

# Surface Mount RF Transformer

50Ω 2 to 500 MHz

## TCM8-1+ TCM8-1



CASE STYLE: DB714  
PRICE: \$.99 ea. QTY (100)

**+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)**

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

### Maximum Ratings

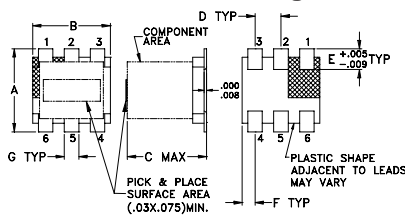
Operating Temperature	-20°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.25W
DC Current	30mA

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

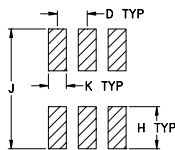
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch)

A	B	C	D	E	F
.160	.150	.160	.050	.040	.025
4.06	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	

### Features

- wide bandwidth, 2 to 500 MHz
- good return loss
- excellent amplitude unbalance, 0.1 dB typ. and phase unbalance, 2 deg typ. in 1 dB bandwidth
- plastic base with solder plated leads
- aqueous washable

### Applications

- impedance matching

### Transformer Electrical Specifications

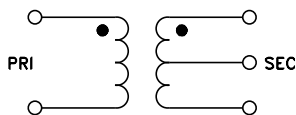
Ω RATIO (Secondary/Primary)	FREQUENCY (MHz)	INSERTION LOSS*		
		3 dB MHz	2 dB MHz	1 dB MHz
8	2-500	2-500	5-400	10-100

\* Insertion Loss is referenced to mid-band loss, 0.8 dB typ.

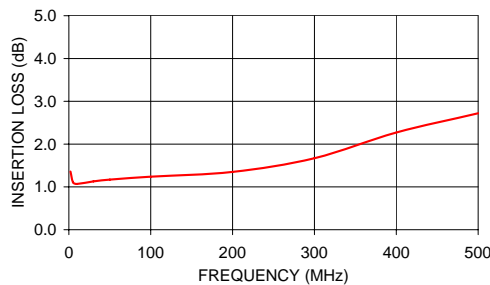
### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
2.00	1.36	20.96
5.00	1.11	27.44
10.00	1.07	32.00
30.00	1.13	31.42
50.00	1.17	28.33
100.00	1.24	22.86
200.00	1.35	16.51
300.00	1.67	12.66
400.00	2.27	9.85
500.00	2.72	7.79

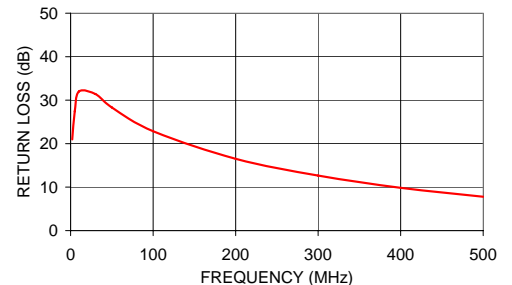
### Config. A



TCM8-1  
INSERTION LOSS



TCM8-1  
INPUT RETURN LOSS



**Mini-Circuits®**  
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IF/RF MICROWAVE COMPONENTS

For detailed performance specs  
& shopping online see web site

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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