

Ku-Band Orthomode Transducer OMT75K-X10

Optim Microwave, Inc.
4020 Adolfo Road
Camarillo CA 93012

MICROWAVE COMPONENT

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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	Screws Type	Weight
OMT75K-110	1.283"	-	6-32	82.2g/2.9oz
OMT75K-210	1.283"	-	metric M4	82.2g/2.9oz
OMT75K-310	1.283"	conductive	6-32	82.2g/2.9oz
OMT75K-410	1.528"	-	6-32	87.2g/3.1oz

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

2 Electrical Specifications

1.Frequency Band

Through Port:

10.70 – 14.50 GHz

Side Port:

13.75 – 14.50 GHz

2.Insertion Loss

See plots.

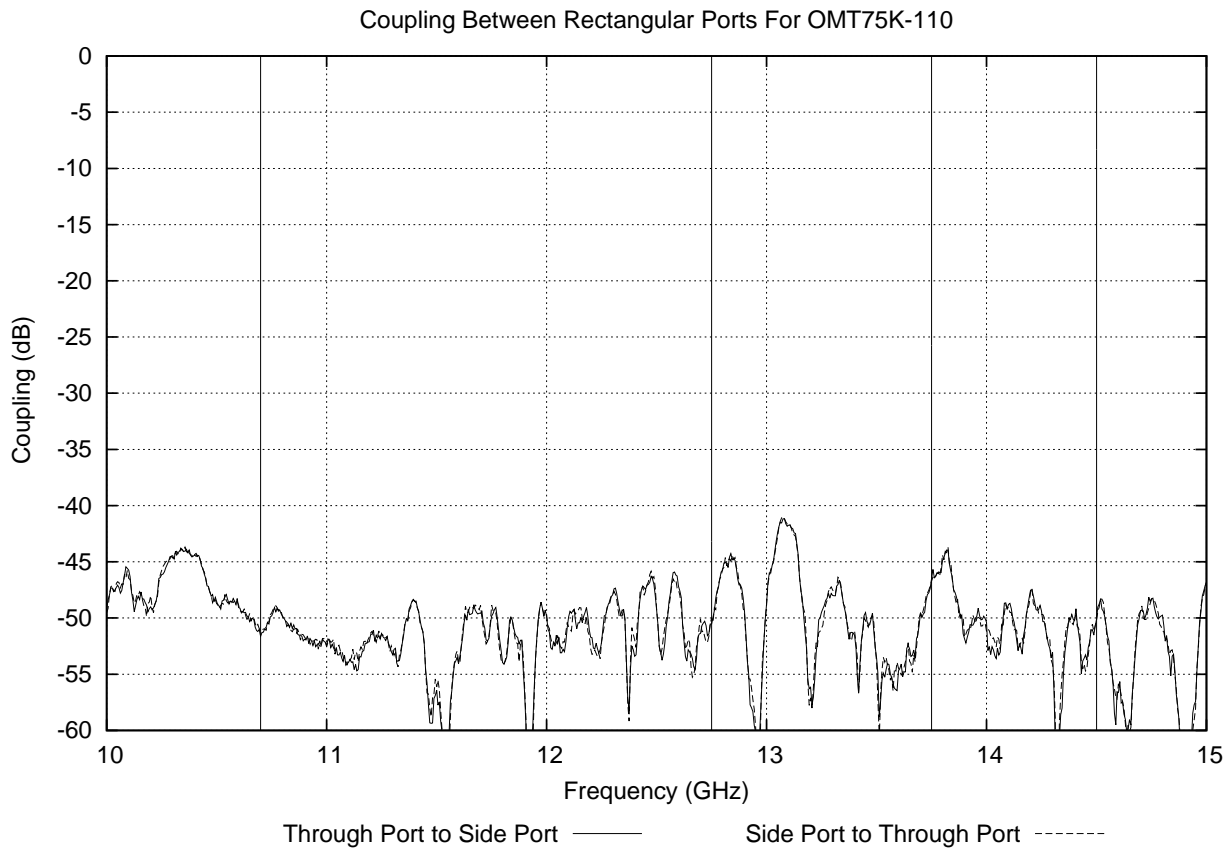
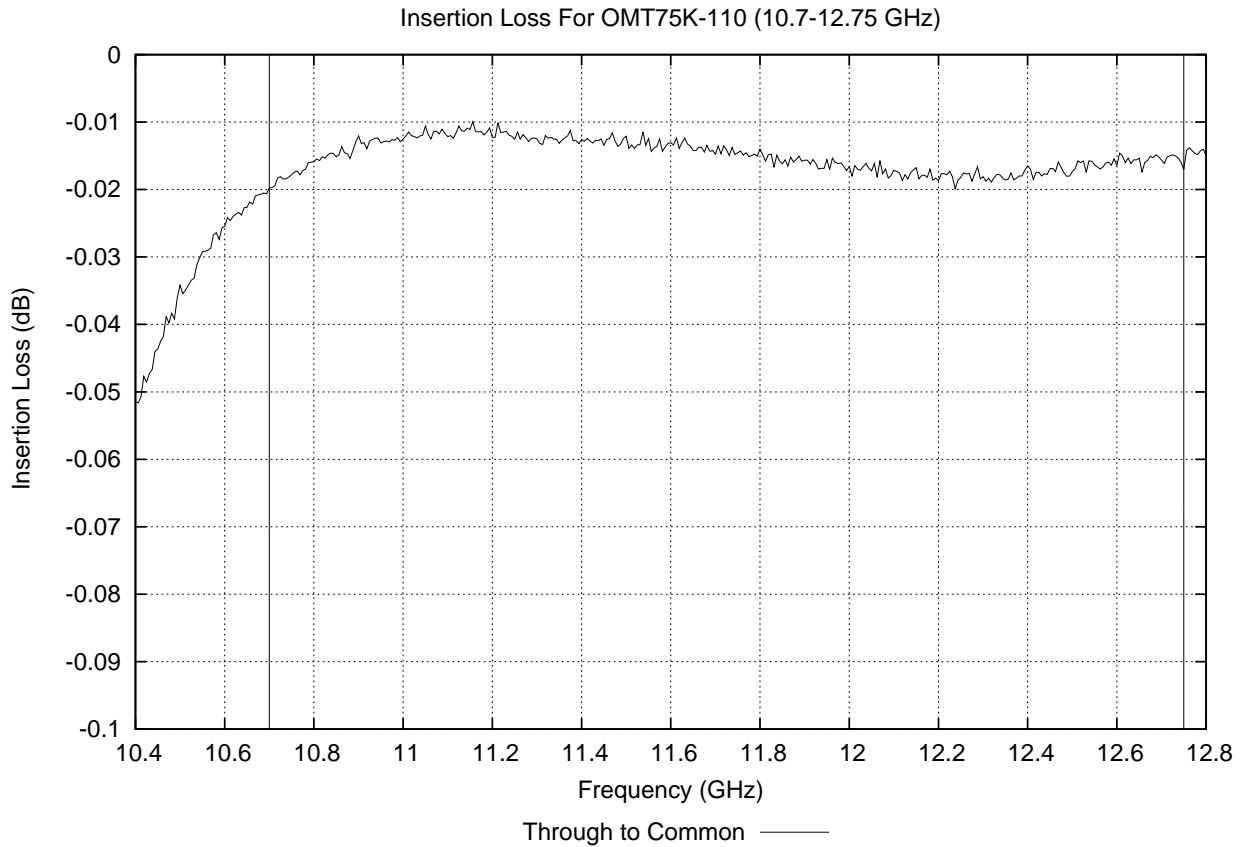
3.Isolation

See plots.

