

Ku-Band Orthomode Transducer OMT75K-X09

Optim Microwave, Inc.
4020 Adolfo Road
Camarillo CA 93012

MICROWAVE COMPONENT

April 15, 2016

1 Mechanical Specifications

The unit has a 0.7" diameter circular waveguide at the common port, and WR75 flanges at both the through port and the side port.

With the same performance, the OMT presently comes in four different versions:

OMT	Length	O-Rings	Screw Type	Weight
OMT75K-109	1.365"	-	6-32	80.3g/2.8oz
OMT75K-209	1.365"	-	metric M4	80.3g/2.8oz
OMT75K-309	1.365"	conductive	6-32	80.3g/2.8oz
OMT75K-409	1.626"	-	6-32	85.2g/3.0oz

Other combinations of length, O-rings, and screw type are available upon request.

2 Electrical Specifications

1. Frequency Band

Through Port: 10.70 – 14.50 GHz

Side Port: 10.70 – 12.75 GHz

2. Insertion Loss

See plots.

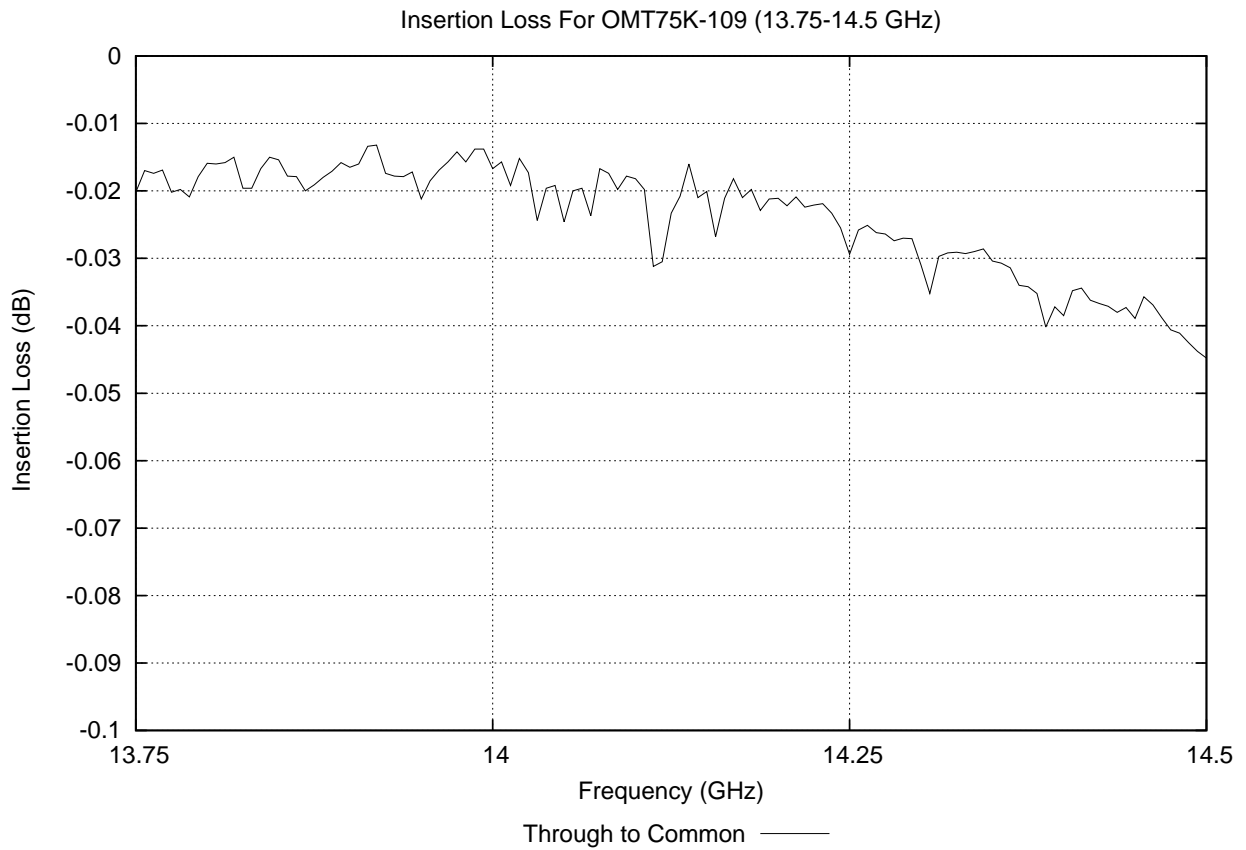
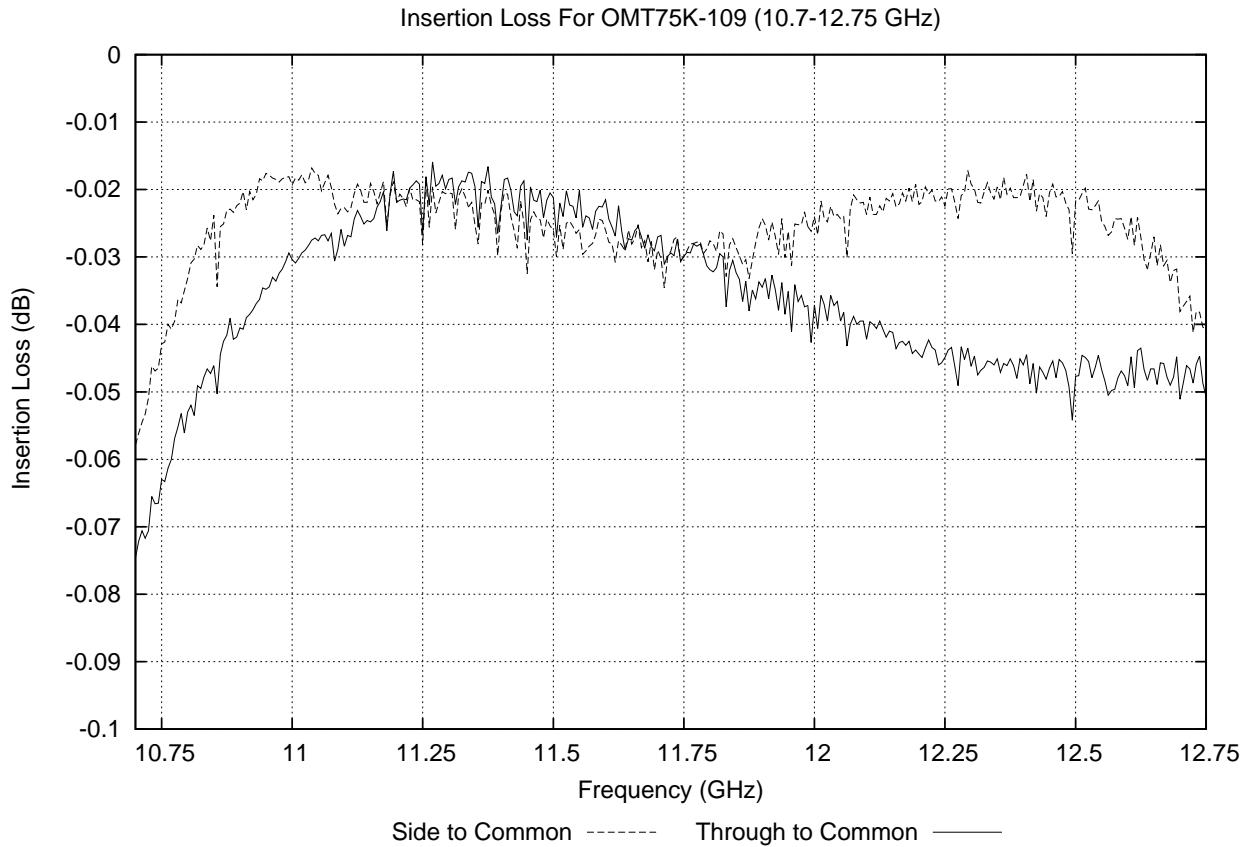
3. Return Loss

See plots.

