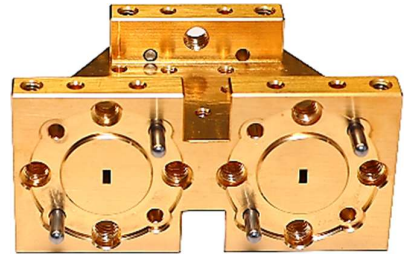


RPG WPS – Waveguide Power Splitter Specifications



Radiometer Physics
A Rohde & Schwarz Company

Definitions

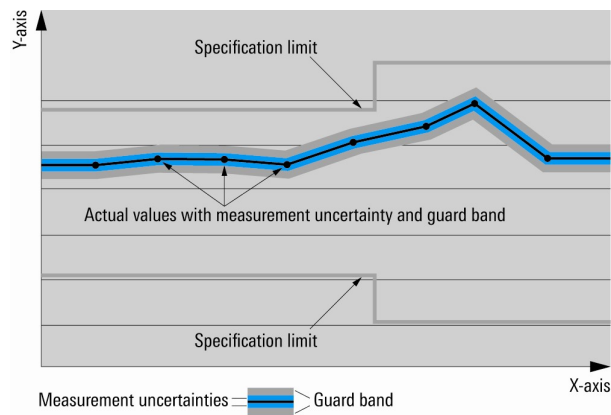
General

Product data applies under the following conditions:

- Three hours storage at ambient temperature followed by 30 minutes warm-up operation
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits

Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as $<$, \leq , $>$, \geq , \pm , or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Non-traceable specifications with limits (n. trc.)

Represent product performance that is specified and tested as described under “Specifications with limits” above. However, product performance in this case cannot be warranted due to the lack of measuring equipment traceable to national metrology standards. In this case, measurements are referenced to standards used in the Radiometer Physics laboratories.

Specifications without limits

Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value (e.g. dimensions or resolution of a setting parameter). Compliance is ensured by design.

Typical data (typ.)

Characterizes product performance by means of representative information for the given parameter. When marked with $<$, $>$ or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)

Characterize product performance by means of a representative value for the given parameter (e.g. nominal impedance). In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)

Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties

Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear

Device settings and GUI parameters are indicated as follows: “parameter: value”.

Non-traceable specifications with limits, typical data as well as nominal and measured values are not warranted by Radiometer Physics.

General information

The RPG Waveguide Power Splitters (WPS) are available for the frequency bands:

- 50 GHz to 75 GHz (WPS 50-75)
- 60 GHz to 90 GHz (WPS 60-90)
- 75 GHz to 110 GHz (WPS 75-110)
- 110 GHz to 170 GHz (WPS 110-170)
- 140 GHz to 220 GHz (WPS 140-220)
- 220 GHz to 330 GHz (WPS 220-330)
- 325 GHz to 500 GHz (WPS 325-500)

Specifications

Test Port

RF-Frequency range [GHz]	WPS 50-75 H	50 - 75
	WPS 60-90 H	60 - 90
	WPS 60-90 Y	60 - 90
	WPS 75-110 H	75 - 110
	WPS 75-110 Y	75 - 110
	WPS 110-170 H	110 - 170
	WPS 140-220 H	140 - 220
	WPS 140-220 Y	140 - 220
	WPS 220-330 H	220 - 330
	WPS 220-330 Y	220 - 330
	WPS 325-500 H	325 - 500
	Waveguide designator	WPS 50-75 H
WPS 60-90 H		WR-12
WPS 60-90 Y		WR-12
WPS 75-110 H		WM-2540 (WR-10)
WPS 75-110 Y		WM-2540 (WR-10)
WPS 110-170 H		WM-1651 (WR-6.5)
WPS 140-220 H		WM-1295 (WR-5.1)
WPS 140-220 Y		WM-1295 (WR-5.1)
WPS 220-330 H		WM-864 (WR-3.4)
WPS 220-330 Y		WM-864 (WR-3.4)
WPS 325-500 H		WR-2.2
Connector type		WPS 50-75 H
	WPS 60-90 H	
	WPS 60-90 Y	
	WPS 75-110 H	
	WPS 75-110 Y	
	WPS 110-170 H	
	WPS 140-220 H	
	WPS 140-220 Y	
	WPS 220-330 H	
	WPS 220-330 Y	
	WPS 325-500 H	

Absolut Maximum Ratings

RF-Input Power [dBm]	WPS 50-75 H	+ 20
	WPS 60-90 H	
	WPS 60-90 Y	
	WPS 75-110 H	
	WPS 75-110 Y	
	WPS 110-170 H	
	WPS 140-220 H	
	WPS 140-220 Y	
	WPS 220-330 H	
	WPS 220-330 Y	
	WPS 325-500 H	

General data

Temperature loading	operating temperature range	+18 °C to +28 °C
	permissible temperature range	+5 °C to +40 °C
	storage temperature range	-40 °C to +70 °C
		in line with IEC 60068-2-1 and IEC 60068-2-2
Damp heat		+40 °C at 80 % rel. humidity, in line with IEC 60068-2-30
Mechanical resistance	vibration, sinusoidal	5 Hz to 150 Hz, in line with IEC 60068-2-6
	vibration, random	10 Hz to 300 Hz, in line with IEC 60068-2-64
	shock	40 g shock spectrum, in line with MIL-STD-810, method 516, procedure I
Operation	permissible altitude	3000 m above sea level
Weight		70 gram (0,15 lb)
Shipping weight		100 gram (0.22 lb)

Ordering information

Designation	RPG-Order No.
WPS 50-75 H	04500007
WPS 60-90 H	04500018
WPS 60-90 Y	04500013
WPS 75-110 H	04500001
WPS 75-110 Y	04500009
WPS 110-170 H	04500010
WPS 140-220 H	04500026
WPS 140-220 Y	04500027
WPS 220-330 H	04500000
WPS 220-330 Y	04500002
WPS 325-500 H	04500024

