Very High DC Current

RF Choke

ADCH-1220-75+

75Ω 5 to 1220 MHz

CASE STYLE: CD637

The Big Deal

- Very wideband, 5 to 1220 MHz
- Maximum DC current handling capability of 200mA
- Excellent Insertion Loss, .3dB typical
- Good Return Loss, 20 dB typ.
- SMT Package

Product Overview

The ADCH-1220-75+ series of RF Chokes achieve very wide bandwidth from 5 up to 1220 MHz. The choke is wound with AWG32 wire, making the maximum continuous current 200mA DC. Excellent Insertion Loss, good VSWR (1.22:1 typ.), flatness and rugged construction make these models ideal solutions for rf-choke applications across a very wide frequency range. These units support a broad range of system and test applications.

Key Features

Feature	Advantages
Extremely wideband, 5 to 1220 MHz	Ideal for an exceptionally wide variety of lab and system applications.
Excellent Insertion Loss, .3 dB typ. across entire range.	Provides excellent signal transmission from input to output with consistent performance across its entire frequency range.
Good Return Loss, 20 dB typ.	Efficient power utilization with minimal signal power reflected back to source
200mA DC continuous	Ideal for DC injection applications requiring high current levels.
Rugged Construction	Withstands harsh environmental conditions for high reliability and long life of use.

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Generic photo used for illustration purposes only

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+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
13"	900

Maximum Ratings

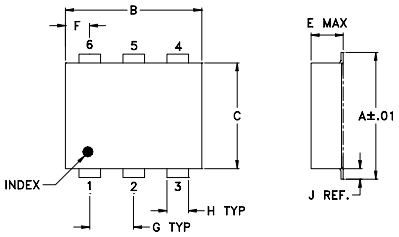
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
DC Current	300mA

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

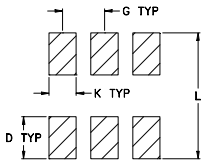
Pin Connections

RF-IN & DC	1
RF GROUND	4
NOT USED	2,3,5,6

Outline Drawing



PBC Land Pattern



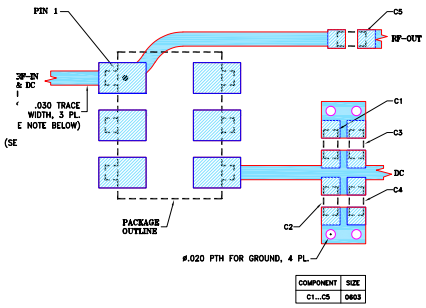
Suggested Layout,
Tolerence to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.206	.055	.100
6.91	7.87	5.59	2.54	5.23	1.40	2.54

H	J	K	L	wt
.030	.026	.065	.300	grams
0.76	0.66	1.65	7.62	0.40

Demo Board MCL P/N: TB-1168+
Suggested PCB Layout (PL-700)



NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030±.0015"; COPPER: 1/2 OZ. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-ADCH-1220-75+.
3. BOTTOM COPPER 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

Features

- low parasitic capacitance 0.1 pf typ.
- effective parallel resistance, Rch 800 ohm typ.
- aqueous washable
- protected by US Patent, 6,133,525

Applications

- biasing amplifiers
- biasing of laser diodes
- biasing of active antennas

Electrical Specifications at 25°C

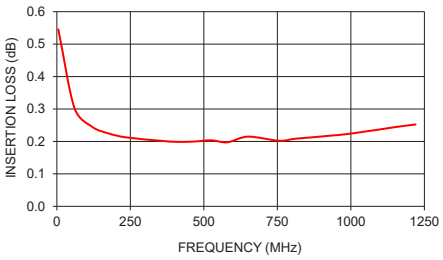
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Insertion Loss	5-10	—	0.6	0.8	dB
	10-1220	—	0.3	0.5	
VSWR*	5-10	—	2.0	2.3	:1
	10-1220	—	1.2	1.38	
DC Current	—	—	—	200	mA
Inductance	@ 0 mA	—	3.4	—	µH

* tested with circuit shown below, Zo=75 ohms

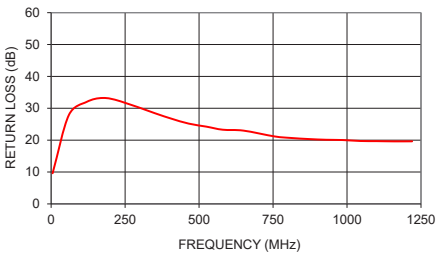
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
5	0.55	9.62
60	0.30	27.89
120	0.25	32.00
175	0.23	33.24
235	0.21	32.17
350	0.20	28.47
405	0.20	26.79
465	0.20	25.19
525	0.20	24.24
580	0.20	23.28
650	0.21	23.00
755	0.20	21.17
810	0.21	20.69
870	0.21	20.35
930	0.22	20.12
985	0.22	20.04
1045	0.23	19.74
1100	0.24	19.70
1160	0.25	19.62
1220	0.25	19.64

ADCH-1220 -75+
INSERTION LOSS

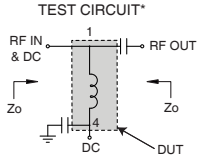


ADCH-1220-75+
RETURN LOSS



Electrical Schematic

TEST CIRCUIT*



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

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