



# OML Millimeter Wave VNA Modules Configured for Anritsu Lightning Millimeter Wave VNA Systems

OML uses a system based on the Anritsu 37247D Millimeter Wave VNA in the testing and optimization of OML Millimeter Wave VNA Modules (modules) for delivery to customers. The system consists of a 37247D VNA, a 3738A test set controller, a 68163B 40 GHz RF synthesizer and a 69147A Option 15 (high power) 20 GHz LO synthesizer. This system is capable of operating with the OML VxxVNA-T/R, VxxVNA-S and VxxVNA-T series of MMW modules. OML has the capability to emulate any of the Lightning Millimeter Wave (MMW) Systems.

For optimum MMW VNA performance OML modules have internal attenuation applied to the LO and RF input ports as needed to match the drive level available with the customer system configuration. All OML modules require +5 dBm minimum RF and LO drive (+ 7 to +10 dBm recommended). The OML modules have internal attenuation at the IF output to avoid IF overload of the VNA.

With this VNA test capability, OML Millimeter Wave VNA Modules are delivered from the factory internally adjusted to operate with the specific VNA system configuration the customer is using. The IF levels are adjusted to yield the maximum possible dynamic range on the Lightning. The LO and RF levels are adjusted for optimum VNA system frequency response. The customer is no longer required to measure each of the signal levels and apply the necessary outboard attenuation. Consult the other sections of the OML Millimeter Wave VNA Module manual or see the other papers posted in the Vector Analysis section of the OML web site for further insight.