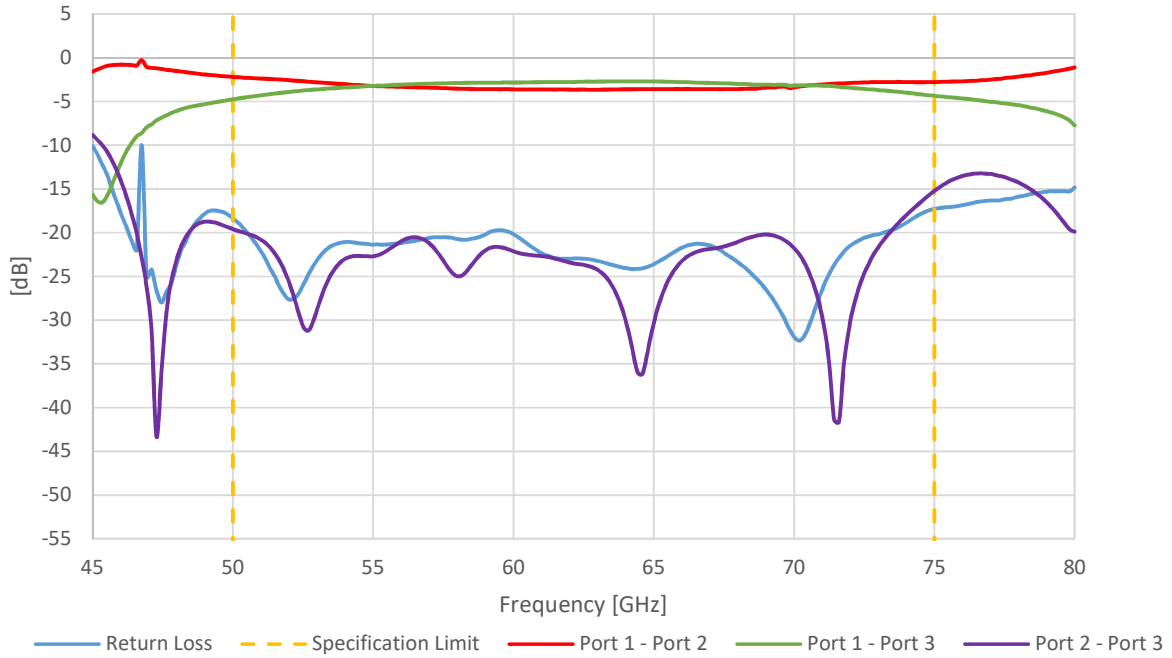


Figure 1: WPS 50-75 H S-Parameter between 45 GHz and 80 GHz

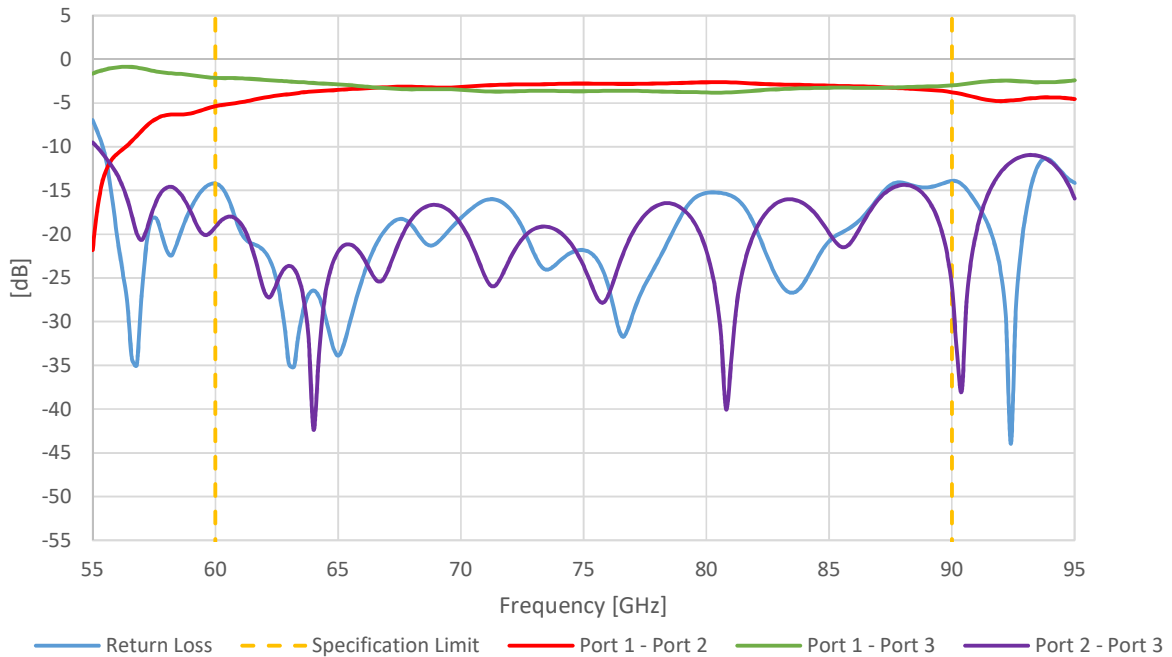


Figure 2: WPS 60-90 H S-Parameter between 55 GHz and 95 GHz

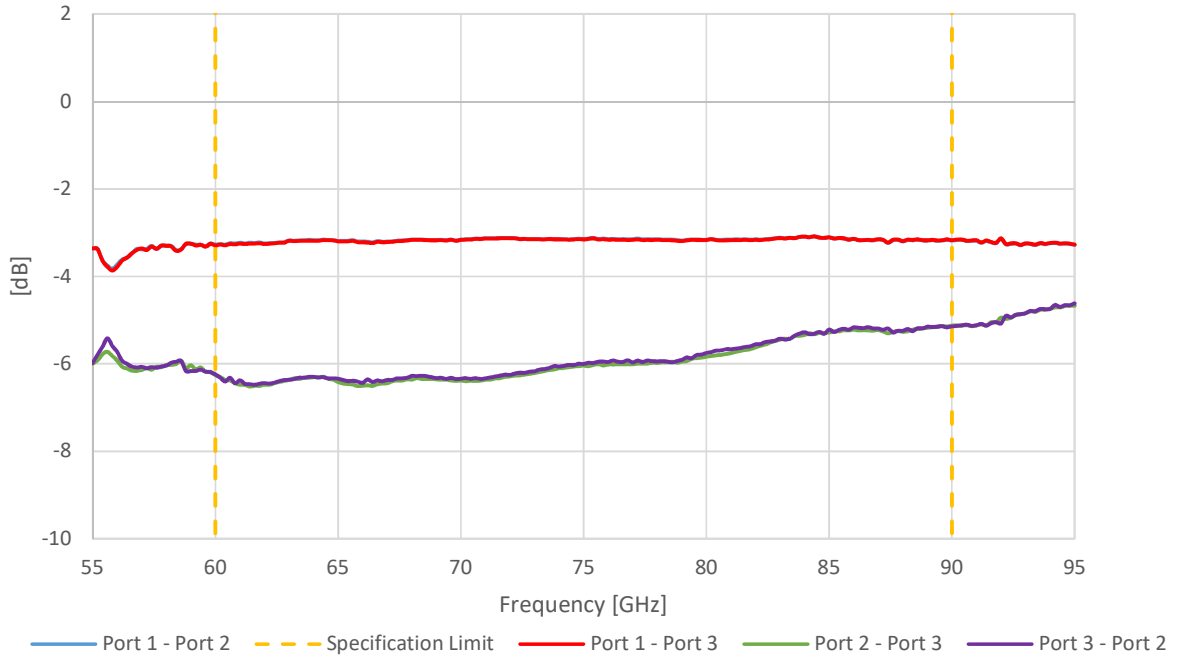


Figure 3: WPS 60-90 Y S-Parameter between 55 GHz and 95 GHz

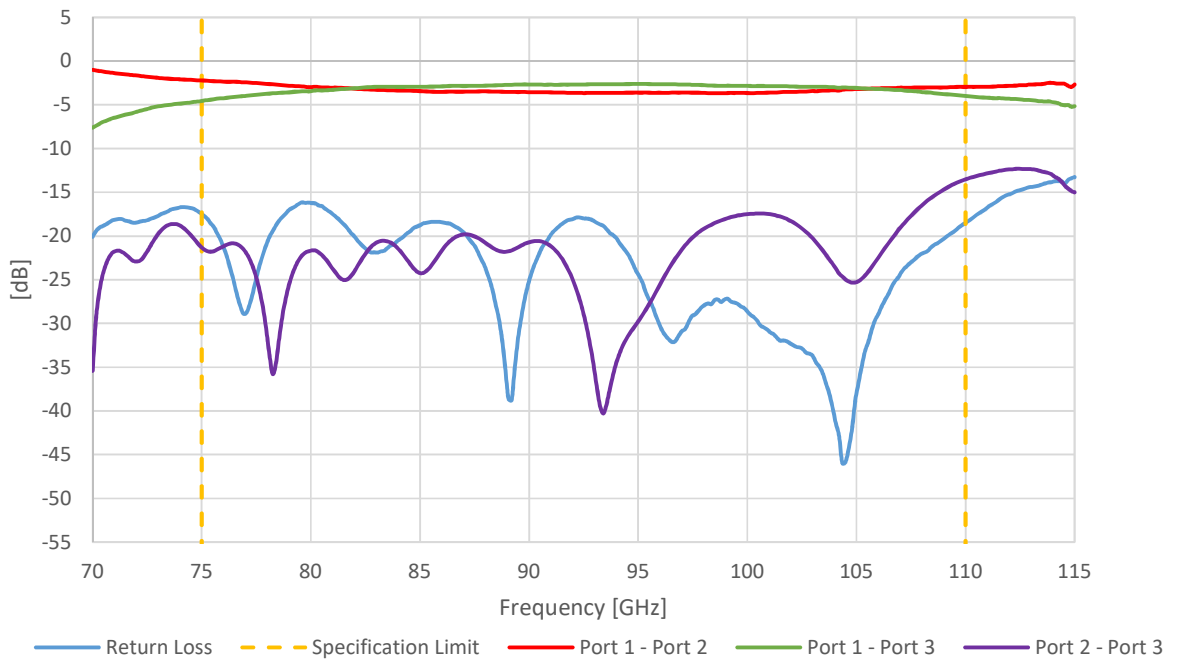


Figure 4: WPS 75-110 S-Parameter between 70 GHz and 115 GHz

