

**QUALIFICATIONS AND CERTIFICATIONS**  
**SECTION 2.911(d)**

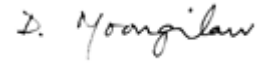
**September 30, 2011**

**SECTION 2.911(d) QUALIFICATION OF ENGINEER (who performed or supervised the Tests).**

Dheena D. Moongilan is a Distinguished Member of Technical Staff, Alcatel-Lucent. He received his BSEE, and MSEE from Madras University, India and another MSEE from Illinois Institute of Technology, Chicago, Illinois. He was trained in FCC testing procedures by his former Supervisor, Donald N. Heirman. He has 28 years of EMC testing experience. He is a NARTE certified EMC Engineer, certificate #EMC-00/1022-NE.

**SECTION 2.911(d) CERTIFICATION OF TECHNICAL TEST DATA**

I hereby certify that the technical test data are the results of tests performed or supervised by me.



Dheena Moongilan  
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**MANUFACTURERS – IDENTIFIER**  
**SECTION 2.1033 (c) 1 and 2**

**MANUFACTURERS IDENTIFIER**

**SECTION 2.1033(c) 1**

The full name and mailing address of the manufacturer of the device and the applicant for certification:

**RESPONSE:**

**APPLICATION: Alcatel-Lucent  
600-700 Mountain Avenue  
Murray Hill, NJ 07974  
Attention: Rudolf J Pillmeier**

**SECTION 2.1033(c) 2**

**FCC Identifier:**

**RESPONSE:** LTE AWS Transceiver Duplexer Unit “LTE TRDU2x120 is AWS **Commercial Broadband**” to be operated under Part 27 and OET Rules 662911 D01 and D02 of the FCC Rules.

**FCC Identifier: AS5  
FCC ID: AS5BBTRX-13**

**EMISSIONS, FREQUENCY RANGE,  
POWER LEVEL**  
SECTION 2.1033 (c) (4), (5), (6) and (7)

**EMISSIONS, FREQUENCY RANGE, POWER LEVEL**

**SECTION 2.1033(c) (4)**

Type or types of emission:

**RESPONSE:**

The “AWS Transceiver Duplexer Unit (**LTE TRDU2x120-AWS Commercial Broadband**)” capable of amplifying transmission involving the following types of emissions:

Measured Emission type:

BW (MHz)	Emissions Designation
5	4M72F9W
10	9M53F9W
15	14M2F9W
20	18M8F9W

**SECTION 2.1033(c) (5)**

Frequency Range

**RESPONSE:**

**FCC 27.5 h (1) and (2)**

Block	Transmit Frequency Range MHz	Bandwidth MHz
A	2110-2120	10
B	2120-2130	10
C	2130-2135	5
D	2135-2140	5
E	2140-2145	5
F	2145-2155	10

**SECTION 2.1033(c) (6)**

Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

**RESPONSE:**

The “**LTE TRDU2x120-AWS Commercial Broadband,**” is capable of operating from 0.002 to 120 watts/port, 2X2 MIMO mode. The output power is measured at the External Antenna Connection (EAC) output connector of the 9712 cabinet in which “**LTE TRDU2x120-AWS Commercial Broadband**” is mounted. The power is under continuous software control. The short term peak power due to channel activity fluctuations is 120W +0.3/-1dB.

**SECTION 2.1033(c) (7)**

Maximum power rating as defined in the applicable part(s) of the rules.

**Alcatel-Lucent's 9712 cabinet RESPONSE:**

The maximum average power output of the “**LTE TRDU2x120-AWS Commercial Broadband**” at 9712 cabinet EAC port is 1x120 watts and can operate 2x2 120W (MIMO) mode. The radio transmitter is operated under 47 CFR 27 and OET Rules 662911 D01 and D02. There were 12 External antenna port (EAC) ports and the ports were randomly selected and configured for all antenna port conducted tests.