# Surface Mount **RF** Transformer

#### **75**Ω 0.3 to 475 MHz

## **Maximum Ratings**

Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA
Permanent damage may occur if any o	of these limits are exceeded.

### **Pin Connections**

PRIMARY DOT	6
PRIMARY	3
SECONDARY DOT	1
SECONDARY	3

Outline Drawing AT224-1

# **Features**

- wideband 0.3-475 MHz
- good return loss, 23 dB typ in 1 dB bandwidth
- step-down 9:1 autotransformer
- plastic base with leads
- · aqueous washable

# **Applications**

• matching laser diode

# Ingraded Version TC9-1-75+



#### Generic photo used for illustration purposes only CASE STYLE: AT224-1

Addition of Top hat™ feature Benefits Allows faster pick-and-place
Enables visual identification marking

+RoHS Compliant The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

ilable Tape and Reel at no extra cost Ava Reel Size , 200, 500

# **Transformer Electrical Specifications**

Ω	FREQUENCY	INSERTION LOSS*		
(Primary/Secondary)	(MHZ)	3 dB MHz	2 dB MHz	1 dB MHz
75/8	0.3-475	0.3-475	0.5-450	0.9-370

\* Insertion Loss is referenced to mid-band loss, 0.4 dB typ. Stepdown, 75 ohm primary, 51 pF across secondary

Typical Performance Data				
FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)		
0.30	0.80	14.70		
0.50	0.71	16.80		
0.90	0.66	18.13		
10.00	0.36	22.63		
100.00	0.44	22.86		
200.00	0.42	22.40		
300.00	0.29	23.48		
370.00	0.29	18.53		
450.00	0.84	9.48		
475.00	1.40	7.44		



TC9-1-75+ INPUT RETURN LOSS 100 200 300 400 500 FREQUENCY (MHz)

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-Circuit's website at www.minicircuits.com/WCLStore/terms.jsp

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REV. D M151107 TC9-1-75+ IG/TD/CP/AM 200407 Page 1 of 1

#### Lead #1 identifier shall be located in the cross-hatched area shown. Identifier may be either a molded or marked feature C MAX -d⁄ tyi 2



Suggested Layout, Tolerance to be within ±.002

## Outline Dimensions (inch)

<b>F</b>	<b>E</b>	D	<b>C</b>	<b>B</b>	<b>A</b>
.025	. <b>040</b>	.050	. <b>160</b>	. <b>150</b>	. <b>150</b>
0.64	1.02	1.27	4.06	3.81	3.81
wt	L	K	J	H	<b>G</b>
grams	.007	.030	. <b>190</b>	. <b>065</b>	.028
0.15	0.18	0.76	4.83	1.65	0.71

Demo Board MCL P/N: TB-276



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Mini-Circuits: TC9-1-75+