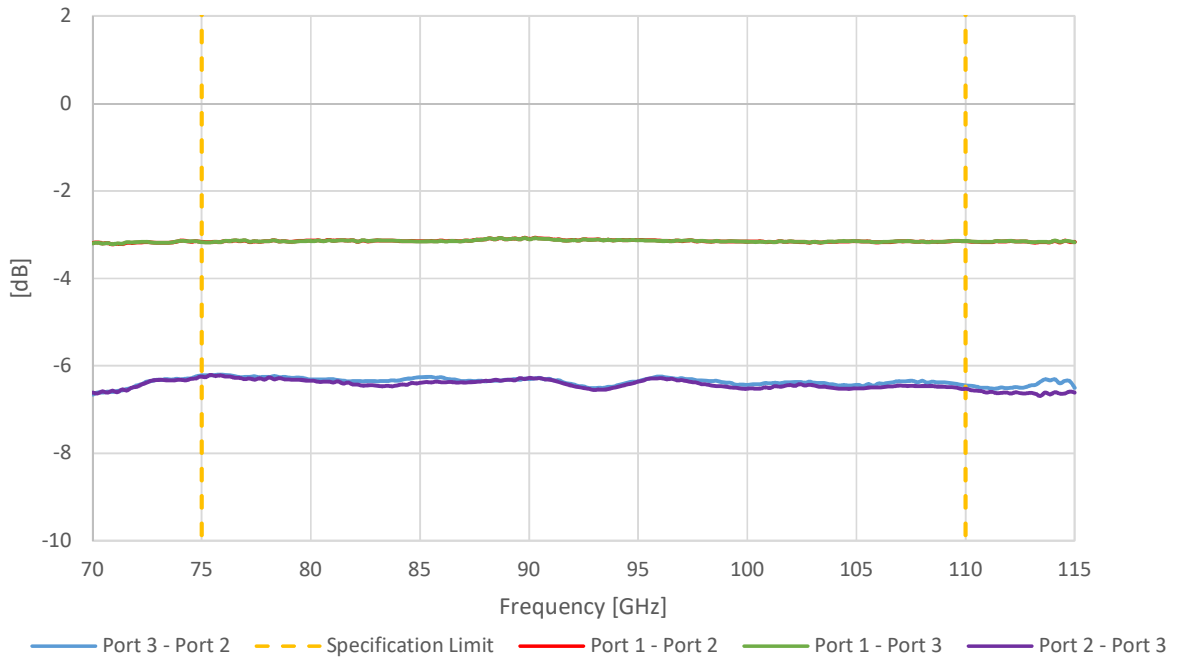


Figure 5: WPS 75-110 Y S-Parameter between 70 GHz and 115 GHz

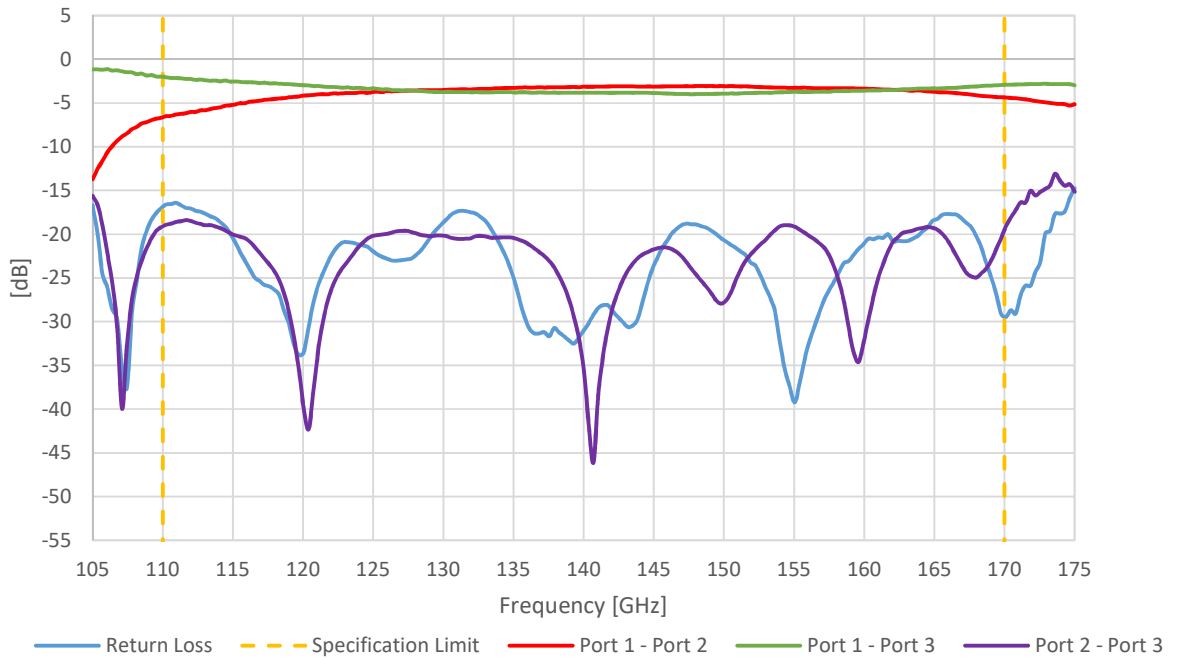


Figure 6: WPS 110-170 H S-Parameter between 105 GHz and 175 GHz

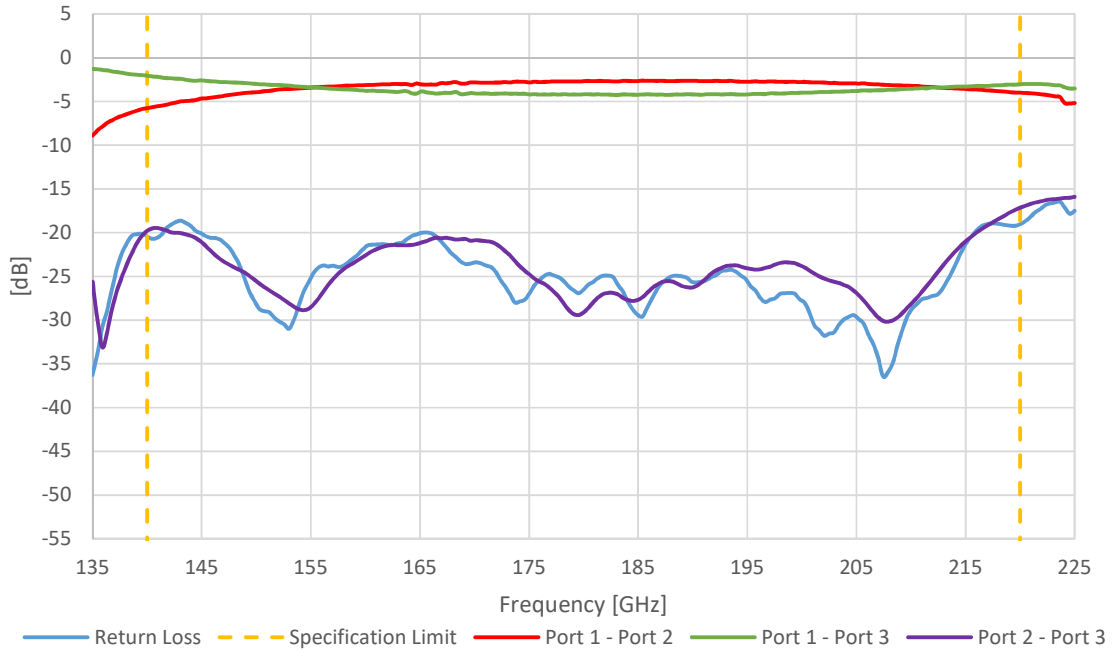


Figure 7: WPS 140-220 H S-Parameter between 135 GHz and 225 GHz

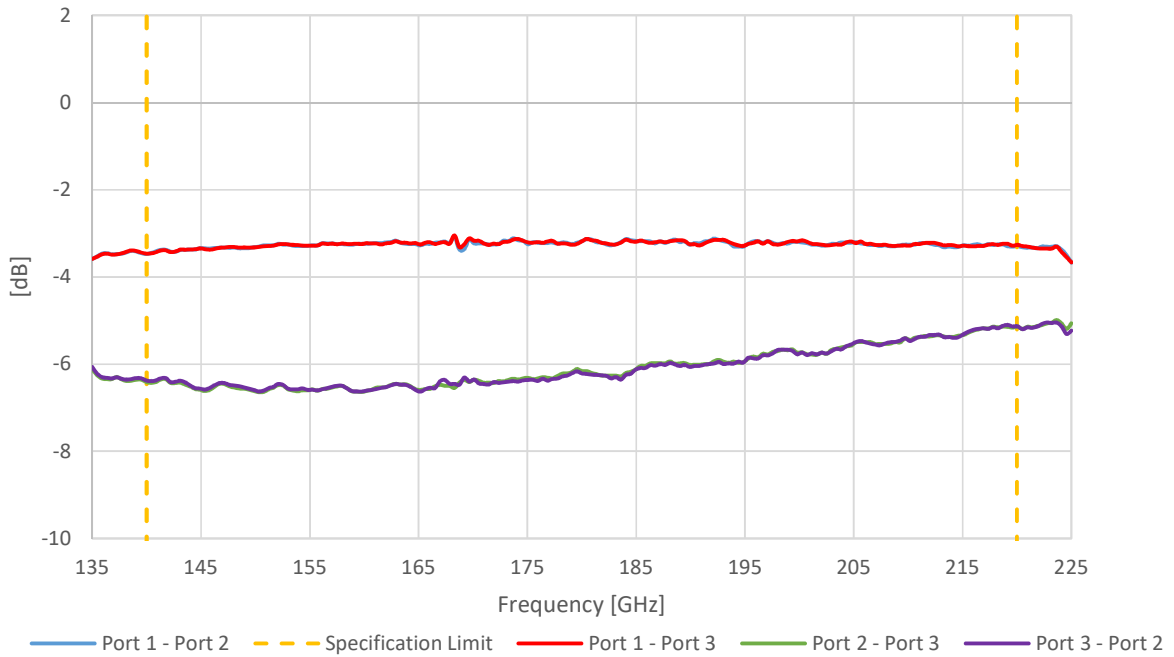


