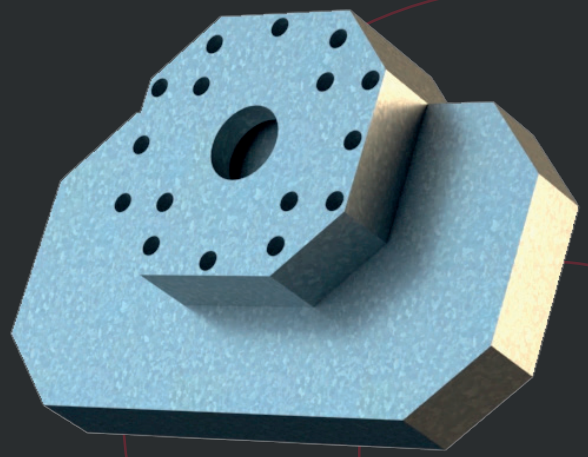
www.anteral.com

contact@anteral.com
+34 948 488458



Orthomode Transducer

2.6 to 220 GHz, High Isolation and XP level

DESCRIPTION

Anteral's wide-band orthomode transducers (OMTs) are used for either combine or separate two orthogonal linear polarized signals. The OMTs support either horizontal or vertical polarized signals with more than 35 dB cross-polarization rejections and 35 dB isolation.

APPLICATIONS

Wide-band orthomode transducers (OMTs) are especially useful when high isolation and high cross polarization is required to combine or separete two linear polarized waveforms. Therefore, these OMTs are widely used in radar applications, communication, and antenna ranges among others.

Anteral also offers their Dual Polarized Scalar Feed Horn Antennas (DPSFHA) with 10, 15 and 18 dBi gain at a wide range of frequencies. They are an integrated system composed of an orthomode transducer (OMT) that provides high isolation and cross-polarization (XP) cancellation and a broad band scalar feed horn antenna that provides high gain, low VSWR and low side-lobes, with minimum size.

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Edificio I+D "Jerónimo de Ayanz", Calle Tajonar 22,
31006 Pamplona (Navarra), SPAIN

contact@anteral.com
+34 948 488458

ELECTRICAL SPECIFICATIONS

Model	Frequency (GHz)	VSWR	Insertion Loss (dB)	Isolation (dB)	XP (dB)	Length (mm)
OMT-WR284-01	2.6 - 3.95	1.15	0.15	45	50	278
OMT-WR137-01	5.85 - 8.2	1.15	0.15	45	50	129
OMT-WR112-01	7.05 - 10	1.15	0.2	45	50	108
OMT-WR90-01	8.2 - 12.4	1.15	0.2	45	45	99.4
OMT-WR75-01	10 - 15	1.15	0.2	45	45	85
OMT-WR62-01	12.4 - 18	1.15	0.2	40	45	70
OMT-WR51-01	15 - 22	1.15	0.2	40	40	94.9
OMT-WR42-01	18 - 26.5	1.15	0.3	40	40	76.2
OMT-WR34-01	22 - 33	1.2	0.3	40	40	69.2
OMT-WR28-01	26.5 - 40	1.2	0.3	35	40	45.34
OMT-WR28-02	24.5 - 43.5	1.2	0.4	35	40	61.37
OMT-WR22-01	33 - 50	1.2	0.4	35	35	47.4
OMT-WR19-01	40 - 60	1.3	0.4	35	35	44.4
OMT-WR15-01	50 - 75	1.3	0.5	35	35	35.5
OMT-WR12-01	60 - 90	1.45	0.5	35	35	32
OMT-WR10-01	75 - 110	1.45	0.6	35	35	32
OMT-WR06-01	120 - 160	1.45	1	35	30	28
OMT-WR05-01	140-220	1.45	1	30	30	30
OMT-WR04-01	190-220	1.45	1	30	30	30
OMT-WR137-PM-01*	5.85 - 8.2	1.15	0.15	45	50	74
OMT-WR112-PM-01*	7.05 - 10	1.15	0.2	45	50	62.2
OMT-WR90-PM-01*	8.2 - 12.4	1.15	0.2	45	45	54.5
OMT-WR75-PM-01*	10 - 15	1.15	0.2	45	45	48
OMT-WR62-PM-01*	12.4 - 18	1.15	0.2	45	45	35.3
OMT-WR51-PM-01*	15 - 22	1.15	0.2	40	40	30
OMT-WR42-PM-01*	18 - 26.5	1.15	0.3	40	40	25
OMT-WR34-PM-01*	22 - 33	1.2	0.3	40	40	20
OMT-WR28-PM-01*	26.5 - 40	1.2	0.3	40	40	20

** Phased matched design. This table contains only a few OMT examples. All data are typical values. Contact us for other OMT and more information.*

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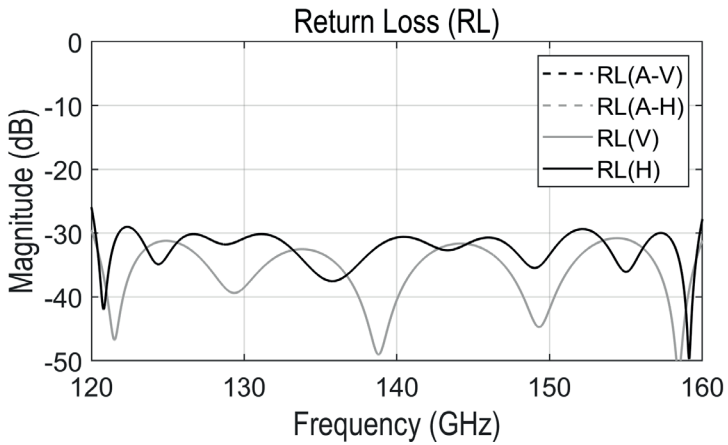
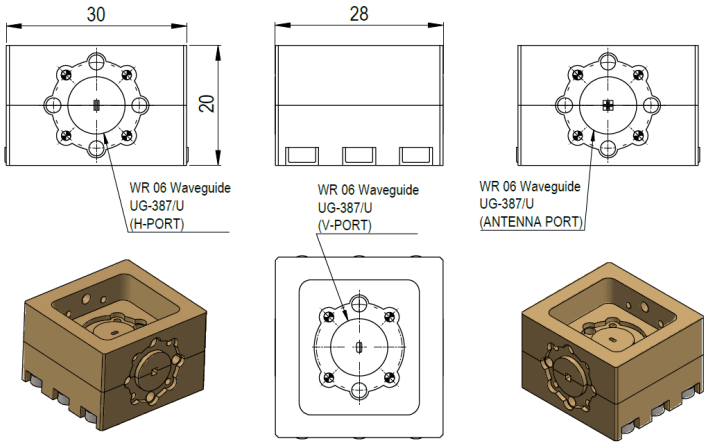
TYPICAL PERFORMANCE



MECHANICAL OUTLINE

Flange	Standard UG-xxx/U
Operating temperature	-40ºC to +85ºC
External color	Aluminum. Gold plated in some cases.
Material	Aluminum.
Fabrication	In two or three pieces.



Additional notes

All data are simulated. Typical performance data and mechanical outline correspond to OMT-WR06-01 model. The cover image corresponds to a phase-matched model. Actual values could vary slightly.
The return loss performance of all items is checked before delivery.

Last version: 10/05/2024

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