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25MHz to 1.25GHz VNA

Drawn By: Josh Johnson

LO

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

Filter Bank

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

LFCN-105+
LFCN-225+
LFCN-400+
LFCN-1000+

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PE42440
IL = 0.5dB
P1dB = +41dBm

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

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

-6dB Resistive Split

DUT

MCU

STM32F373
16bit Sigma-Delta ADC
Inbuilt USB

Host Computer

USB

ADC

ADC

SPI Flash

Gain/Phase Detector

V MAG

V PHASE

AD8302

RF A (REF)

RF B (DUT)

Reference

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

SPDT Switch
F2923
IL = 0.5dB
ISO > 60dB

Return Signal

Through Signal

-6dB

-21dB