Unique Broadband Systems
a DOL Technologies Inc. Company

Model: SRASYSA0050IXA4CH

3.7 GHz, 50W 4-Channel Solid State Power Amplifier System

Product Features

- **3.7GHz operating frequency**
- **Solid state design using LDMOS devices**
- **4-channel output provides 50W continuous per channel**
- **Built-in self-protection circuits**
- **Integrated PLL**
- **Local monitoring and control via front panel LCD and cursor/execute keys**
- **Integrated AC/DC power supply**
- **Forced air cooled with integrated fans**

Product Description

The 4-Channel 3.7 GHz RF Source with inbuilt PLL System is a compact solid state design using the latest LDMOS transistor technology. The highly-efficient design is optimized for radar and ground test applications. The System offers 50 Watts of CW or Pulse power per channel with maximum reliability and long service life.

The components of the System are housed in a compact ruggedized 5RU – 19” desktop rack cabinet. The cabinet design permits easy accesss to the system components. The System is designed to operate in a controlled indoor environment using forced air-cooling supplied variable-speed fans integrated into each System component.

The System components include a 4-channel RF Source with inbuilt PLL and four 50W Power Amplifiers. Each component features monitoring and self-protection circuits with alarms that include; input overdrive, forward power, reflected power and over-temperature.

The operational parameters of the Amplifiers can be monitored and controlled independently or by the RF Source when configured accordingly. A front panel LCD display provides the user with local monitoring and control, while a RS485 interface provides the user with remote monitoring and control.

Head Office – 120 Spinnaker Way – Vaughan – Ontario – Canada – L4K 2P6 – Tel: **905 669 8533** – North America Toll Free: **1 877 669 8533** – **www.uniquesys.com** – Email: **sales@uniquesys.com**

Product Specifications

Electrical	
Operating Frequency	3.7 GHz
Frequency Stability	±1 ppm max. over operating temperature range
Bandwidth	20MHz
RF Output Power	50 W (47 dBm) continuous per channel (x4 channels)
RF Output Power Variation	±0.4 dB max.
RF Output Power Range	100 mW to 50 W continuous, 0.5 dB step
Phase Range	0 to 360 deg. (+180 deg.) (analog)
Phase Accuracy	±4 deg. max.
Spurious	≤ -60 dBc
Harmonics	≤ -80 dBc
Phase Noise	-80 dBc/Hz @ 1 kHz -85 dBc/Hz @ 10 kHz
Output Impedance	50 ohm
Output VSWR	1.3:1 max.

Interfaces	
RF Input	SMA (female), 50 ohm
RF Output	N-type (female), 50 ohm
Monitoring and Control	
Front Panel LCD	2 Line by 40 character display with cursor/execute keys
Status Indicators	Front panel LEDs
Remote Control	D-sub connector

Power Supply	
Voltage	230 VAC +10%, single phase, 50 Hz
Power Consumption	125 W per channel

Mechanical	
Package	19”, indoor rack mount chassis

Environmental	
Ambient Operating Temperature	+10°C to +50°C
Ambient Storage Temperature	+5°C to +55°C
Relative Humidity	5% to 95%, non-condensing @ +40°C
Cooling	3000 m (10000 ft.)

