

**EXHIBIT 15**

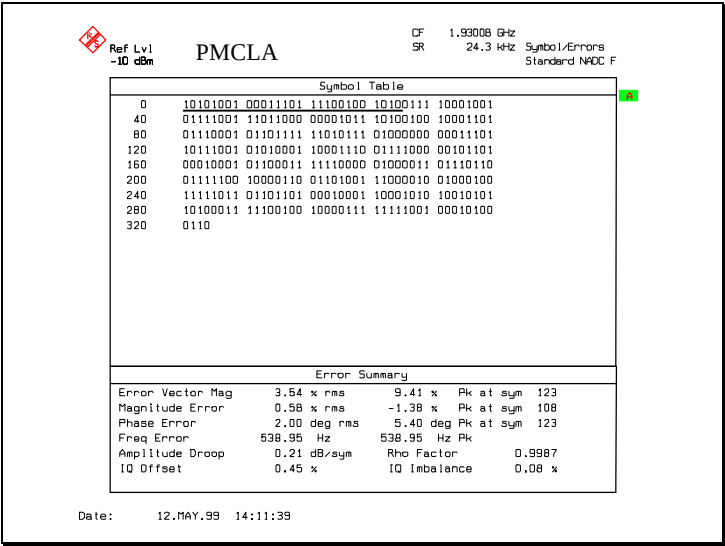
**Section 2.1047 Measurements Required: Modulation Characteristics**

The TDMA modulation utilized by the PCS-TDMA Dual Radio Module (PDRM) 44WR53, subject of a separate application for certification under AS5CMP-30, is the standard  $\pi/4$  differentially encoded quadrature phase shift keying ( $\pi/4$  DQPSK). The modulation accuracy measurements were performed with all 3 TDMA time slots modulated with a pseudo-random bit stream. Measurements were made at the transmit antenna terminal with the single carrier power level set to +30.8 dBm (1.2 Watts), and with the PDRM tuned to 1) the lowest settable PCS channel: A-Block Ch 2 1930.08 MHz, 2) mid PCS Band: B-Block Ch 917 1957.53 MHz, and 3) the highest settable PCS channel: C-Block Ch 1998 1989.96 MHz. The required modulation accuracy is specified in TIA/EIA/IS-138-A, July 1996, Section 3.3.2 Digital and in ANSI J-STD-010-1996, Section 3.3 Modulation Requirements. The “minimum standard”, or limitation, is stated that the RMS error vector magnitude shall be less than 12.5%.

Measurements were made with a Rohde & Schwarz Spectrum Analyzer 20 Hz to 26.5 GHz FSEM, Model 1079.8500.30, calibrated as required for ISO-9001 compliance. The measurement results and test set-up block diagram are included.

**RESULTS:**

The PCS-TDMA Multi Carrier Linear Amplifier, 44WA28, does not contain or incorporate modulation circuitry. This test procedure demonstrates that it also does not degrade the modulation accuracy of the PCS-TDMA Dual Radio Module (PDRM) transceiver, 44WR53. The measurement data below demonstrates full compliance with the modulation accuracy requirements specified in TIA/EIA/IS-138-A and in ANSI J-STD-010-1996. The error vector magnitude is less than 12.5% across the PCS Frequency Band 1930.08 – 1989.96 MHz.



Modulation Accuracy: PCS-TDMA carrier at the transmit antenna terminal  
 A-Block Channel 2, 1930.08 MHz  
 Error Vector Magnitude = 3.54% rms



## EXHIBIT 15

Test set-up for measuring the modulation accuracy of the PCS-TDMA Dual Radio Module transceiver.

**FLEXENT™ PCS-TDMA Microcell J41698A-1**

