

# Surface Mount RF Transformer

## TCL1-19+

50Ω 800 to 1900 MHz

### Maximum Ratings

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

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

### Pin Connections

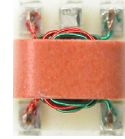
PRIMARY DOT	6
PRIMARY	4
SECONDARY DOT	1
SECONDARY	3
NOT USED	2

### Features

- wideband, 800 to 1900 MHz
- balanced transmission line
- plastic base with leads
- aqueous washable

### Applications

- cellular
- PCN
- GPS
- baluns
- impedance matching



CASE STYLE: AT224-1

### +RoHS Compliant

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

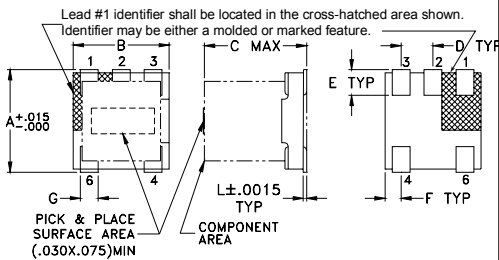
Available Tape and Reel at no extra cost	
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

### Transformer Electrical Specifications

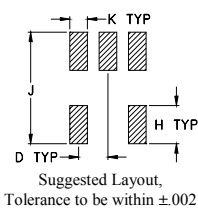
MODEL NO.	Ω RATIO	FREQUENCY (MHz)	INSERTION LOSS*	
			3 dB MHz	1 dB MHz
TCL1-19+	1	800-1900	800-1900	800-1400

\* Insertion Loss is referenced to mid-band loss, 0.2 dB typ.

### Outline Drawing AT224-1



### PCB Land Pattern



### Outline Dimensions (inch)

A	B	C	D	E	F
.150	.150	.160	.050	.040	.025
3.81	3.81	4.06	1.27	1.02	0.64

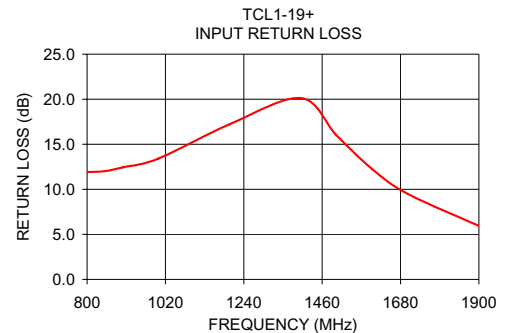
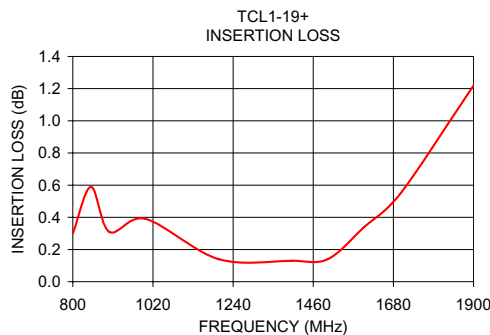
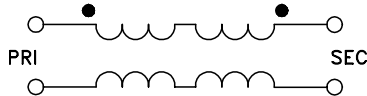
  

G	H	J	K	L	wt
.028	.065	.190	.030	.007	grams
0.71	1.65	4.83	0.76	0.18	0.15

### Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)
800.00	0.30	11.91
850.00	0.59	12.02
900.00	0.31	12.44
1000.00	0.39	13.40
1200.00	0.14	17.22
1400.00	0.13	20.13
1500.00	0.14	16.01
1600.00	0.34	12.26
1700.00	0.55	9.49
1900.00	1.22	5.94

### Config. G



### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

