Ceramic Balun

RF Transformer

NCS2-771-75+

75Ω 240 to 770 MHz 1:2 Ratio

CASE STYLE: GE0805C-9

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Input RF Power*	2W at 25°C

*Passband rating , derate linearly to 1W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Pad Connections

PRIMARY DOT (Unbalanced Port)	2
PRIMARY (GND)	1, 3
SECONDARY DOT (Balanced)	4
SECONDARY (Balanced)	6
NO CONNECTION	5

Features

- wideband, 240 to 770 MHz
- low phase unbalance, 7 deg. and amplitude unbalance, 0.3 dB typ.
- miniature size 0805 (2.0x1.25mm)
- LTCC construction
- low cost
- aqueous washable

Applications

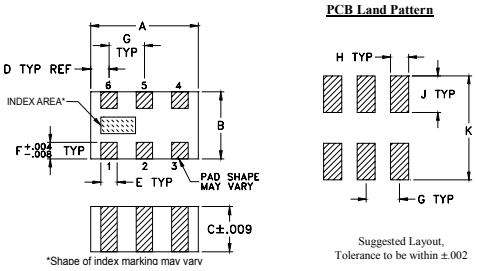
- VHF/UHF
- signal process
- instrumentation

+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, 500,1000, 4000

Outline Drawing

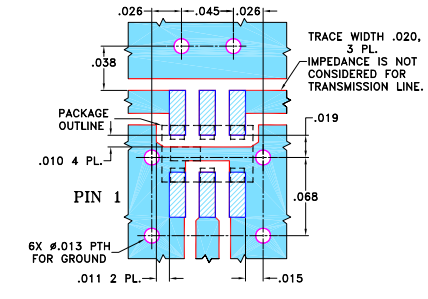


Outline Dimensions (inch / mm)

A	B	C	D	E	F
.079	.049	.037	.014	.012	.012
2.0	1.24	0.94	0.36	0.30	0.30

G	H	J	K	wt
.026	.014	.039	.110	grams
0.66	0.36	1.00	2.80	.008

Demo Board MCL P/N: TB-626+
Suggested PCB Layout (PL-348)



NOTES:
1. TRACE WIDTH IS SHOWN FOR REFERENCE ONLY.
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

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (secondary/primary)			2		
Frequency Range		240	—	770	MHz
Insertion Loss*	240 - 770	—	0.8	1.2	dB
Amplitude Unbalance	240 - 770	—	0.3	1.0	dB
Phase Unbalance†	240 - 770	—	7	10	Degree

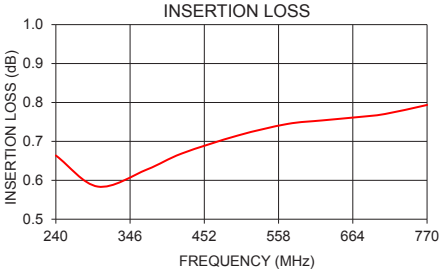
* Reference Demo Board TB-626+
† Relative to 180°

Typical Performance Data at 25°C**

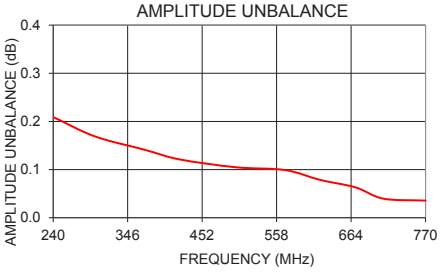
FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
240	0.66	18.76	0.21	4.45
300	0.58	20.33	0.17	5.57
370	0.63	16.43	0.14	6.29
420	0.67	15.22	0.12	6.26
500	0.72	14.73	0.10	5.34
570	0.74	15.18	0.10	3.40
620	0.75	16.01	0.08	1.41
670	0.76	17.24	0.06	1.10
710	0.77	18.58	0.04	3.65
770	0.79	21.67	0.04	7.99

** Measured with Agilent E5071B network analyzer using impedance conversion and port extension.

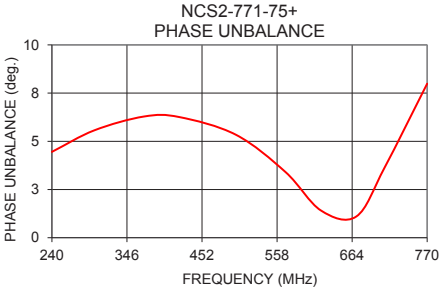
NCS2-771-75+
INSERTION LOSS



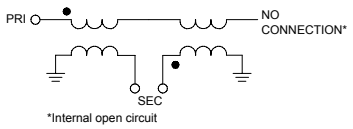
NCS2-771-75+
AMPLITUDE UNBALANCE



NCS2-771-75+
PHASE UNBALANCE



configuration J



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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

REV. A
M146515
NCS2-771-75+
MY/CP/AM
180124