MEASUREMENT OF RADIO FREQUENCY POWER OUT

SECTION 2.1046

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The test arrangements used to measure the radio frequency power output of the FCC ID: **AS5CMP-44** Individual Carrier Linear Amplifier is on the following page. Measurements were made respectively at each frequency where occupied Bandwidth measurements are to be performed. The use of the ICLA is for a single CDMA carrier. This requires that the J4 connector power level be calibrated for the specific channel of use. The test configuration, Figure 1A, allowed the measurement of output power for each channel being investigated for Occupied Bandwidth. These included the upper and lower band edges and at the center channel for frequency blocks A and B shown in Table 1.2.

Table 1.1. IS 97 channel allocation consists of following channel Blocks:

Block	FCC Cellular Frequency Bands Per FCC 22.905	Valid CDMA Channel s & Frequency Range	
	MHz	Channel No.	MHz
A" (1 MHz)	869.000 - 870.000	1013 -1023	869.700 – 870.000
A (10 MHz)	870.000 - 880.000	0001- 0311	870.030 – 879.330
B (10 MHz)	880.000 - 890.000	0356 - 0644	880.680 – 889.320
A' (1.5 MHz)	890.000 - 891.500	0689 - 0694	890.670 – 890.820
B' (2.5 MHz)	891.500 - 894.000	0739 - 0777	892.170 – 893.310

The edge channels are 1013 and 0777.

Table 1.2. The frequency range used by ICLA and for FCC filing.

Block	Valid CDMA Channels	Frequency Range
A	016-283	870.48 – 878.49 MHz
B	384-617	881.52 – 888.51 MHz

The ICLA does not seek certification for entire cellular Band (869-894 MHz) at present time. At present operation is restricted to frequency ranges shown in Table 1.2 Blocks A and B.

The ICLA system has a maximum power output at the antenna terminals of 24 Watts (43.8 dBm) +2/-4 dB, it also has a minimum power output at the antenna terminals of 0.00008 Watts (+2/-4

dB), in the Cellular Band A: 870.48 – 878.49 MHz and Band B: 881.52 – 888.51 MHz. The signal applied to the ICLA is defined in Table 1.3. The power was reset to 24 Watts at each measurement frequency to verify the spectral performance at that power level. The attenuation range was also verified. The specific Frequencies and channels and set power level was documented on each "Occupied Bandwidth" sheet.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh Assignments, full rate only

TABLE 1.3 BASE STATION TEST MODEL, NOMINAL

TEST SETUP FOR MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

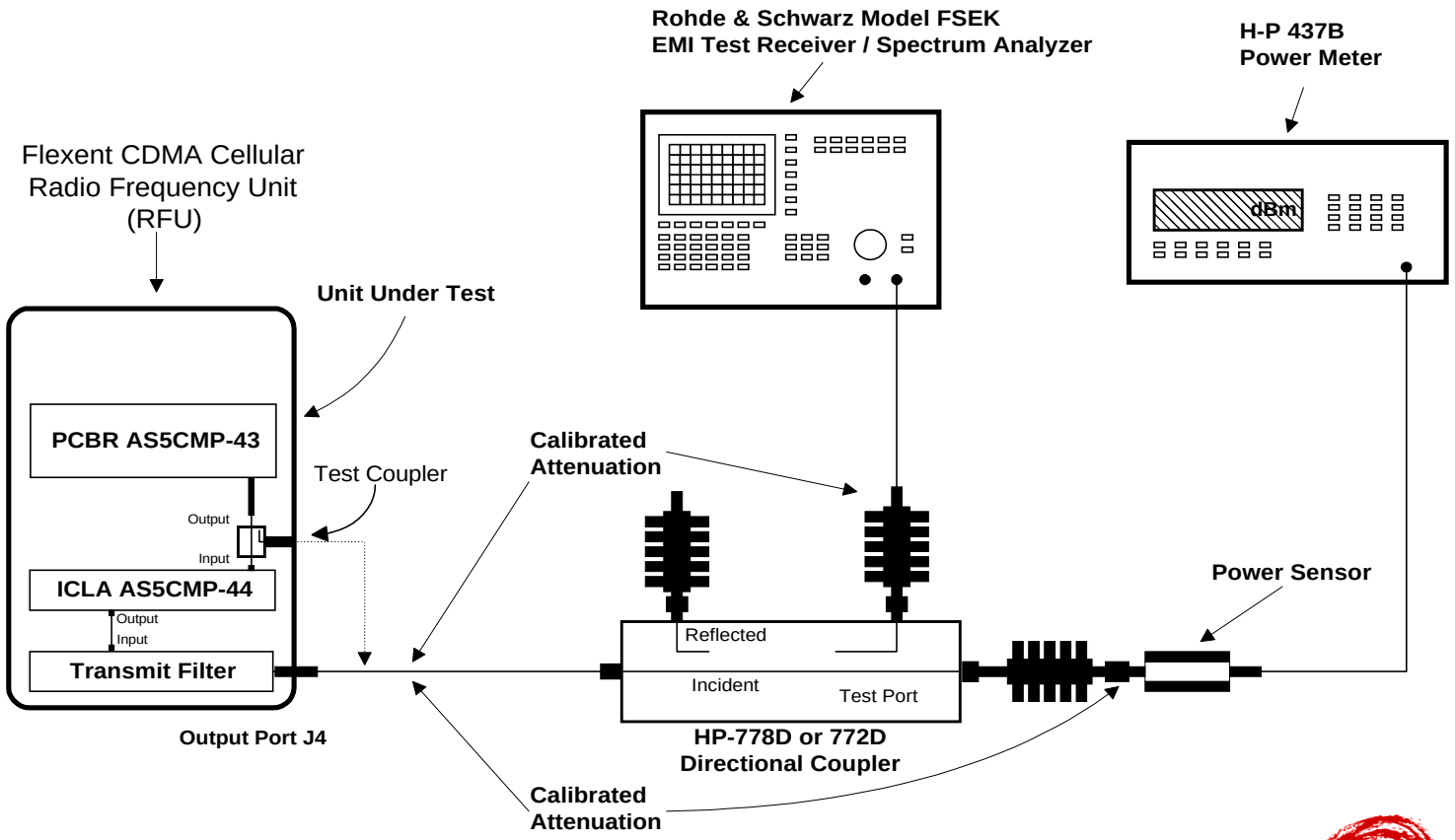
EQUIPMENT:

BBU:	**Basband Unit**
PCBR:	**Predistortion CDMA Baseband Radio (850)**
ICLA:	**Individual Carrier Linear Amplifier (FCCID: AS5CMP-44)**
Transmit Filter:	**Cellular Band Transmit Filter appropriate for the investigated Band**
Directional Coupler:	**HP 778D Dual Directional Coupler**
Power Meter:	**HP 437B with HP 8481A Power Head**
Plotter:	**HP Model 520 DeskJet**
Spectrum Analyzer:	**Rohde & Schwarz FSEK EMI Test Receiver**

RESULTS:

The ICLA was configured in the test setup shown in Figure 1A. For each of the cellular channels tested the ICLA delivered a 24 Watts when measured at the J4 output connection. This data is recorded on the Occupied Bandwidth Data Sheets (see Measurement-3).

Figure 1A. TEST CONFIGURATION FOR RF POWER OUTPUT



All components are calibrated over the frequency range of interest

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APPLICANT: Lucent Technologies FCC ID: AS5CMP - 44