

Surface Mount RF Transformer

50Ω

30 to 3000 MHz

TCM2-33X+



CASE STYLE: DB1627

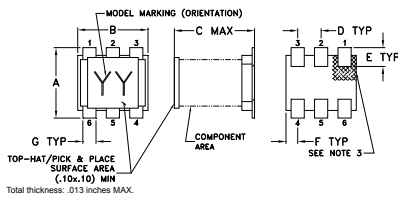
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power	0.4W
DC Current	30mA
Permanent damage may occur if any of these limits are exceeded.	

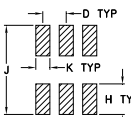
Pin Connections

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

Outline Drawing



PCB Land Pattern

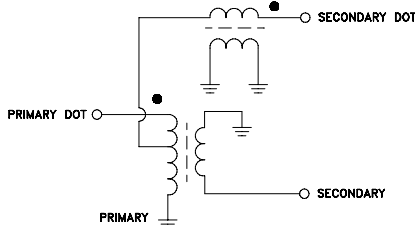


Suggested Layout,
Tolerance to be within .002

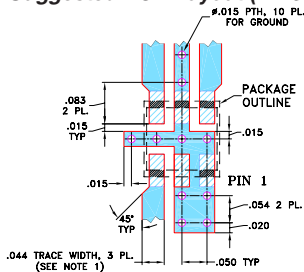
Outline Dimensions (mm)

	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		
	.028	.065	.190	.030	wt	
	0.71	1.65	4.83	0.76	grams	0.15

Config. N



Demo Board MCL P/N: TB-654+
Suggested PCB Layout (PL-364)



NOTES: 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.

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-Circuits' 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

Features

- wide bandwidth 30 to 3000 MHz
- balanced transmission line
- excellent return loss
- aqueous washable
- protected by US Patent 8,576,037

Applications

- PCS
- wideband push-pull amplifiers
- cellular

+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

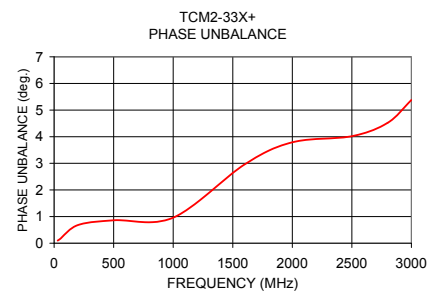
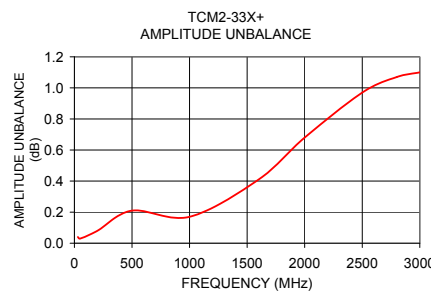
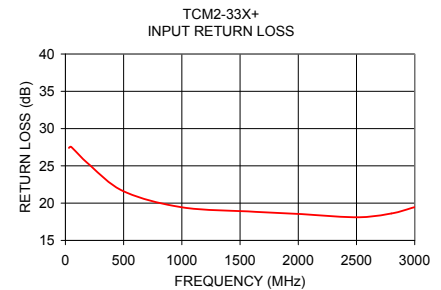
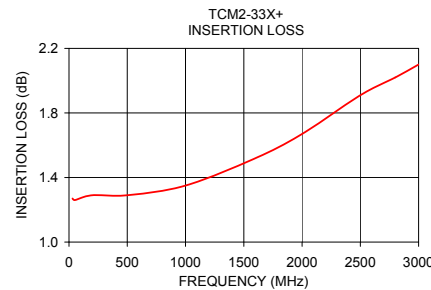
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500
13"	1000, 2000

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		
Frequency Range		30	—	3000	MHz
Insertion Loss	30 - 3000	—	1.5	3.0	dB
Amplitude Unbalance	30 - 3000	—	0.5	—	dB
Phase Unbalance	30 - 3000	—	4	—	Degree

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (deg.)
30	1.27	27.41	0.04	0.10
50	1.26	27.54	0.03	0.16
200	1.29	25.23	0.08	0.68
500	1.29	21.59	0.21	0.86
1000	1.35	19.44	0.17	0.96
1600	1.52	18.86	0.41	2.96
2000	1.67	18.55	0.68	3.79
2500	1.91	18.11	0.97	4.02
2800	2.02	18.61	1.07	4.52
3000	2.10	19.46	1.10	5.38



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. A
M151107
TCM2-33X+
ED-14492/7
IG/TD/CP/AM
151012
Page 1 of 1