

Lucent Technologies
Bell Labs Innovations



Subject: **Application for a Class II Change to The TDMA
Transmit Unit . FCC ID: AS5CMP-19.**

67 Whippany Road
Whippany, NJ 07981-0903

Rudolf J. Pillmeier
Telephone: 973-386-3837
Facsimile: 973-386-8098
E-mail rpillmeier@lucent.com

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Timco Engineering, Inc.
P.O. Box 370
849 NW State Road 45
Newberry, Florida 32669

Dear Sid Sanders:

Pursuant to CFR 47 Part 2 Sub-part J Sec. 2.1043 (b) (2) we are submitting a Class II Permissive Change to FCC ID: AS5CMP-19 the TDMA Transmit Unit (TTU). The TTU is an upbander amplifier used to convert the cellular transceiver channel output frequency to a PCS output signal. The TTU has a local oscillator frequency which is derived from the system frequency standard and adjusted to the needed frequency by a phase lock loop. A mixer is used to combine the LO frequency and the cellular channel frequency to produce the PCS signal. A second source vender has been found to supply this mixer chip. Our testing has shown that with this new chip the TTU - although still compliant with the FCC requirements - exhibits a greater than 3 dB degradation in the emissions radiated at the third harmonic.

When the question was raised with FCC Examiner Rich Fabina we were told that if any of the values reported to the FCC in the "Certification" filing were degraded by more than 3 dB a "Class II Permissive Change" would be required as long as the equipment was still compliant. Even with the additional spurious emissions the TTU is still compliant and all the other equipment characteristics pertinent to "Certification" remain unchanged.

The attached information is relevant only to the characteristic to be changed which is the spurious radiated emissions (Part 2 Sub Part J Sec 2.1053). The changes to the schematic, parts list, and assembly drawing are hand drawn because these parts can be used interchangeably and supplies of them are now at the factory. The diagrams can not be officially updated until the Class II Change has been approved. This will insure that none of the TTU's will be shipped with the new mixer installed before the Class II Change has

been authorized. If you look at the before and after pictures you will notice a sloppy soldering job, this did not affect the circuit's operation since the schematic shows those pins are intentionally tied together on the circuit board.

I am including a picture of the present chip and one with the second source chip mounted in the board. A marked up copy of the schematic, parts list, and assembly drawing, and an exhibit comparing the radiated emissions, at the third harmonic, of the TTU for both the original chip and the new chip.

A copy of the original test report schematics are included with the package at the request of the FCC. Please be sure that all the schematics both old and new are kept confidential.

Sincerely,
Original signed by
Rudolf J. Pillmeier, Technical Manager
EMC Conformance Test Group, Whippany