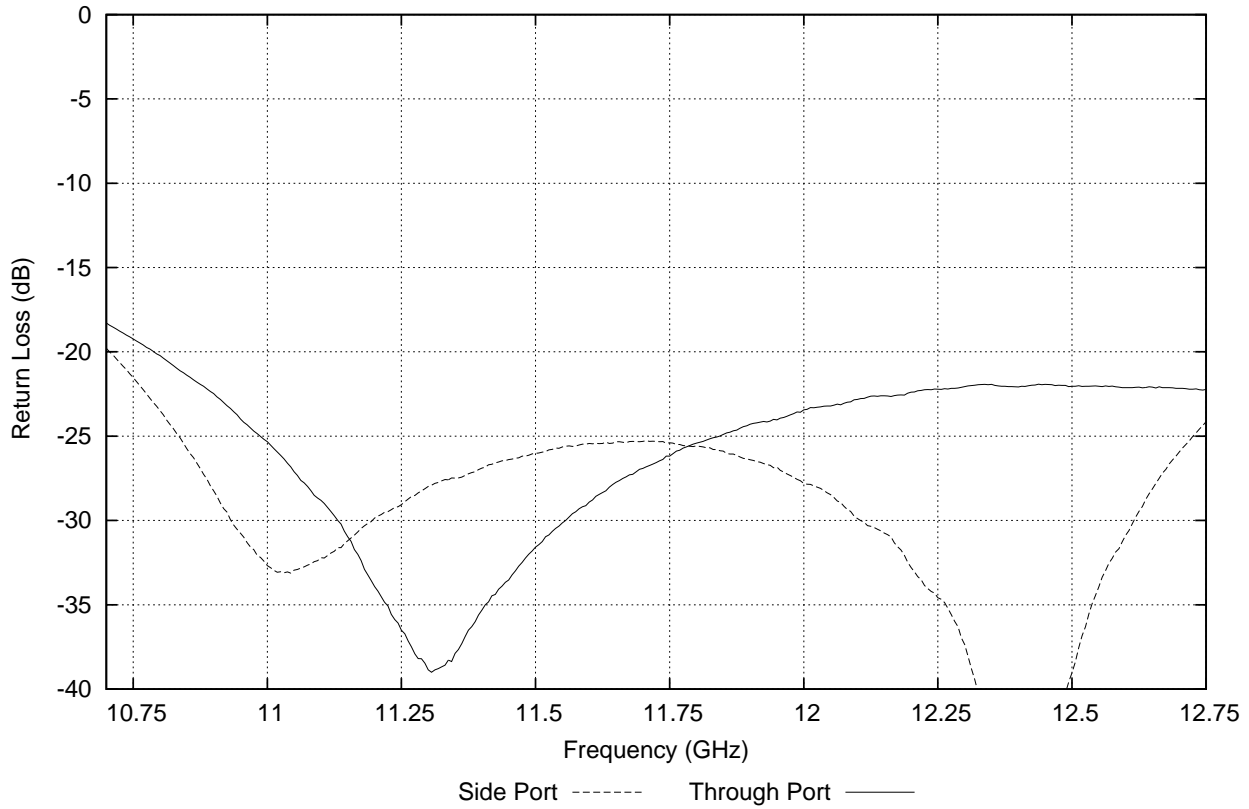
4. Isolation

Side port to Through port < -40 dB

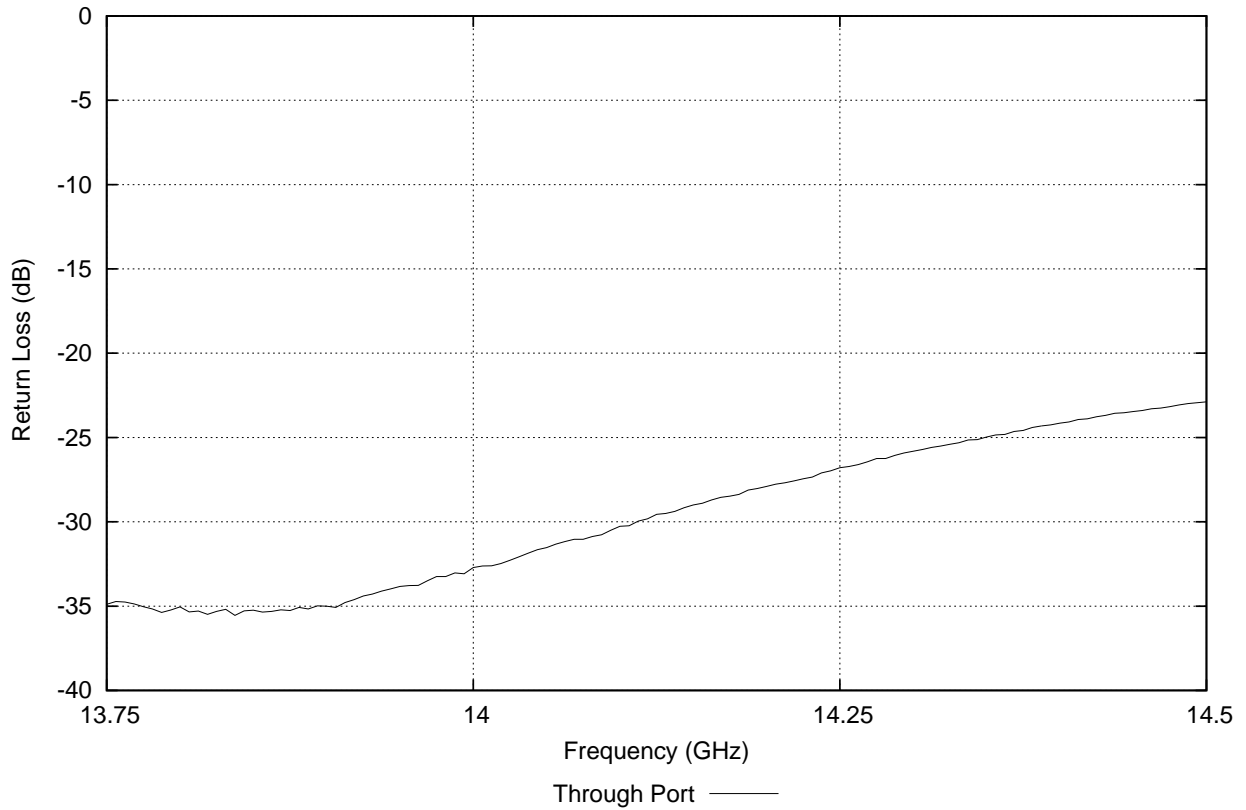
3 Typical Electrical Performance Measurements



