Ceramic Balun

RF Transformer

NCS2-33+

50Ω 1500 to 3100 MHz 1:2 Ratio

Generic photo used for illustration purposes only

CASE STYLE: GE0805C-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, 500,1000, 4000

Features

- wideband, 1500 to 3100 MHz
- low phase unbalance, 5 deg. and amplitude unbalance, 0.6 dB typ.
- miniature size, 0.079"x0.049"x0.033"
- LTCC construction
- aqueous washable
- low cost

Applications

- WLAN
- WIMAX/WIBRO
- MMDS
- WCDMA

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio (Secondary/Primary)			2		
Frequency Range		1500	—	3100	MHz
Insertion Loss[1]	1500-3100	—	1.0	—	dB
Amplitude Unbalance	1500-3100	—	0.6	—	dB
Phase Unbalance[2]	1500-3100	—	5	—	Degree

1. Insertion Loss is referenced to mid-band loss, 0.6 dB. Reference Demo Board TB-419+
2. Relative to 180°

Maximum Ratings

Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power***	3W at 25°C

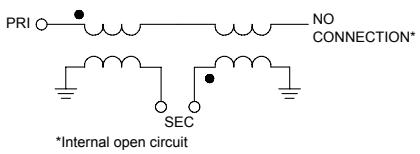
*** Derate linearly to 2W at 85°C
Permanent damage may occur if any of these limits are exceeded.

Pad Connections

Function	Pad Number
PRIMARY DOT (Unbalanced Port)	1
PRIMARY (GND)	2
SECONDARY DOT (Balanced)	4
SECONDARY (Balanced)	3
NO CONNECTION*	6
NOT USED (GND Extremally)	5

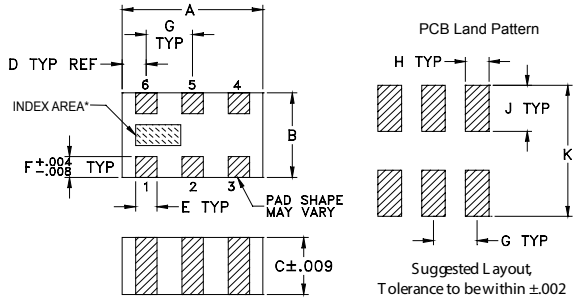
Pads 2,3,4 are DC-connected internally
**Pad 6 must be open (See PL-264)*

Configuration J



*Internal open circuit

Outline Drawing



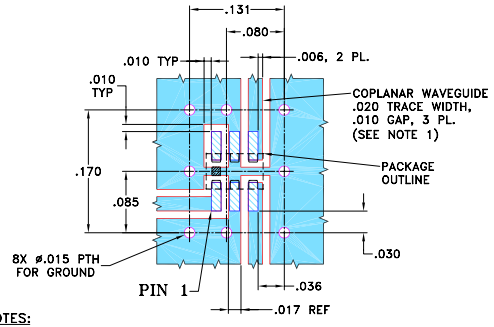
*Shape of index marking may vary

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.079	.049	.033	.014	.012	.012
2.01	1.24	0.84	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-419+
Suggested PCB Layout (PL-264)



NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010" ± .001". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

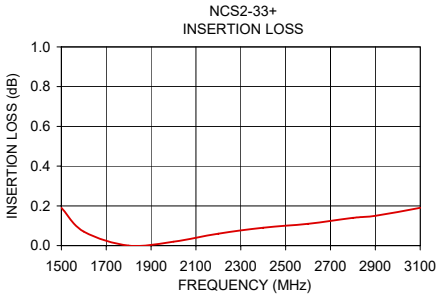
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).

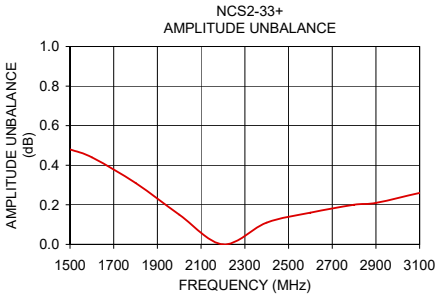
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

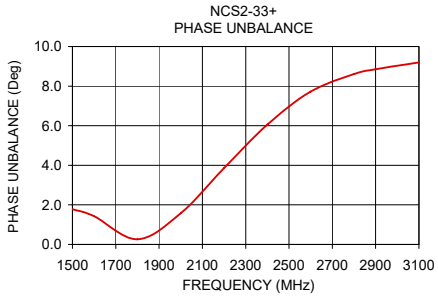
Typical Performance Data at 25°C[3]

FREQUENCY (MHz)	INSERTION LOSS (dB)	INPUT R. LOSS (dB)	AMPLITUDE UNBALANCE (dB)	PHASE UNBALANCE (Deg.)
1500.00	0.19	14.72	0.48	1.78
1600.00	0.07	18.96	0.44	1.43
1800.00	0.00	27.34	0.31	0.26
2000.00	0.02	21.43	0.15	1.58
2200.00	0.06	18.94	0.00	3.86
2400.00	0.09	18.46	0.11	6.06
2600.00	0.11	18.90	0.16	7.72
2800.00	0.14	19.62	0.20	8.61
2900.00	0.15	19.75	0.21	8.85
3100.00	0.19	19.44	0.26	9.20

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







Additional 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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Signal Conditioning ***category:***

Click to view products by Mini-Circuits ***manufacturer:***

Other Similar products are found below :

MAPDCC0001 MAPDCC0004 PD0409J5050S2HF 880157 HHS-109-PIN DC1417J5005AHF AFS14A30-2185.00-T3 AFS14A35-1591.50-T3 DS-323-PIN B39321R801H210 1A0220-3 JP510S LFB212G45SG8C341 LFB322G45SN1A504 LFL182G45TC3B746 SF2159E 30057 FM-104-PIN CER0813B MAPDCC0005 3A325 40287 41180 ATB3225-75032NCT BD0810N50100AHF BD2425J50200AHF C5060J5003AHF JHS-115-PIN JP503AS DC0710J5005AHF DC2327J5005AHF DC3338J5005AHF 43020 LFB2H2G60BB1C106 LFL15869MTC1B787 X3C19F1-20S XC3500P-20S 10013-20 SF2194E CDBLB455KCAX39-B0 TGL2208-SM, EVAL RF1353C PD0922J5050D2HF 1E1305-3 1G1304-30 B0922J7575AHF 2020-6622-20 TP-102-PIN TP-103-PIN BD1222J50200AHF