

ALQ 99 Jammers

Ensuring the Availability of Affordable Transmitters for Jamming Applications

The Band 4 Transmitter is employed on the Navy EA-6B Prowler to conduct support jamming against radar and communications threats. The OTWT is the final output stage of the Band 4 Transmitter's Radio Frequency (RF) amplifier chain. The ALQ-99 Band 4 Transmitter relies on OTWT that use a unique "hollow-beam" design. This is a very broad band, high power OTWT confined to a demanding form factor and operating in a harsh environment. Currently, there is cost and delivery risk for the OTWT manufacturing yield to keep pace with the Navy demand for spares to replace failed OTWTs.



There is current funding in place to address some of these issues, but it is agreed that more can be done to achieve not only an improvement in yields on the current OTWT design, but to establish a OTWT design replacement that is more producible and affordable, thus mitigating delivery risk to the ALQ-99 Band 4 jammer, and other jammer applications, in the future.

This Navy ManTech project will work to supplement existing efforts by PMA-234 to increase the OTWT yields as well as potentially establishing an OTWT solid state replacement. To accomplish these objectives, a panel group will be formed and used to focus on specific issues and possible solutions to current Band 4 OTWT manufacturing. In addition, packaging and/or manufacturing issues associated with potential solid-state OTWT replacements will be addressed through a test vehicle build and testing effort. The result of this work will be direct OTWT manufacturing improvement options for the existing design, demonstrated packaging and/or manufacturing process solutions for advanced OTWT replacements, and identified technical leveraging opportunities for other transmitters.

Overall, this project will assist in the mitigation of cost and delivery risk for Band 4 Transmitters OTWTs and potentially benefit procurement of other bands of Transmitter OTWTs, such as the Band 5/6.

PMA 234, the EA-6B Program Office, is the stakeholder. Naval Surface Warfare Center, Crane IN is the technical authority for the ALQ-99. Current OTWT manufacturers and suppliers of potential solid state replacements will also be involved.