Figure 8: WPS 140-220 Y S-Parameter between 135 GHz and 225 GHz

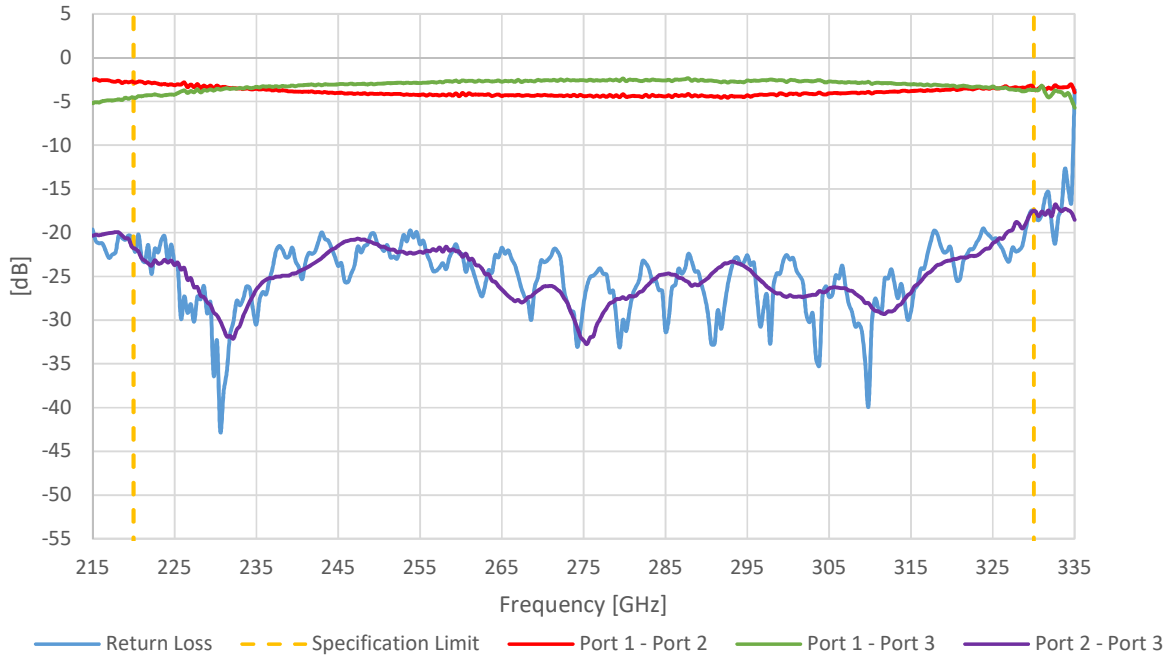


Figure 9: WPS 220-330 H S-Parameter between 215 GHz and 335 GHz

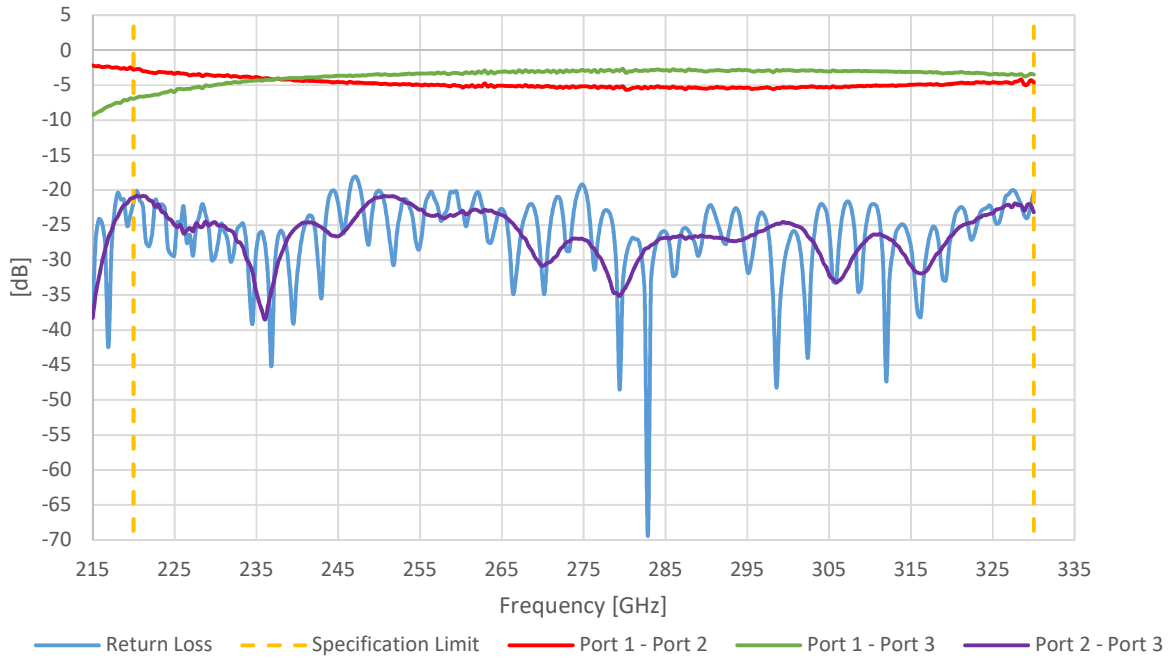


Figure 10: WPS 220-330 Y S-Parameter between 215 GHz and 335 GHz

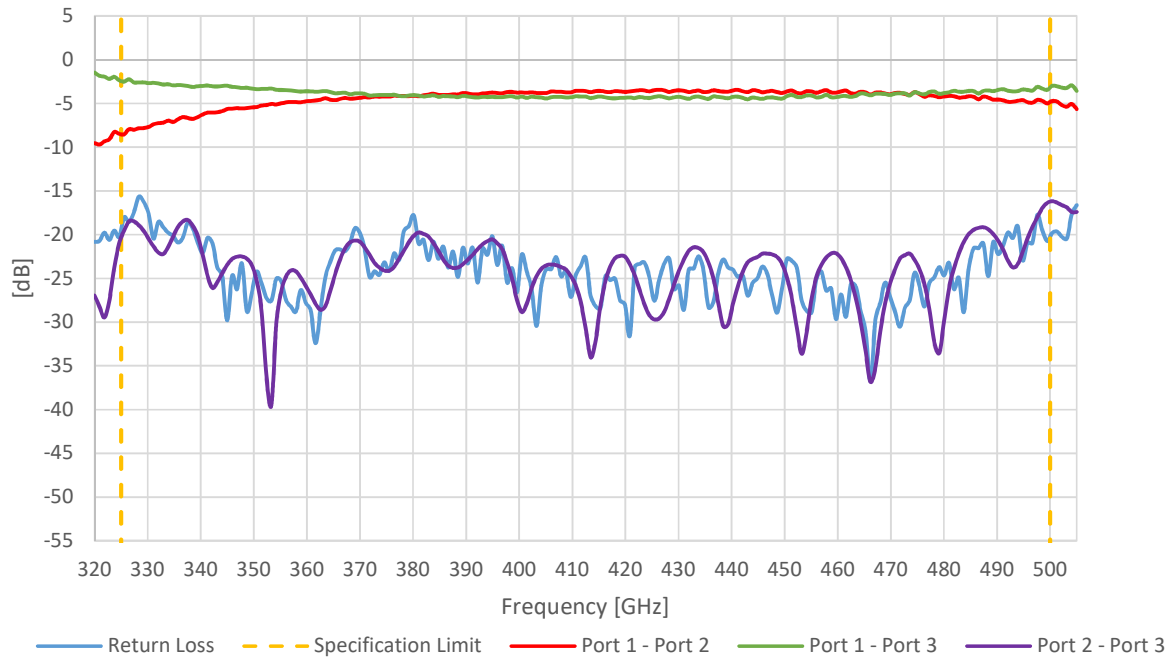
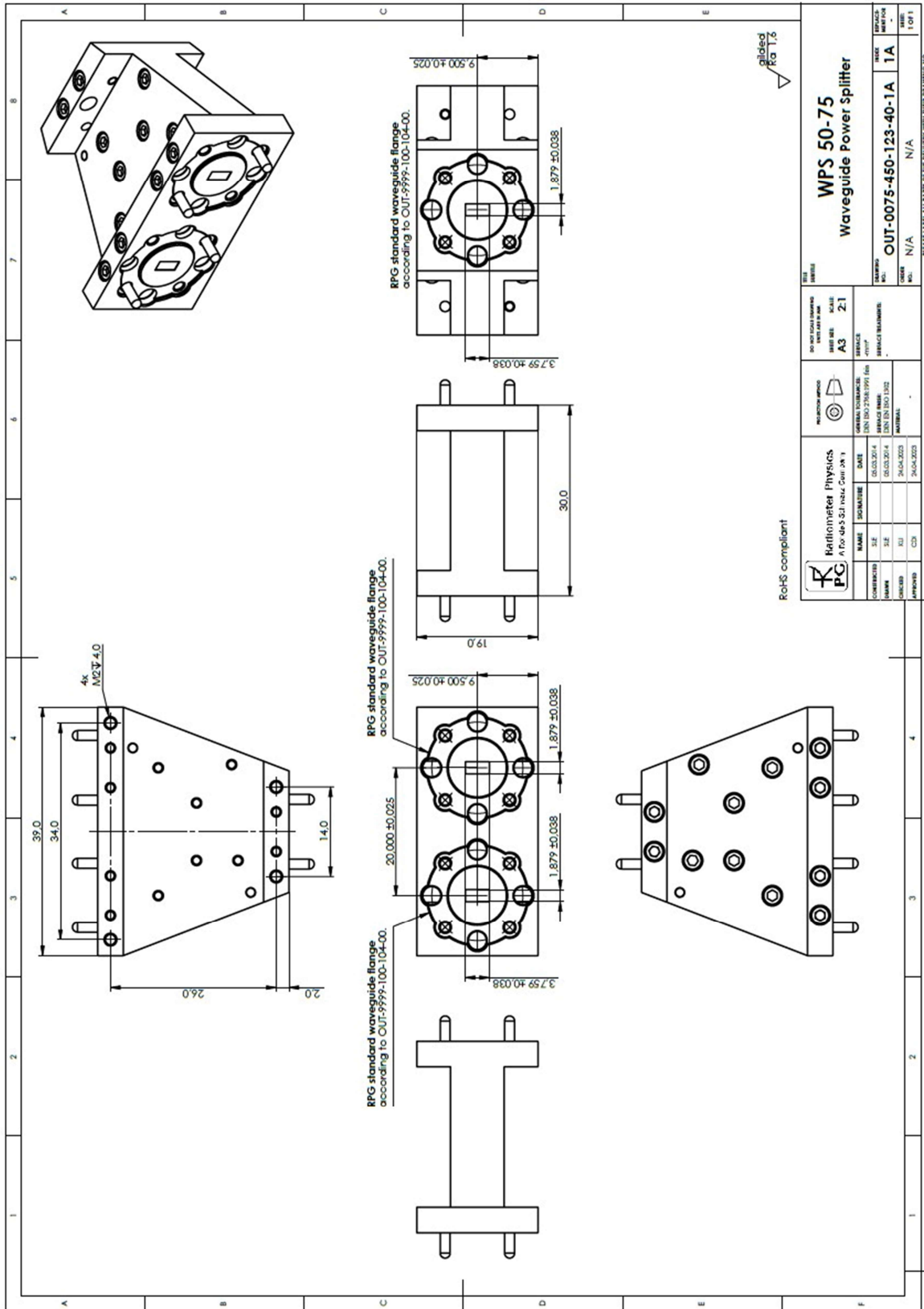
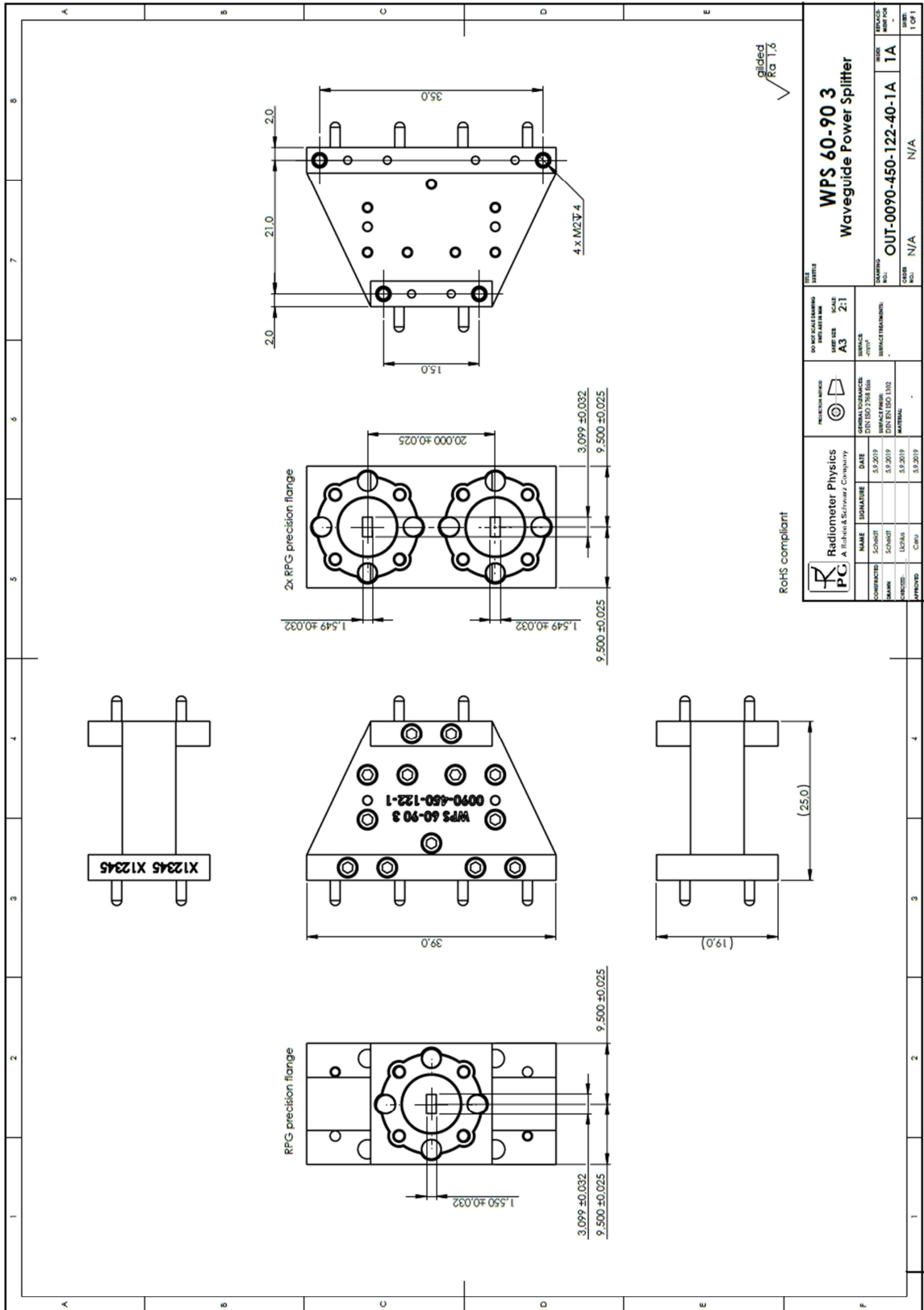


