbalance, 0.1dB typ. and phase unbalance, 0.5 deg. typ.



Generic photo used for illustration purposes only

CASE STYLE: AT224-1A

+RoHS Compliant

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

APPLICATIONS

- Impedance matching
- Balanced amplifier

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			16		Ohm
Frequency Range		0.6		160	MHz
Insertion Loss*	0.6-160		3		dB
	1.5-120		2		
	3-80		1		

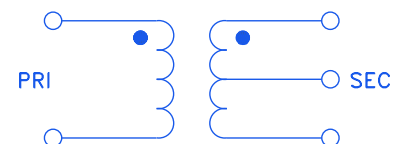
*Insertion Loss is referenced to mid-band loss, 0.6 dB typ.

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

TC16-161T+

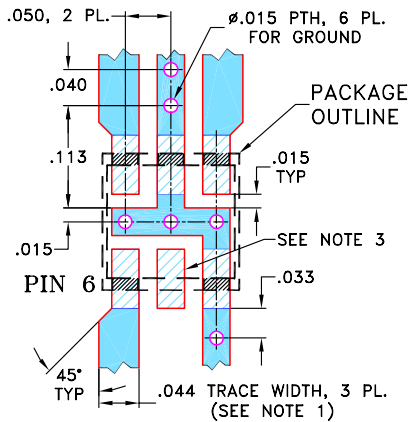
50Ω 0.6 to 160 MHz

PIN CONNECTIONS

Function	Pin Number
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY CT	2
SECONDARY	3
NOT USED	5

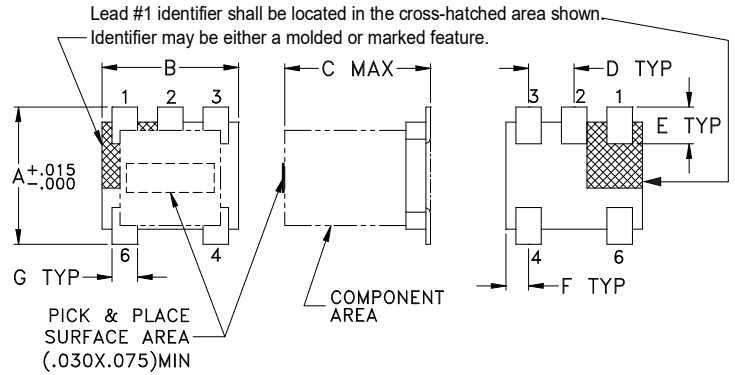
PRODUCT MARKING: N/A

**DEMO BOARD MCL P/N: TB-145
SUGGESTED PCB LAYOUT: (PL-244)**

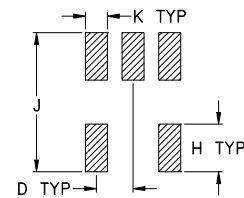


1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. ON EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
 3. THIS PAD IS NOT REQUIRED FOR AT224 CASE STYLE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inch/mm)

A	B	C	D	E	F
.150	.150	.160	.050	.040	.025
3.81	3.81	4.06	1.27	1.02	0.64
G	H	J	K		wt
.028	.065	.190	.030		grams
0.71	1.65	4.83	0.76		0.15

TAPE & REEL INFORMATION: F17



SURFACE MOUNT

RF Transformer

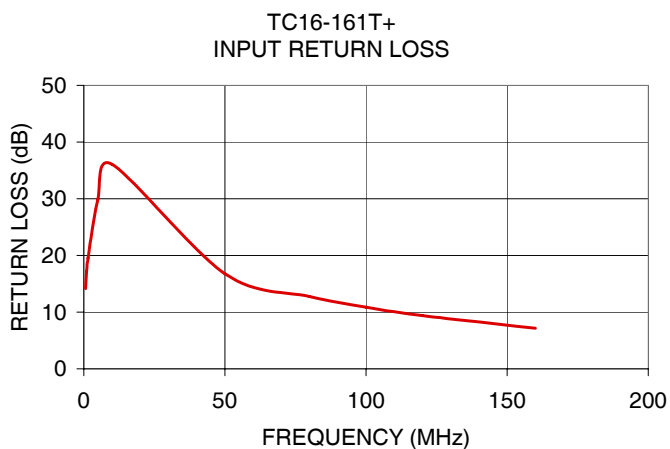
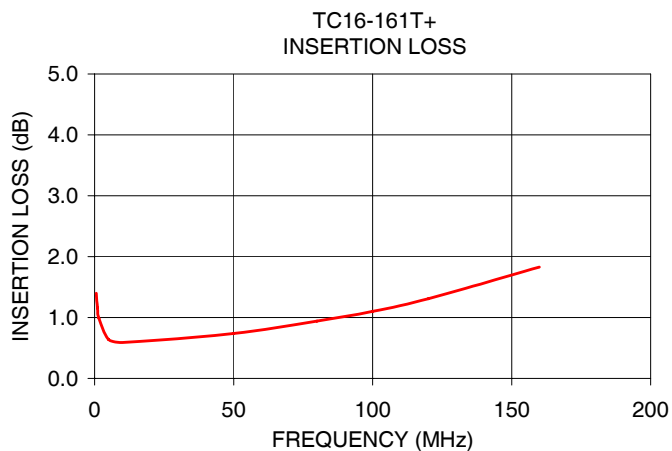
TC16-161T+

Mini-Circuits

50Ω 0.6 to 160 MHz

TYPICAL PERFORMANCE DATA

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
0.60	1.40	14.15
1.00	1.16	17.14
1.50	0.99	19.51
5.00	0.64	29.93
10.00	0.59	36.06
50.00	0.74	16.77
80.00	0.94	12.74
100.00	1.10	10.87
120.00	1.31	9.38
160.00	1.83	7.18



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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