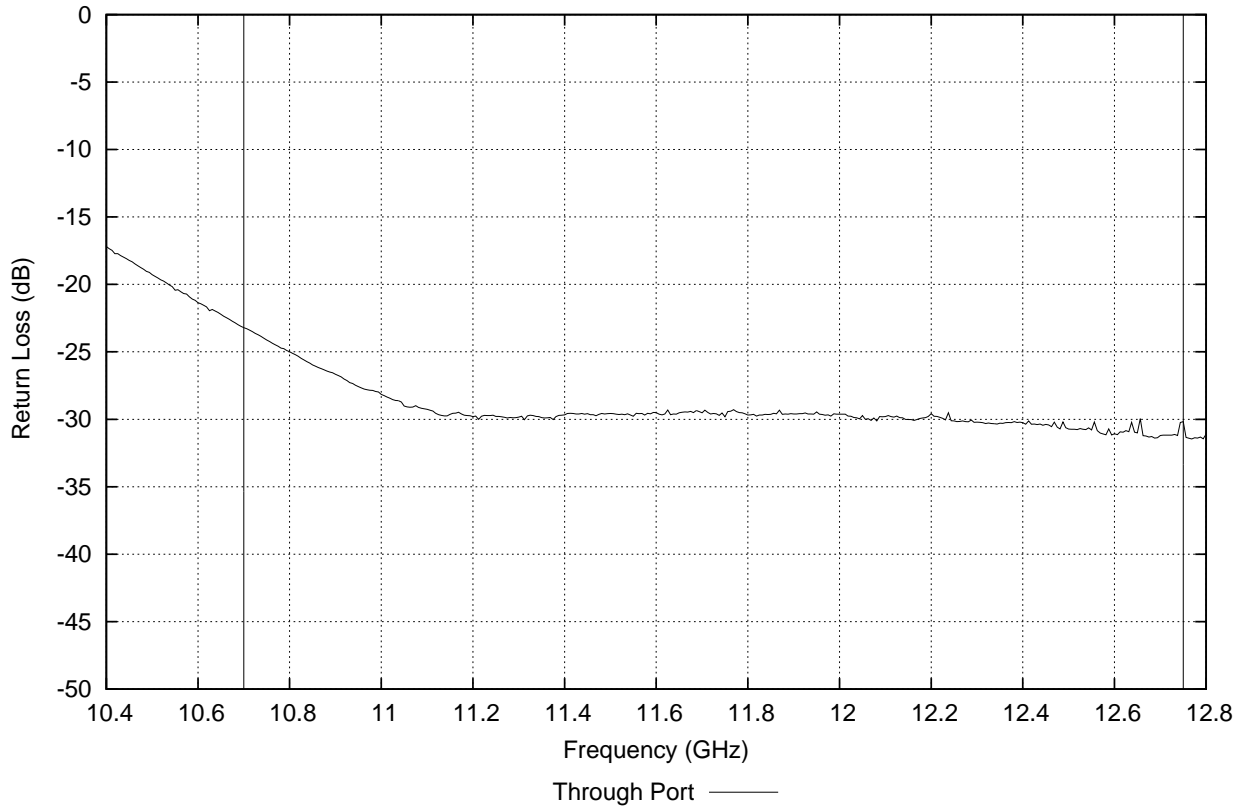
3.Return Loss

See plots.