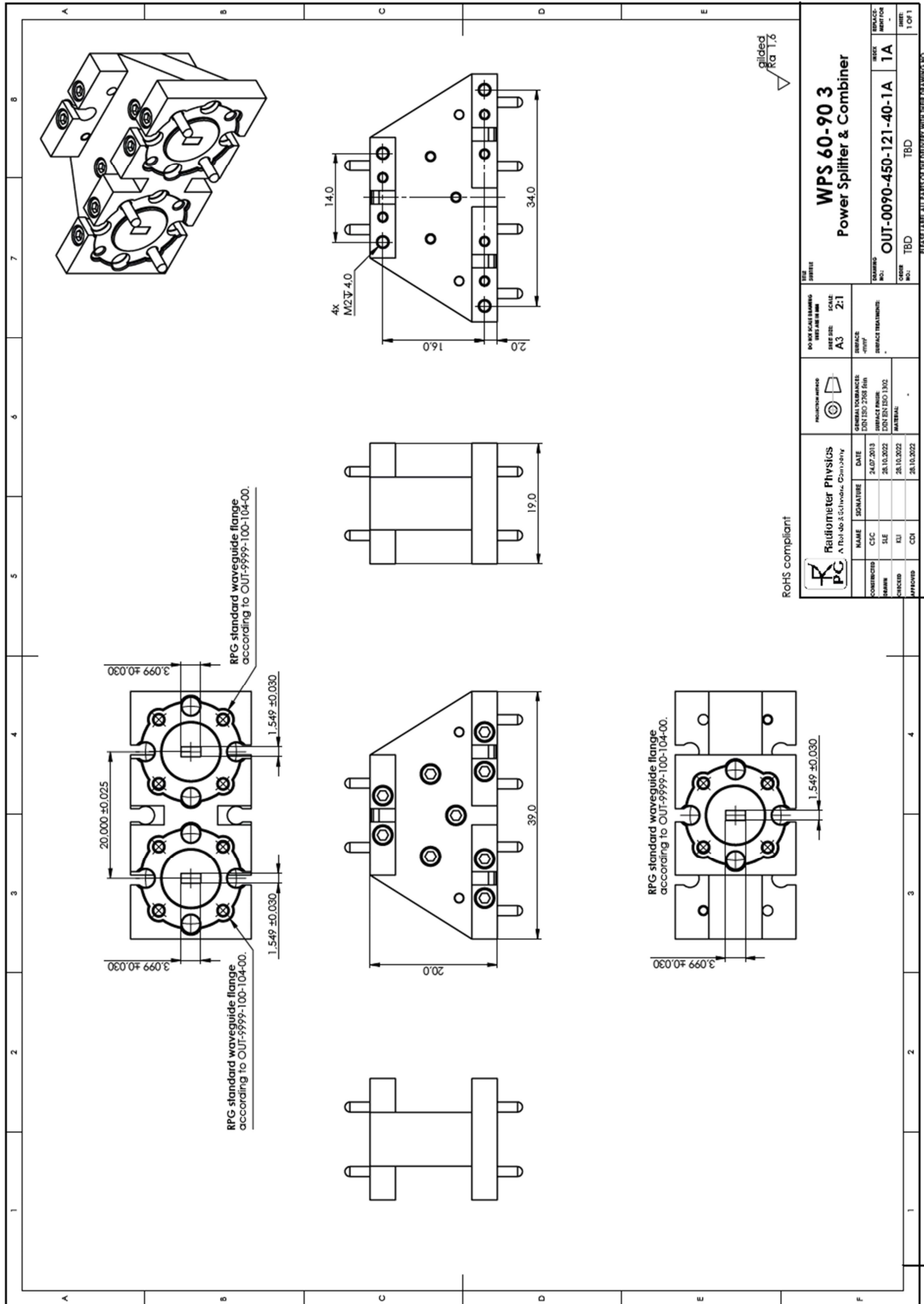
Figure 11: WPS 325-500 H S-Parameter between 320 GHz and 505 GHz



