



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017  
& ANSI/NCSL Z540-1-1994

ANRITSU AASC SERVICE CENTRAL, TEXAS  
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Allen, TX 75013  
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CALIBRATION

Valid To: April 30, 2024

Certificate Number: 2160.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1,6</sup>:

I. Electrical – RF/Microwave

Parameter/Range	Frequency	CMC <sup>2,5</sup> (±)	Comments
Power Level <sup>3</sup> – Measure Absolute & Relative <sup>4</sup> (20 to -125) dBm:  (20 to -35) dBm	(10 to 50) MHz (50 to 150) MHz (0.15 to 2) GHz (2 to 12) GHz (12 to 18) GHz (18 to 32) GHz (32 to 40) GHz (40 to 50) GHz (50 to 60) GHz (60 to 90) GHz	(0.12 to 0.13) dB 0.12 dB 0.12 dB (0.12 to 0.13) dB (0.12 to 0.14) dB (0.13 to 0.17) dB (0.16 to 0.18) dB 0.46 dB 0.54 dB 0.17 dB	Direct power measurement (for Type N & Type K connector), MA 247XA/B with ML 2437/8A & ML 2530A; MS269xA; V Type with SC7770; waveguide with NRP90TWG



Parameter/Range	Frequency	CMC <sup>2, 5</sup> ( $\pm$ )	Comments
Power Level <sup>3</sup> – Measure (cont)			
Absolute & Relative <sup>4</sup> (20 to -127) dBm:			
(-35 to -85) dBm	(10 to 50) MHz (50 to 150) MHz (0.15 to 2) GHz (2 to 12) GHz (12 to 18) GHz (18 to 32) GHz (32 to 40) GHz	0.13 dB 0.13 dB 0.13 dB 0.13 dB (0.13 to 0.14) dB (0.14 to 0.17) dB (0.17 to 0.18) dB	Direct power measurement (for Type N & Type K connector), MA 247XA/B with ML 2437/8A & ML 2530A; MS269xA; V Type with SC7770; waveguide with NRP90TWG
(-85 to -95) dBm	(10 to 50) MHz (50 to 150) MHz (0.15 to 2) GHz (2 to 12) GHz (12 to 18) GHz (18 to 32) GHz (32 to 40) GHz	0.17 dB 0.17 dB (0.17 to 0.16) dB (0.16 to 0.17) dB 0.17 dB (0.17 to 0.20) dB (0.20 to 0.21) dB	
(-95 to -100) dBm	(10 to 50) MHz (50 to 150) MHz (0.15 to 2) GHz (2 to 12) GHz (12 to 18) GHz (18 to 32) GHz (32 to 40) GHz	0.85 dB 0.85 dB 0.85 dB 0.85 dB (0.85 to 0.86) dB 0.86 dB (0.86 to 0.87) dB	
(-100 to -125) dBm	(10 to 50) MHz 50 MHz to 2 GHz (2 to 12) GHz (12 to 13.5) GHz	0.30 dB 0.29 dB 0.32 dB 0.36 dB	



## II. Time & Frequency

Parameter/Equipment	Frequency	CMC <sup>2, 5</sup> ( $\pm$ )	Comments
Frequency – Measuring Equipment	10 MHz	5 parts in $10^{12}$ Hz/Hz	GPS disciplined oscillator aging rate
Frequency <sup>3</sup> – Measure	10 MHz to 40 GHz	$5 \times 10^{-7}f$	Counter MF241X $f$ = frequency

<sup>1</sup> This laboratory offers commercial calibration service and field calibration service (where noted).

<sup>2</sup> Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

<sup>3</sup> Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

<sup>4</sup> Enlisted values represent absolute power level uncertainty; relative power level uncertainty does not include 1 mW reference and associated mismatch uncertainty of the enlisted values.

<sup>5</sup> The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

<sup>6</sup> This scope meets A2LA's *P112 Flexible Scope Policy*.





## Accredited Laboratory

A2LA has accredited

**ANRITSU AASC SERVICE CENTRAL, TEXAS**

*Allen, TX*

for technical competence in the field of

**Calibration**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 23<sup>rd</sup> day of June 2022.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 2160.02  
Valid to April 30, 2024

*For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.*