



**VDS-6030-1001 OPERATING INSTRUCTIONS**

**2. PERFORMANCE/SPECIFICATIONS (continued)**

**Connectors**

- REF In.....SMA female (J4)
- RF Out .....SMA female (J2 & J3)
- Freq Control.....25-pin subminiature “D” (J1)
- Power Supply.....same as frequency control

**Power Supply** .....+5V @ 750 mA; +15V @ 100 mA

**Environmental**

- Operating Temp .....-30°C to +70°C
- Storage Temp.....-55°C to +85°C
- Dimensions .....4.48" x 6.6" x 1.125"
- Weight.....<3 lbs, net; 6 lbs, shipping

**3. MECHANICAL CONFIGURATION**

The VDS-6030-1001 is manufactured in a single module with a 25-pin (male) connector located on the 6.6” x 1.125” face. All RF and digital connectors are accessed on one side of the module (6.6” x 1.125” face) with the following table describing each of the inputs and outputs:

<b>Designator</b>	<b>Function</b>	<b>Connector</b>	<b>Mating Connector</b>
J1	Frequency Control	25-pin Submini “D”	Amphenol 117DB-25S or equivalent
J2	C-Band Out 1	SMA female	SMA male
J3	C-Band Out 2	SMA female	SMA male
J4	10 MHz Ext REF	SMA female	SMA male

**4. POWER SUPPLY CONNECTIONS**

Power is supplied to the following pins on the 25-pin subminiature “D” connector:

<b>Power Supply</b>	<b>Pin Numbers</b>
+5V	11, 23
+15V	13, 25



**5. FREQUENCY CONTROL**

All control lines should be driven with standard LSTTL levels ("0" = 0V to 0.4V for "low" and "1" =2.4V to 5.5V for "high".) No registration of the signal is provided so the logic levels at each pin must be maintained in order for correct operation of the synthesizer. In addition, pull -up resistors are not provided so each control line must be controlled to either a TTL "HIGH" or TTL "LOW" depending on the frequency desired.

The desired frequency is programmed as the offset frequency from **4640 MHz**. Simply subtract the desired frequency from the offset frequency and use the following table for the pin assignments.

All pin out designations for the binary frequency control are listed below:

Pin No.	Description	Pin No.	Description	Pin No.	Description
1	GND	9	40 MHz	18	2.5 MHz
2	GND	10	N. C.	19	Lock Indicator
3	GND	11	+5V	20	N. C.
4	GND	12	GND	21	N. C.
5	GND	13	+15V	22	N. C.
6	320 MHz	14	GND	23	+5V
7	160 MHz	15	20 MHz	24	GND
8	80 MHz	16	10 MHz	25	+15V
		17	5 MHz		

Frequency Control Programming Lines (J1)

**6. ALARM (Lock Indicator)**

Pin 19 of the 25-pin subminiature "D" connector (J1) contains the lock indicator control line. This line provides access to the status of the PLL loop. The signal is a TTL level voltage. The following table contains the logic state for Lock/Out-of-Lock indication. Note that the red LED located between the J1 and J4 connectors will illuminate for an OUT-OF-LOCK condition.

INDICATION	LOCK LINE LEVEL
PLL Locked	TTL HIGH
PLL Out-of-Lock	TTL LOW

Lock Indicator Logic



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7. PROGRAMMING EXAMPLES

Several examples will be presented to assist the user in determining the pin configurations for a desired frequency. The pin numbers shown in the examples should be pulled "HIGH" and all remaining pins must be pulled "LOW".

Desired Frequency	Programmed Frequency	Active Pins ("HIGH")
4665.0 MHz	25 MHz	Pins 15 & 17
4922.5 MHz	282.5 MHz	Pins 7, 8, 9 & 18
5045.0 MHz	405 MHz	Pins 6, 8 & 17
5245.0 MHz	605 MHz	Pins 6, 7, 8, 9 & 17

8. WARRANTY

All Meret products are warranted against defects in material and workmanship for a period of one year after initial shipment. Meret will repair or replace any circuit or component that is found to be defective during this period if in Meret's sole opinion the product is deemed defective.

Any modifications or options performed by Meret during the initial one-year period shall be included under the initial warranty, and such secondary warranties shall terminate one year after the initial shipment. Shipment of the product to Meret (San Diego, CA) shall be made prepaid and shall not be made without prior authorization by Meret.

This warranty is voided if the product is abused or if the user makes unauthorized modifications.

This warranty is in lieu of all other warranties, expressed or implied, and no person is authorized to represent or assume for Meret any liability in connection with the sales of our products other than stated within this warranty.

Serial Number

QC by \_\_\_\_\_ Date: \_\_\_\_\_