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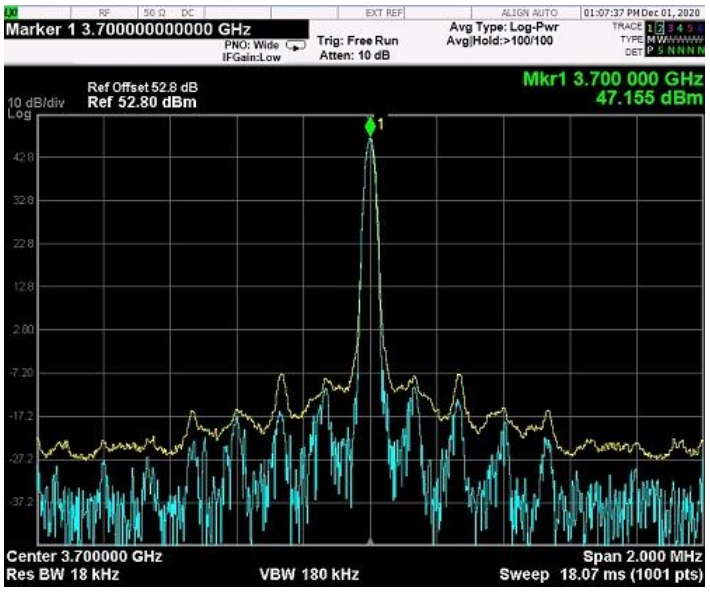
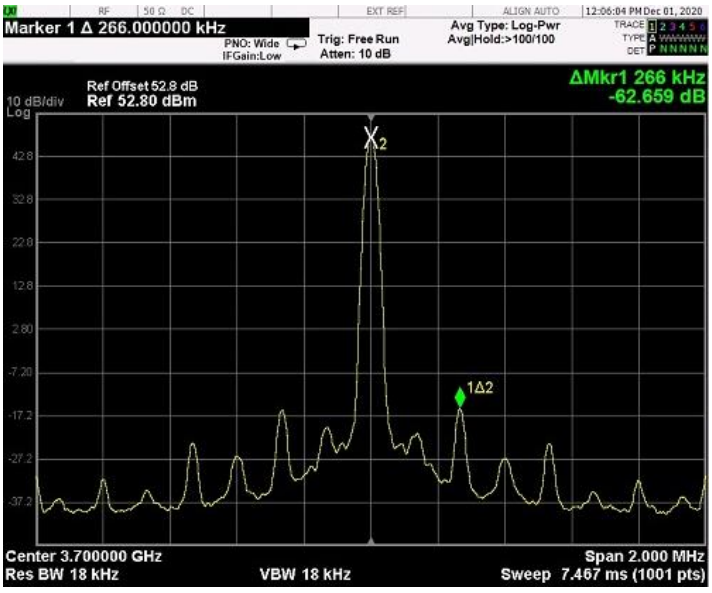
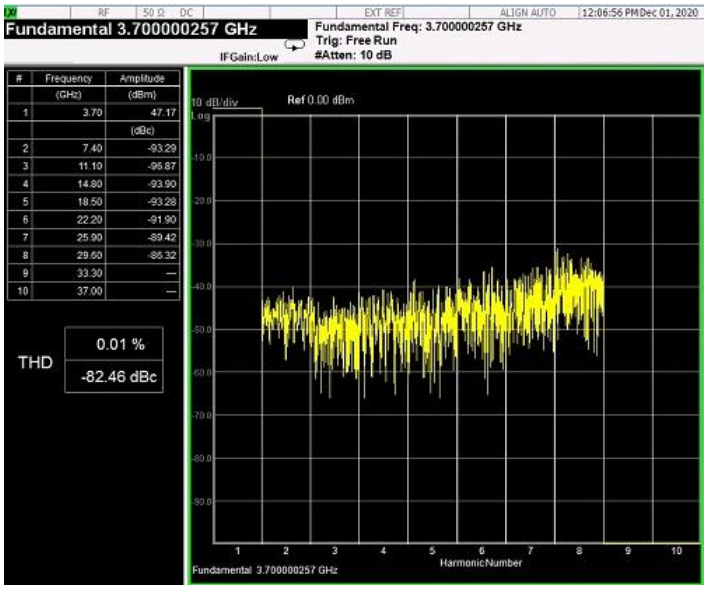
Typical Perfomance



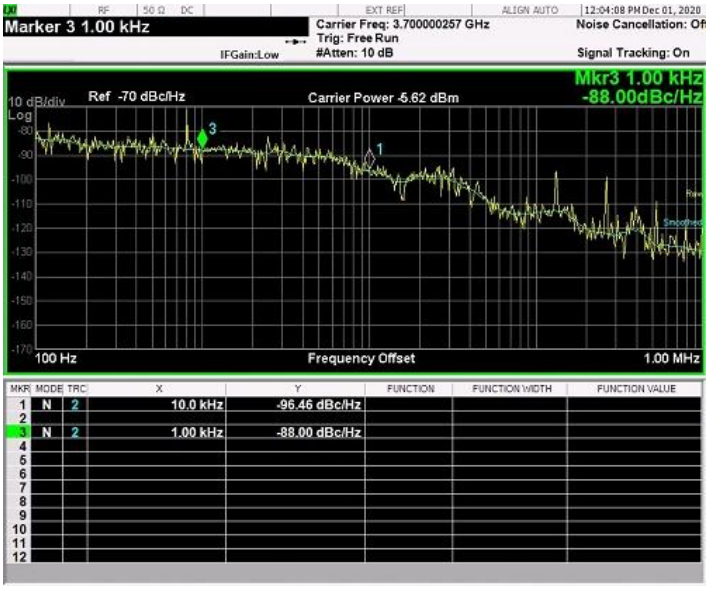
Plot 1 – Frequency Stability



Plot 2 – Spurious @ P_{OUT} = 50W



Plot 3 – Harmonics @ P_{OUT} = 50W



Plot 4 – Phase Noise

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