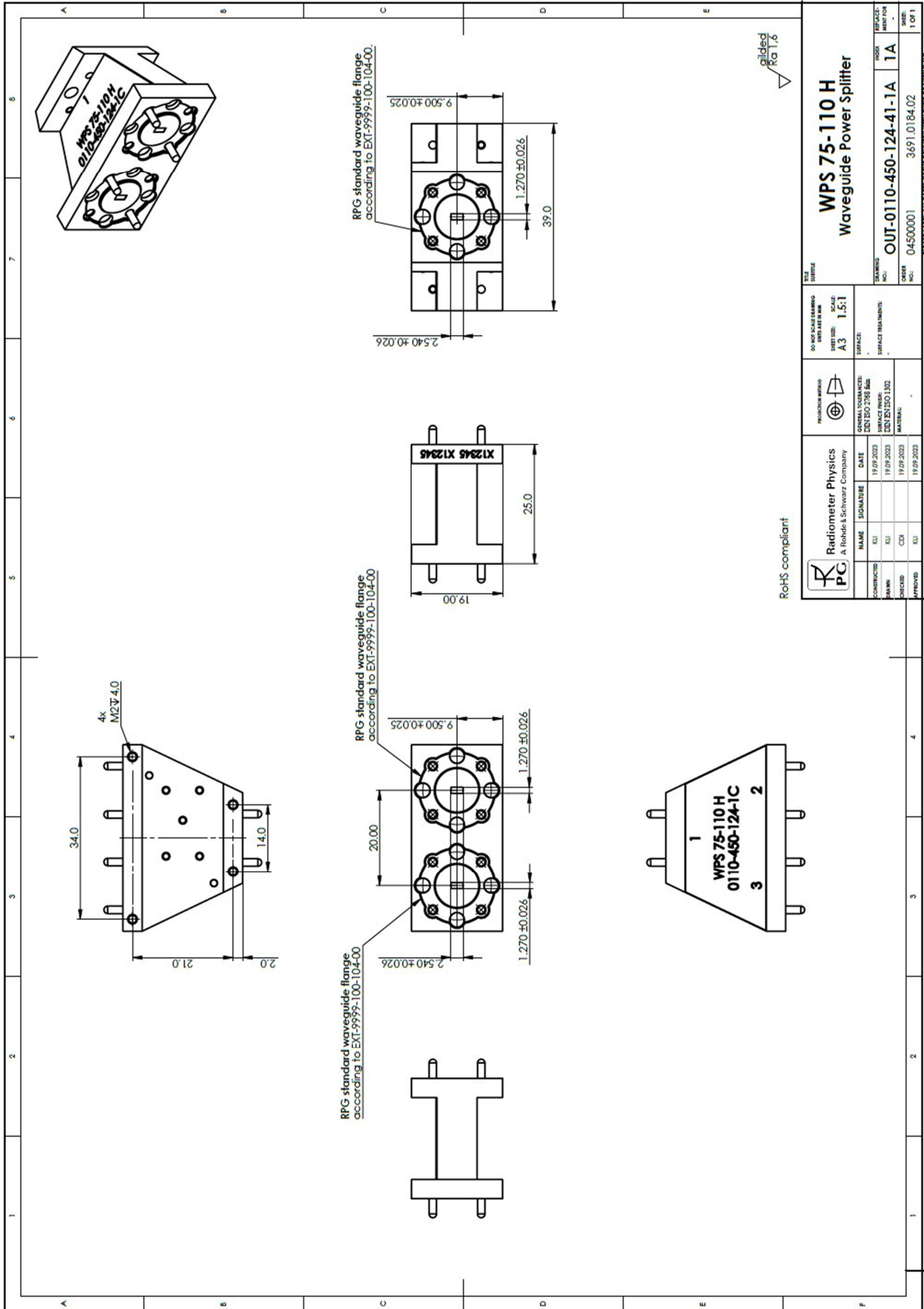
Outline Drawing WPS 50-75 Y



Outline Drawing WPS 60-90 H

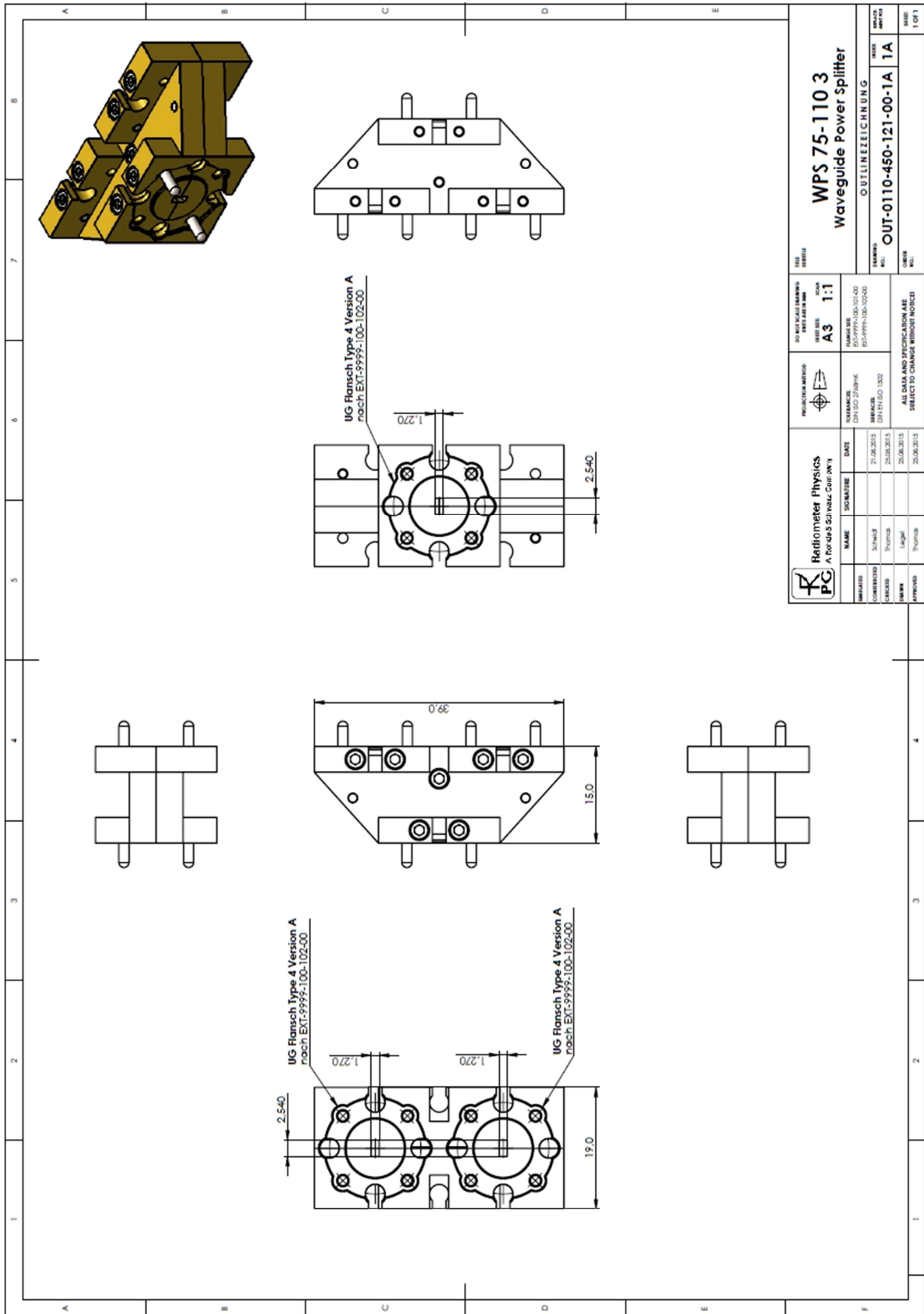


Outline Drawing WPS 60-90 Y



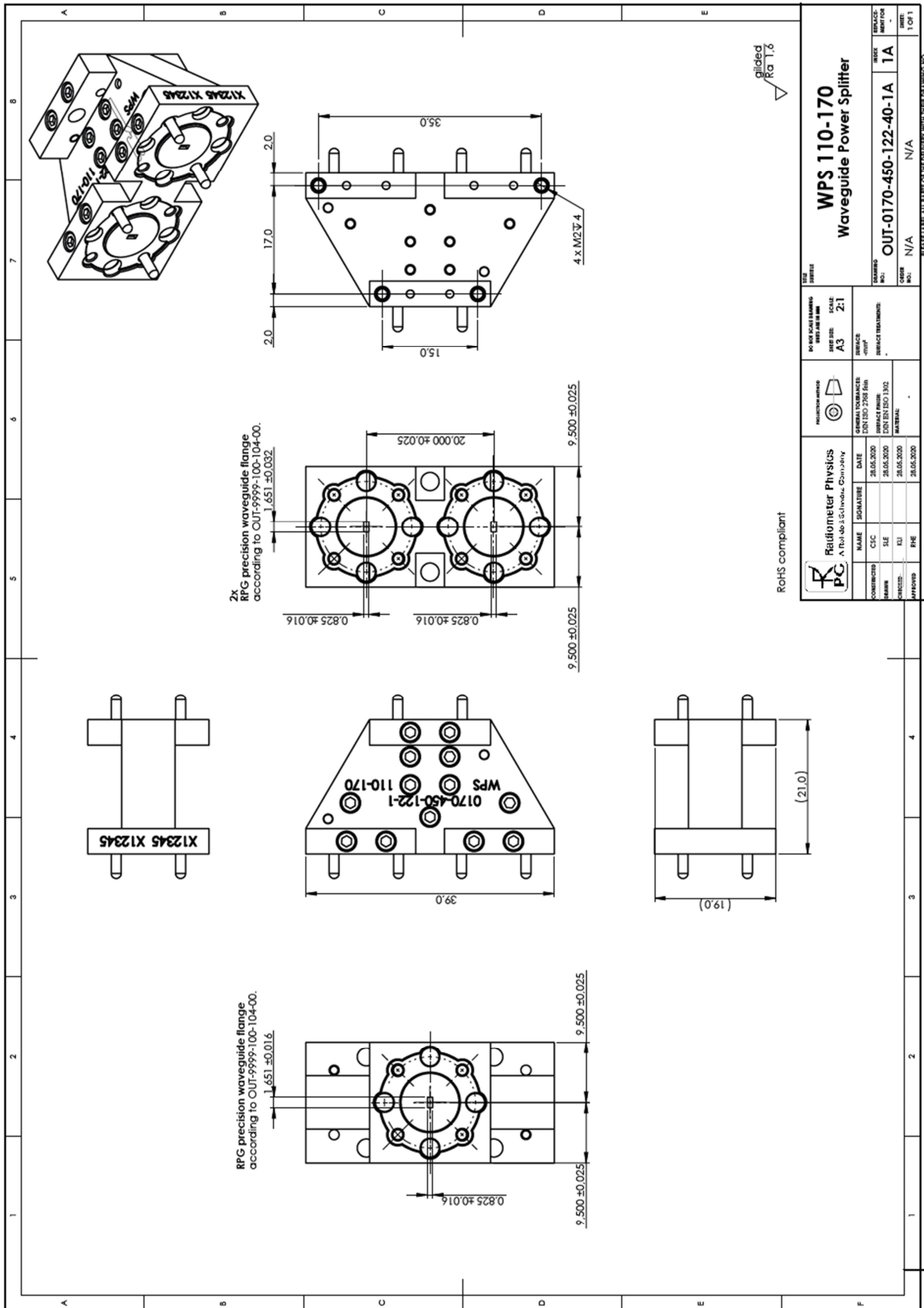
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Outline Drawing WPS 75-110 H