Reflections at Rectangular Ports For OMT75K-109 (10.7-12.75 GHz)



Reflections at Rectangular Ports For OMT75K-109 (13.75-14.5 GHz)



4 Mechanical Diagram

DATA CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO OPTIM MICROWAVE INC. AND SHALL NOT BE DISCLOSED, COPIED OR USED FOR PROCUREMENT OR MANUFACTURE WITHOUT EXPRESS WRITTEN PERMISSION.				REVISIONS			
REV	DESCRIPTIONS	DATE	ECR #				
B	Ø .096 WAS THRU NOW Ψ .160	3-7-14					

THRU PORT

1.500

.561

.561

.908

.520 .520

4x #6-32UNC-2B THRU

WR-75 FLANGE

.135

1.365

1.843±.010

WR-75 FLANGE

SIDE PORT

2x Ø .096 Ψ .160 ON Ø 1.500 B.C. EQUALLY SPACED AS SHOWN

Ø 1.750

COMMEN PORT

2x Ø .096 THRU ON Ø 1.500 B.C. EQUALLY SPACED AS SHOWN

4x Ø .144 THRU ON Ø 1.500 B.C. EQUALLY SPACED AS SHOWN

1.500

SCALE 0.750

1.500

.750

.561

.561

.520 .520

WR-75 FLANGE

SIDE PORT

4x #6-32UNC-2B .150 DEEP

SCALE 0.750

2. MATERIAL/FINISH:
 (A) ALUMINUM: CHEMICAL CONVERSION COATING ROHS COMPLIANT. TRIVALENT CHROMIUM, (0.01%, 100 PPM) CLEAR. OR EQUIVALENT.

1. REMOVE ALL BURRS AND SHARP EDGES

NOTES: UNLESS OTHERWISE SPECIFIED.

INTERPRET DRAWING PER ASM Y14.5M-2001 DIMENSIONS ARE IN INCHES AND INCLUDE FINISH THICKNESS UNLESS OTHERWISE SPECIFIED		TOL: UNLESS SPECIFIED DIMENSIONS ARE IN INCHES. .XX ± .02 .XXX ± .005 .XXXX ANGLE ± 1°	
CONTRACT NO.		MATERIAL: 6061-T6 ALUMINUM	
DRN AAH	9-17-13	FINISH: SEE NOTE 2	
CHK	ISSUED		
NEXT ASSEMBLY		USED ON	
APPLICATION			

Optim Microwave Inc.
 Microwave Circuits and Antenna Design
 4020 Adolfo Rd
 Camarillo, CA 93012

Ku BAND OMT THROUGH WR-75, SIDE WR-75, CYL .700" DIA (SIDE PORT 10.70-12.75 THROUGH PORT 10.70-14.50 GHz)			
SIZE	FSCM NO.	DRAWING NO.	REV.
A		OMT75K-109-B	B
DO NOT SCALE DWG		SCALE	1/1
WEIGHT		SHEET 1 OF 1	