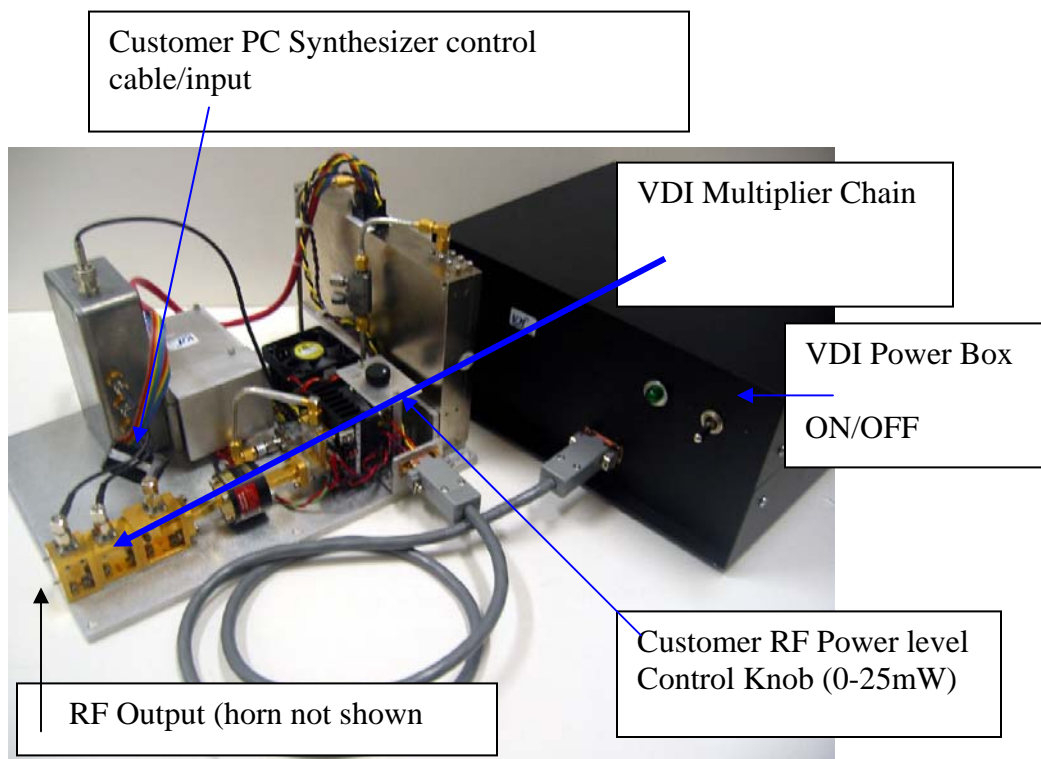


New Full-Feedback-Control FEMs, Transmitters, Receivers: Now No-Bias-Adjustment; Never Mechanical Tuners

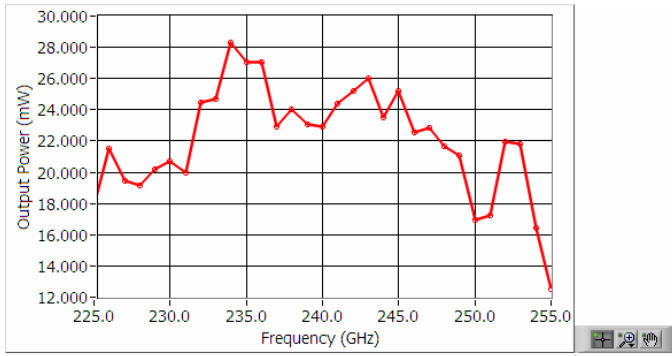
March 2006

VDI has recently developed closed loop analog feedback control of the multiplier bias and amplifier gain for Frequency Extension Modules (FEMs), Transmitters and Receivers. Since 2001 VDI has offered compact, all-solid-state, frequency multipliers without any mechanical tuners. Now, compact, frequency agile systems do not require any User voltage bias adjustments. VDI systems self adjust and regulate for optimal performance as the Customer adjusts frequency. Compact fixed-frequency systems are also available.

The system shown below is a 225-255 GHz transmitter that is frequency controlled by a Micro Lambda (14-16 GHz) synthesizer; VDI multipliers create the X16 frequency multiplication. ***20-30mW of RF power from 225-255GHz is achieved*** in a fully sweepable configuration. This is a simple, single switch turn-on system.

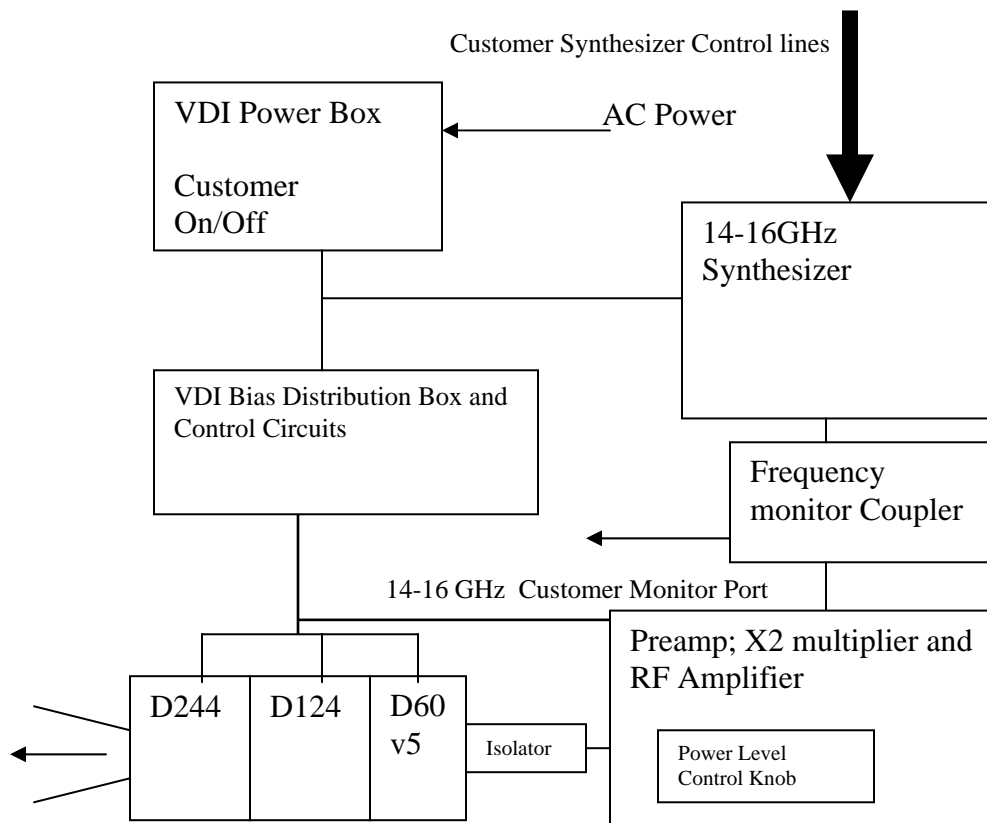


Recently developed Transmitter is shown above



244\D244-R2_B2_7um V=5, D1244x4_B13_11um V=13, WR28_ISO D

RF Output power vs Output frequency is shown above



RF output (224 GHz Fixed upon shipment; 225-255 GHz variable with Customer control)
System diagram is shown above

Contact Tom Crowe or Jeffrey Hesler at VDI today for further information (434) 297-3257