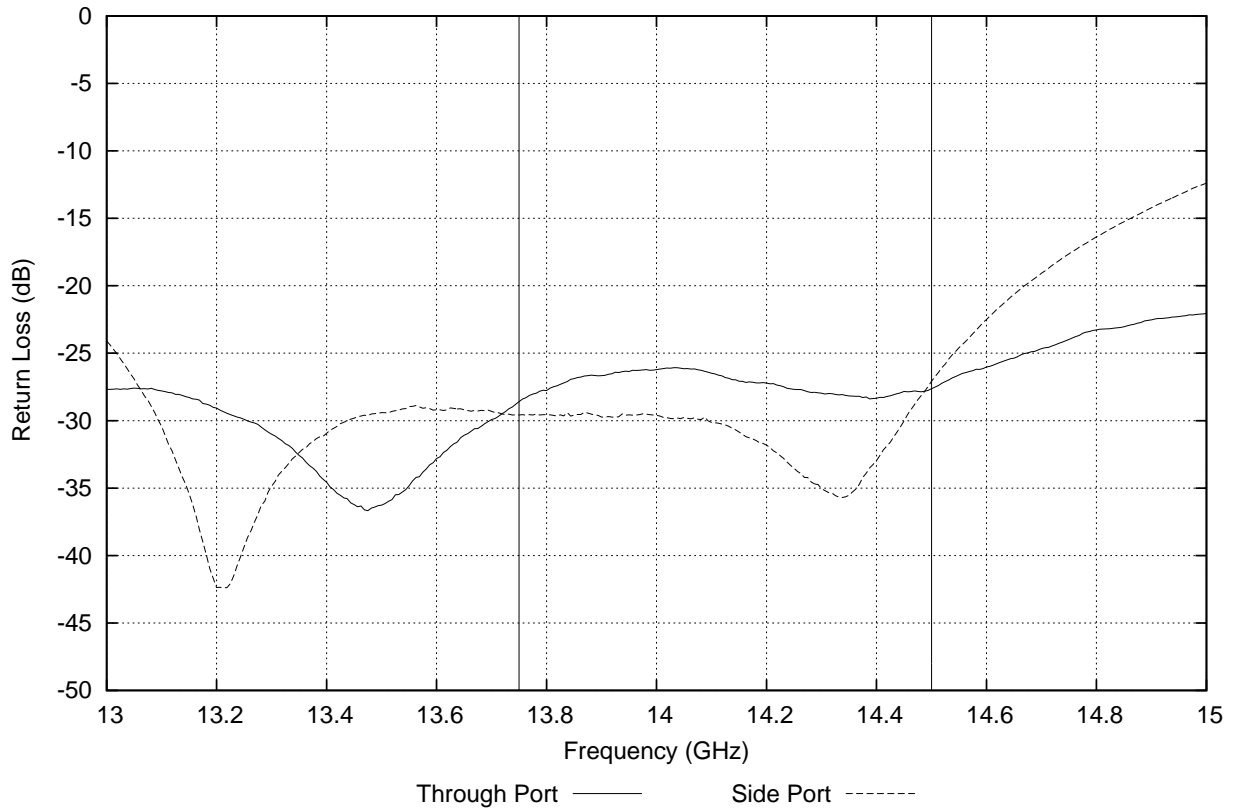
3 Typical Electrical Performance Measurements



Through Port Reflection For OMT75K-110 (10.7-12.75 GHz)



Reflections at Rectangular Ports For OMT75K-110 (13.75-14.5 GHz)



4 Mechanical Diagram

REVISIONS			
REV	DESCRIPTIONS	DATE	ECR #
	PRODUCTION RELEASE		

WR-75 FLANGE THRU PORT

4x #6-32UNC-2B THRU ONE SIDE

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

WR-75 FLANGE SIDE PORT

4x Ø.096 √.16 ON Ø 1.500 B.C. ALIGNMENT HOLES AS SHOWN

Ø 1.750

COMMON PORT

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

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

1. REMOVE ALL BURRS AND SHARP EDGES

NOTES: UNLESS OTHERWISE SPECIFIED.

<small>INTERPRET DRAWING PER ASM Y14.5M-2001 DIMENSIONS ARE IN INCHES AND INCLUDE FINISH THICKNESS UNLESS OTHERWISE SPECIFIED</small>		<small>TOL: UNLESS SPECIFIED DIMENSIONS ARE IN INCHES. .XX ±.02 .XXX ±.005 .XXXX ANGLE ± 1°</small>	
CONTRACT NO.		MATERIAL:	
DRN AAH	6-3-14	6061-T6 ALUMINUM	
CHK		FINISH:	
ISSUED		SEE NOTE 2	

NEXT ASSEMBLY		USED ON		APPLICATION	
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Optim Microwave Inc.
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 4020 Adolfo Rd
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**Ku BAND OMT
 THROUGH WR-75, SIDE WR-75, CYL .700" DIA
 (SIDE PORT 13.75 - 14.5 THROUGH PORT 10.70-14.5 GHz)**

SIZE A	FSCM NO.	DRAWING NO. OMT75K-110	REV.
DO NOT SCALE DWG	SCALE 1/1	WEIGHT	SHEET 1 OF 1