

Mini-Circuits

SURFACE MOUNT 

RF Transformer

TCM2-92X-1+

50Ω 30 to 900 MHz

FEATURES

- Wide Bandwidth 30 to 900 MHz
- Balanced Transmission Line
- Excellent Return Loss
- Aqueous Washable

APPLICATIONS

- PCS
- Wideband Push-Pull Amplifiers
- Cellular



Generic photo used for illustration purposes only

CASE STYLE: DB1627

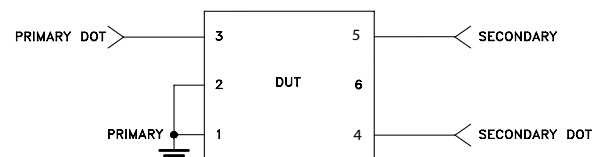
+RoHS Compliant

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

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Impedance Ratio (Secondary/Primary)		2			Ohm
Frequency Range		30		900	MHz
Insertion Loss	30-900		1.1	2.5	dB
Amplitude Unbalance	30-900		0.8		dB
Phase Unbalance	30-900		6		Degree

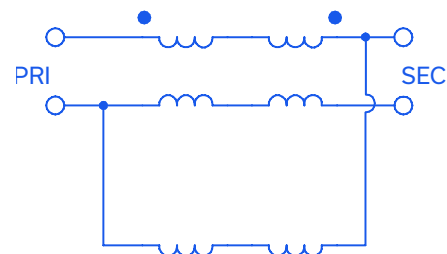
ELECTRICAL SCHEMATIC



ABSOLUTE MAXIMUM RATINGS

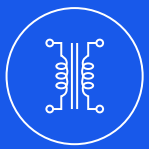
Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
RF Power	0.4 W
DC Current	30 mA

CONFIGURATION K



REV. A
ECO-025163
TCM2-92X-1+
MCL NY
250408





Mini-Circuits

SURFACE MOUNT RF Transformer

TCM2-92X-1+

50Ω

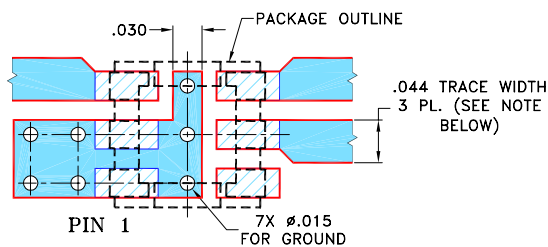
30 to 900 MHz

PIN CONNECTIONS

PRIMARY DOT	3
PRIMARY	1,2
SECONDARY DOT	4
SECONDARY	5
GND	1,2
NOT USED	6

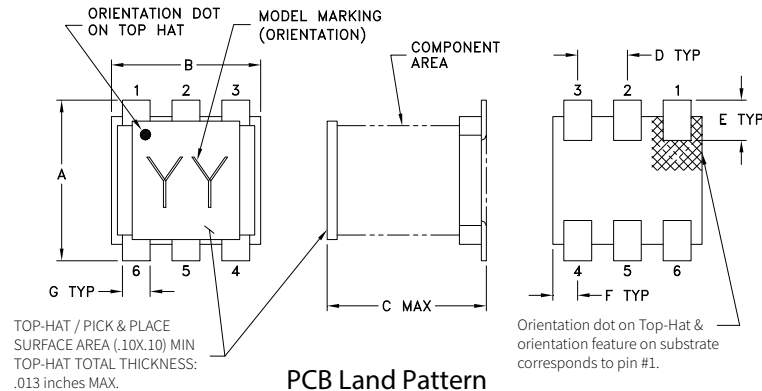
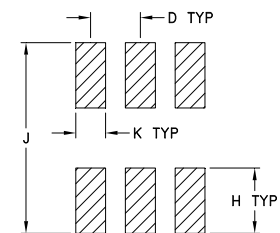
PRODUCT MARKING: WL

DEMOBOARD MCL P/N: TB-717+
SUGGESTED PCB LAYOUT (PL-395)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015"; COPPER: 1/2 OZ. EACH SIDE.
 FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

-  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 (Inches mm)