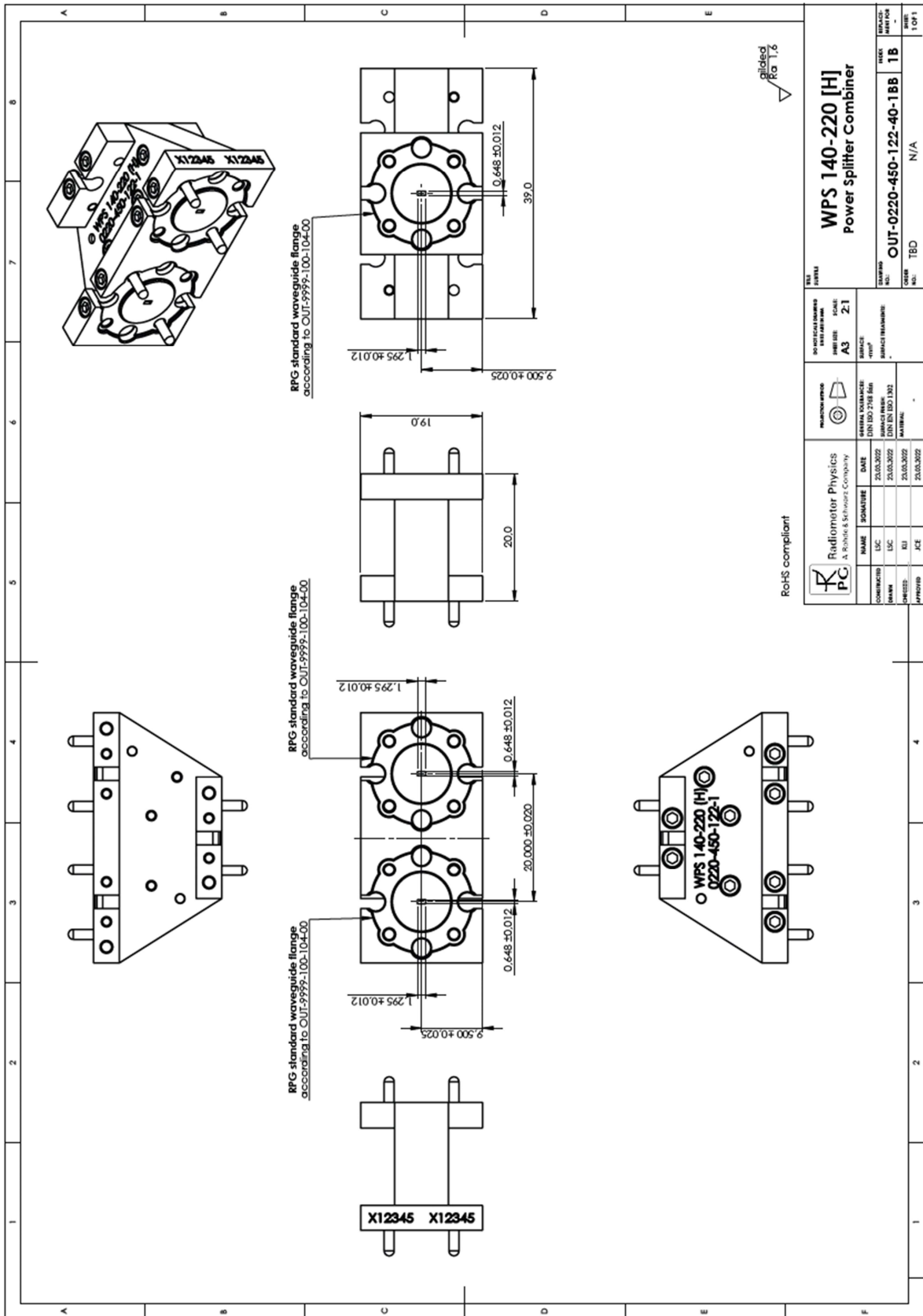


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SHEET NO. 1		SHEET 1 OF 1		

Outline Drawing WPS 75-110 Y



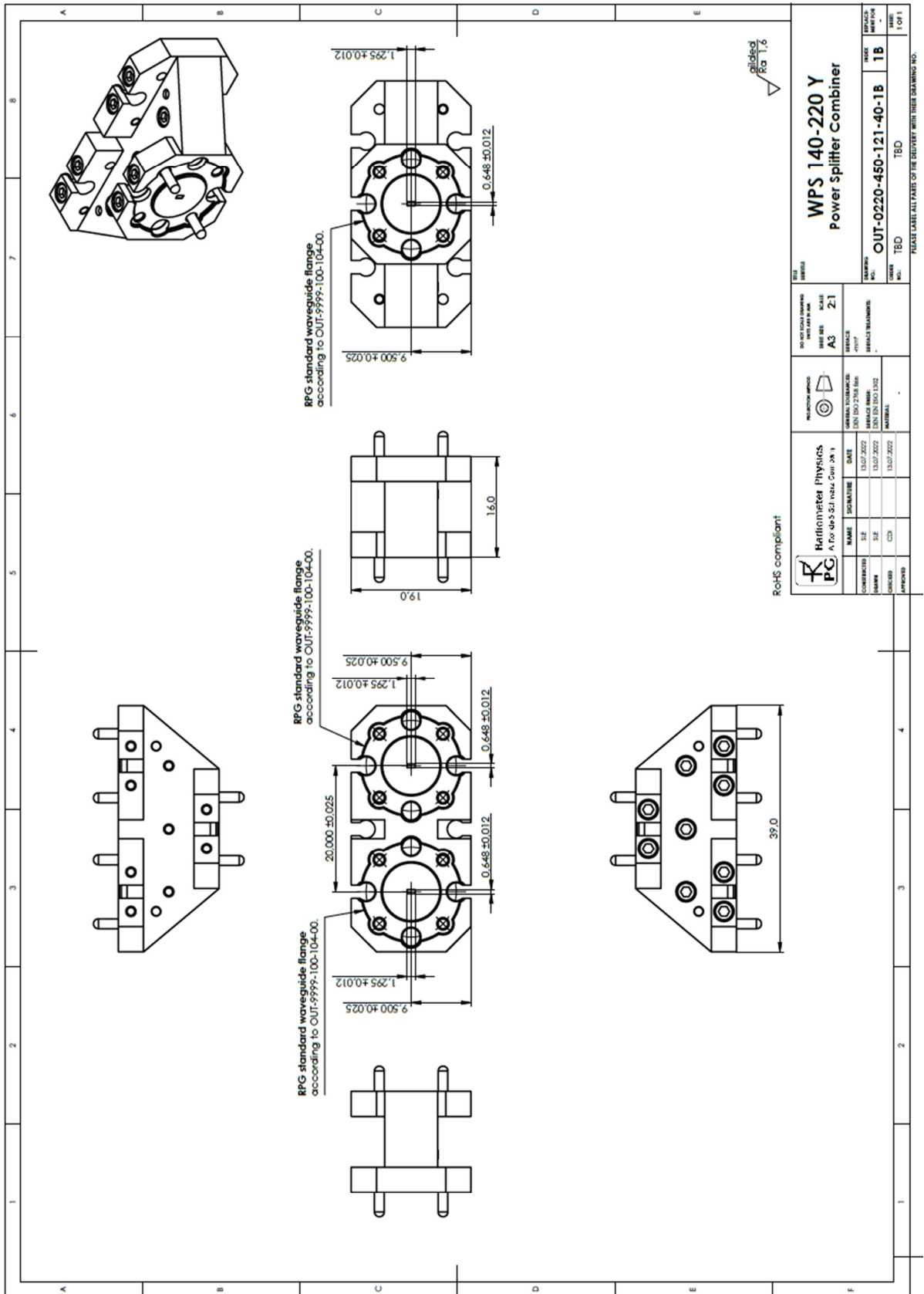
Outline Drawing WPS 110-170 H



RoHS compliant

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CONTRACTOR USC DRAWN USC CHECKED KJI APPROVED JCE	SPECIAL REQUIREMENTS DIN EN ISO 7185 A6 SURFACE FINISH DIN EN ISO 1302 MATERIAL	DOCTORS NUMBER NUMBER A3 SCALE 2:1	REVISIONS NO. 1 DATE DESCRIPTION

