

Greetings Tom, After checking the previous submittals for TPL they have all been for 25kHz channel bandwidth only (or -13dBm) so that is what I would put on the Grant. Hopefully this clears everything up and we can get these done. Please let me know if you require anything else. Thanks Les-----Original Message-----From: Tom Cokenias [mailto:tom@tncokenias.org] Sent: Wednesday, August 06, 2003 1:12 PM To: les@dnbenginc.com Cc: aliang@ccsemc.com; tcokenias@ccsemc.com Subject: PL COMMUNICATIONS, FCC ID: BBD3-1A, Assessment NO.: AN03T3044 Dear Les, The following item from July 22 correspondence needs to be addressed before grant may be issued.

- Will the amplifier be sold for use with 12.5 kHz channel bandwidth equipment? If so, the limit for emissions removed by more than 12.5 kHz must be suppressed by at least $50 + 10 \log(P_{\text{watts}})$. i.e., they must be less than -20dBm. The display line shown on the spurious emissions graphs is -13 dBm. Please comment.

In your 31 July reply you corrected the limit for radiated spurious test called out in Rule paragraph 2.1053. Data shows the product meets attenuation limits in 90.210(b) with the $43 + 10 \log P$ limit (-13dBm). For 12.5 kHz channel bandwidth, emissions mask in 90.210(d) applies, with attenuation limits of $50 + 10 \log(P)$ dB (-20 dBm) or -70 dBc, whichever is the lesser attenuation. For 6.25 kHz channel bandwidth, emissions mask in 90.210(e) applies with attenuation limits of $55 + 10 \log(p)$ dB (-25 dBm) or 65 dBc, whichever is the lesser attenuation. Antenna conducted data plots indicate the referenced product would meet 90.210(b) and 90.210(e) but may not meet 90.210(d) for 12.5 kHz channel bandwidth products. If the product is intended to be sold for use with 12.5 kHz channel bandwidth systems, please submit data showing compliance with the conducted limits, with transmitter operating at maximum power. Otherwise, please indicate that the product will not be sold for use with 12.5 kHz systems. A note will be placed on the grant of equipment authorization indicating this restriction.

-----Original Message-----

From: Compliance Certification Services
 [mailto:TCokenias@ccsemc.com] Sent: Tuesday, July 22, 2003 3:46 PM
 Cc: aliang@ccsemc.com, tom@tncokenias.org
 Subject: TPL COMMUNICATIONS, FCC ID: BBD3-1A, Assessment NO.: AN03T3044
 (#4)

- FCC rule para 2.925 requires the words "FCC ID" to be placed before the FCC identifier. Please submit revised label drawings or photographs that show compliance with this requirement. Attached
- The product interior photographs do not seem to have sufficient resolution. Please re-submit or re-scan at a higher resolution. Attached
- Will the amplifier be sold for use with 12.5 kHz channel bandwidth equipment? If so, the limit for emissions removed by more than 12.5 kHz must be suppressed by at least $50 + 10 \log(P_{\text{watts}})$. i.e., they must be less than -20dBm. The display line shown on the spurious emissions graphs is -13 dBm. Please comment. New data sheet provided to include 12.5kHz bw pages 52, 53 replaced
- For spurious emission field strength emissions required by rule para. 2.1053, emissions are referenced to the radiated output power of the transmitter, assuming all emissions are radiated from a dipole. FCC

interprets this to mean that the "substitution" method must be used to determine compliance. This method called out by EIA/TIA 603 specification (among others) requires that once radiated emissions from the EUT have been measured, the EUT is removed and a signal generator and substitution antenna is put in its place. Emissions are again maximized, the signal generator is set to match the radiated reading, and the resultant ERP is compared against the limit. Same as Item 4

Please submit data for radiated emissions performed in this fashion. Attached

5. Please submit a photograph showing the radiated emissions test set-up
Attached

6. The schematics do not seem to have sufficient resolution to be legible. Please submit original electronic file or new document scanned at higher resolution.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.

TCokenias@ccsemc.com