Date:	30MHz to 1GHz VNA	Drawn By:
11/04/2019		Josh Johnson

LO

PLL w/ VCO
MAX2871
23.5-6000 MHz
-4 to +5dBm

Filter Bank

SP4T Switch
PE42440
IL = 0.5dB
P1dB = +41dBm

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PE42440
IL = 0.5dB
P1dB = +41dBm

LFCN-225+

LFCN-400+

LFCN-1000+

LFCN-1500+

Source Leveling

Variable Attenuator
SKY12347-362LF
(0.5dB to 31.5dB)
IL = 2dB

Amplifier
TRF37A75
G = 12dB
P1dB = +18dBm
IP3 = +32.5dBm

Level
Control

Log Power Detector
AD8319
F = 1 MHz to 10 GHz
Pin = -50 to 0 dBm

Coupling

Directional Coupler
ADC-15-4+
F = 5 to 1000 MHz
IL = 0.6dB
15dB Coupling
>24dB Directivity

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ADC-15-4+
F = 5 to 1000MHz
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-6dB Resistive
Split

D
U
T

MCU

STM32F373
16bit Delta-Sigma ADC
Inbuilt USB

ADC

ADC

Host
Computer

USB

SPI Flash

Gain/Phase Detector

V MAG

V PHASE

AD8302

RF A
(REF)

RF B
(DUT)

Reference

SPDT Switch
F2923
IL = 0.5dB
ISO > 60dB

Return
Signal

Through
Signal

-6dB

-21dB

Gain / Phase Detector
AD8302
Pin = -60 to 0dBm
Fin = 0 to 2700MHz
Vout = 0 to 1.8V