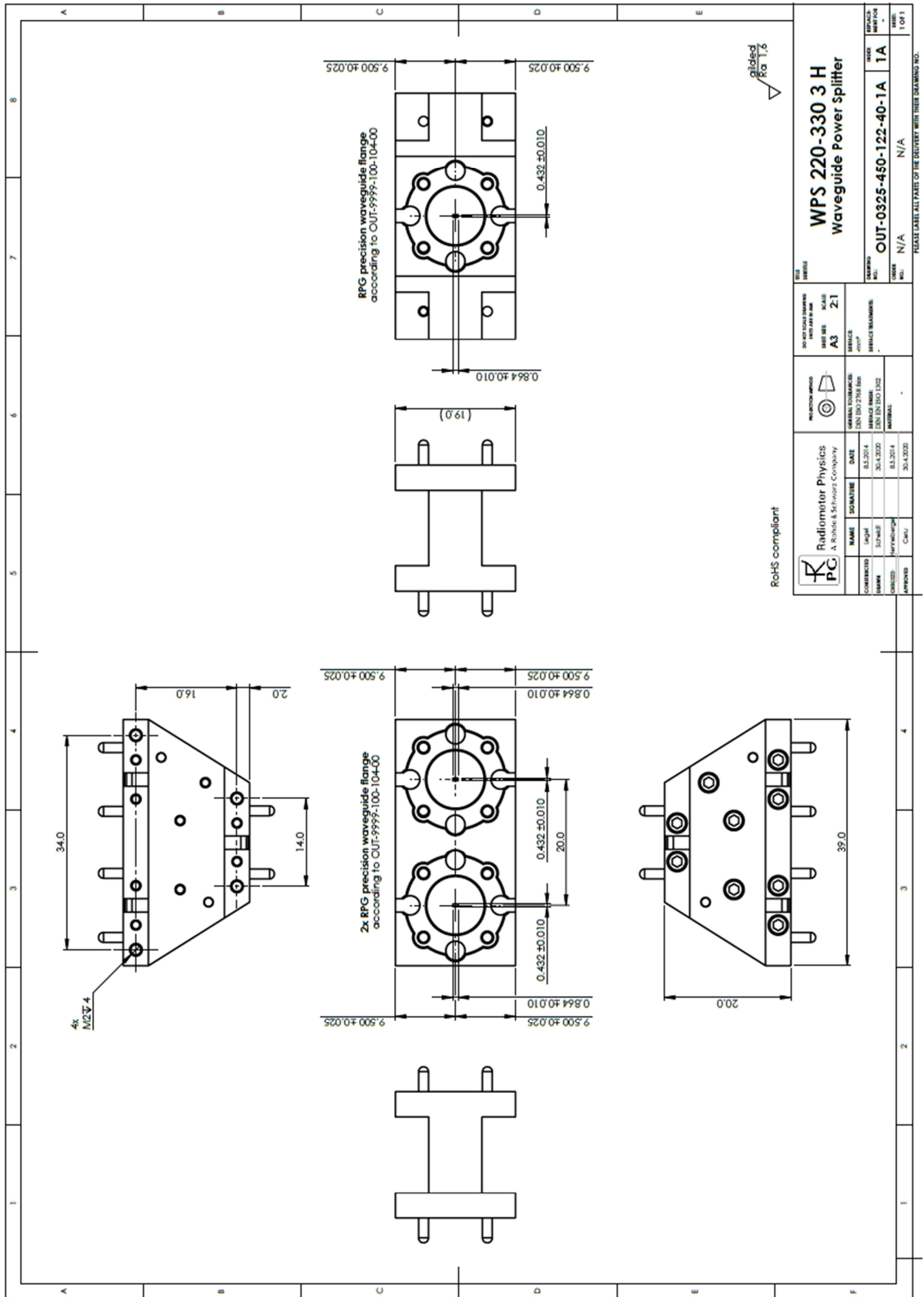
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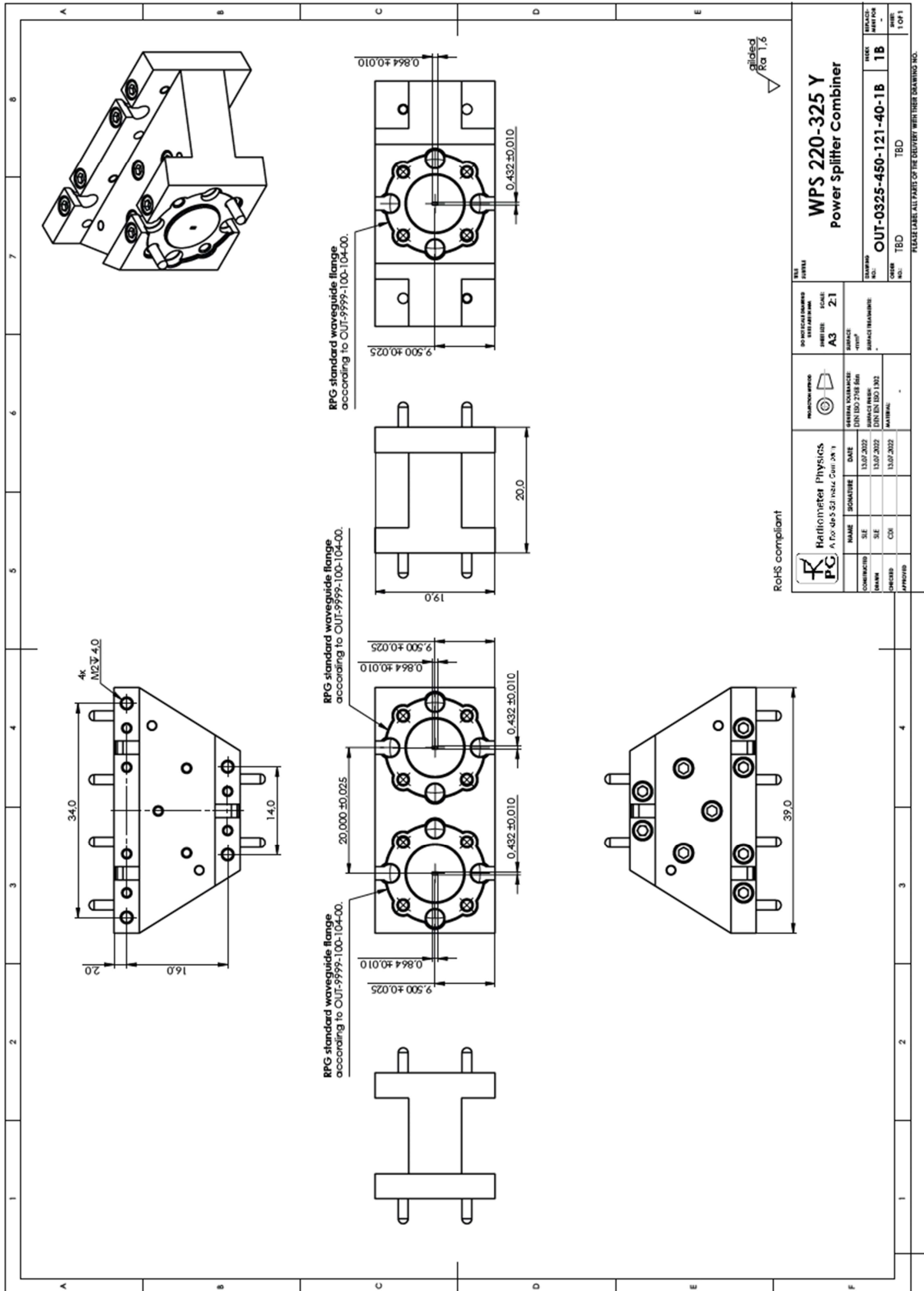
RoHS compliant

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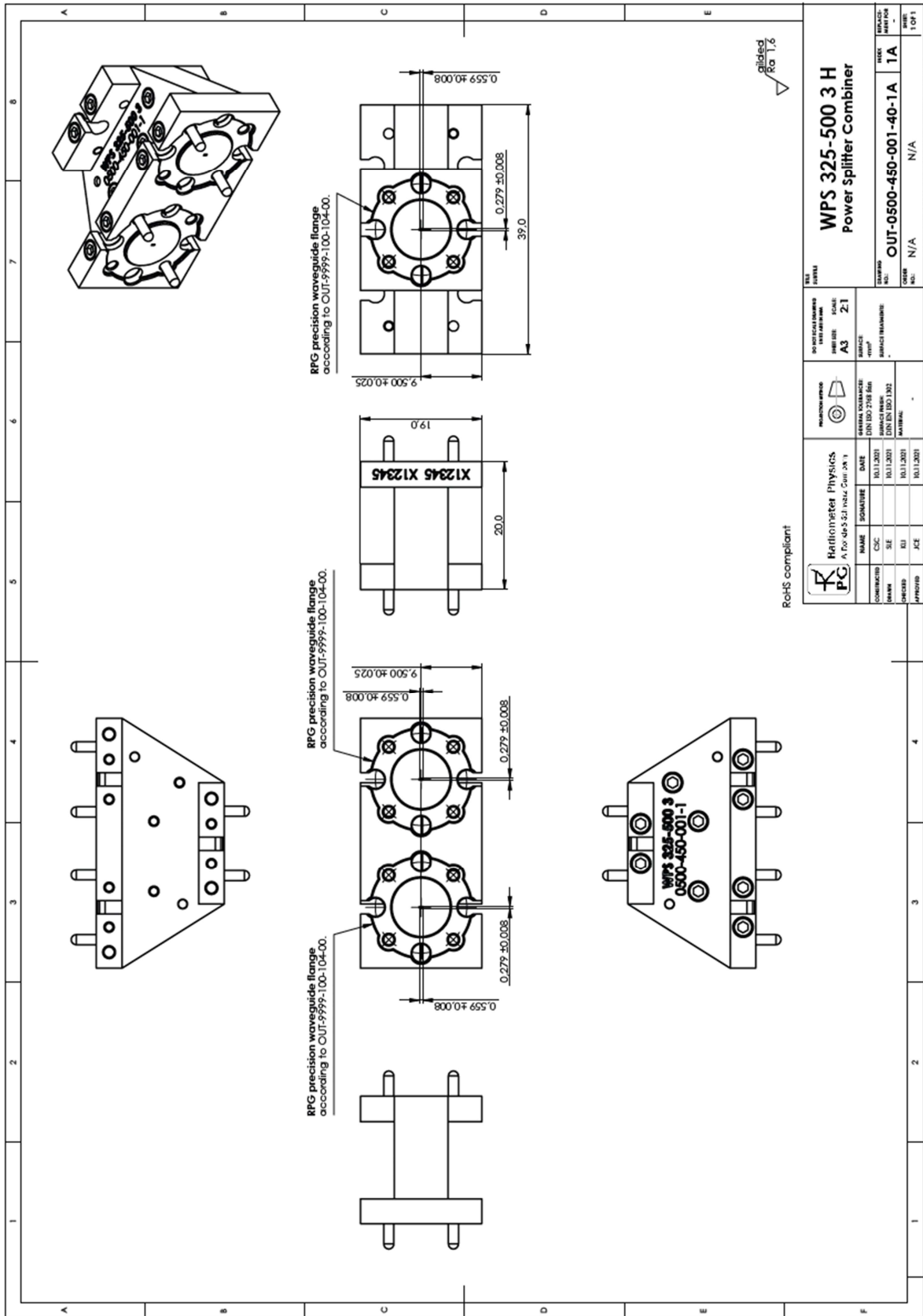
Outline Drawing WPS 140-220 Y



Outline Drawing WPS 220-330 H



Outline Drawing WPS 220-330 Y



RoHS compliant

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PLEASE LABEL ALL PARTS OF THE DRAWING WITH THEIR DRAWING NO.					

Outline Drawing WPS 325-500 H