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	

TAPE & REEL INFORMATION: F47



Mini-Circuits

top hat

SURFACE MOUNT

RF Transformer

TCM2-92X-1+

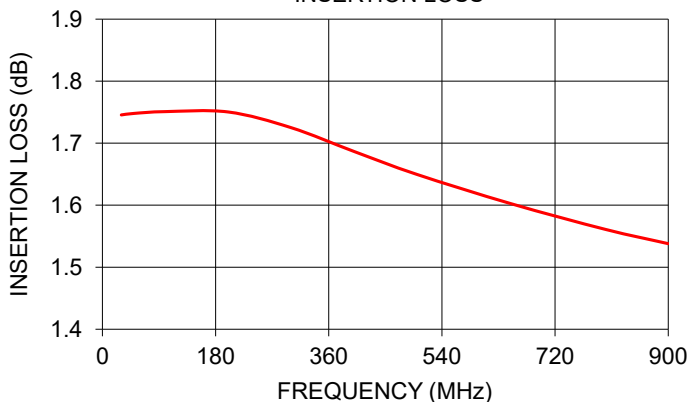
50Ω

30 to 900 MHz

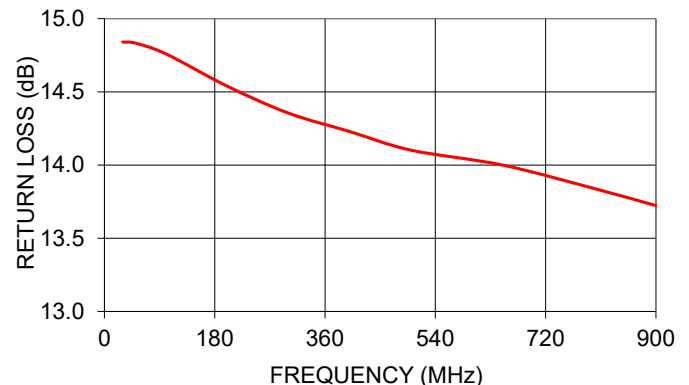
TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Input Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (deg)
30	1.75	14.84	0.06	0.33
50	1.75	14.83	0.06	0.49
100	1.75	14.76	0.05	0.97
200	1.75	14.54	0.01	1.70
300	1.73	14.36	0.02	2.36
400	1.69	14.23	0.07	2.87
500	1.65	14.10	0.10	3.25
650	1.60	14.00	0.16	3.73
800	1.56	13.84	0.19	4.02
900	1.54	13.72	0.20	4.19

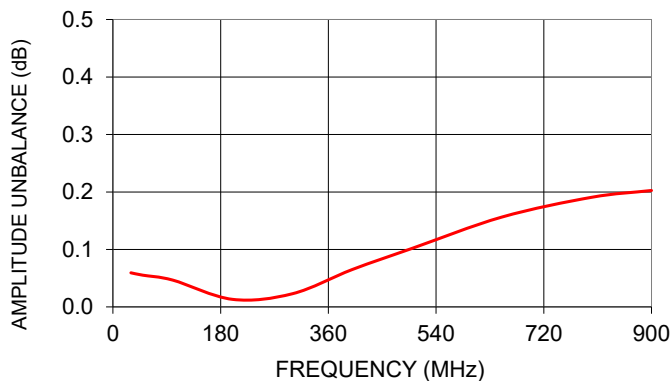
TCM2-92X-1+
INSERTION LOSS



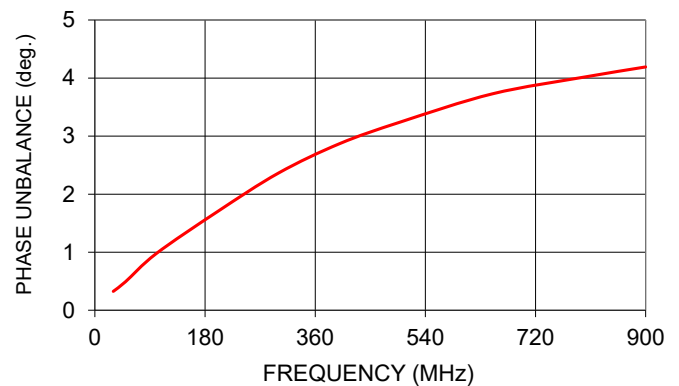
TCM2-92X-1+
INPUT RETURN LOSS



TCM2-92X-1+
AMPLITUDE UNBALANCE



TCM2-92X-1+
PHASE UNBALANCE



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/terms/viewterm.html

