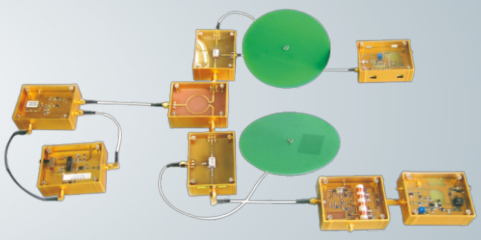
RF Training System
AT-RF3030



Portion AT-RF3030 connecting photo

AT-RF3030: 3.0GHz

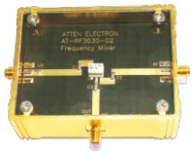
AT-RF3030 RF Training System settings is training to enable students through increased access to the radio frequency system's basic structure, working principle, simulation analysis,test equipment and measurement skills in a rational and perceptual knowledge. To master the concept of time domain and frequency domain, the transmission lines, radio wave propagation, antennas, R F modules, and radio frequency communications, and other basic concepts, and learn how to use important therefore test instruments.

AT-RF3030 Training system uses Radio Frequency Modular Training for the structural design of experiments in the training provided a very simple, flexible assembly, while equipment can be integrated in a box, easy to carry and transport. The module circuit use all microstrip circuit design, have transparent plexiglass on the cover and can be clearly observed that the structure of all microstrip circuit.

Name	Quantity
SMA-50 Ω Terminal load	3
SMA Open circuit load	1
SMA Short circuit load	1
SMA-50JJ Connector	3
SMA-50KK-1 Connector	2
SMB-C-TKW1.5-3X300 Power cables linking	4
SFF-1.5-50-1Shielding Line	13
BNC-SMAtransformer	2
Coaxial attenuator 10dB	1
Coaxial attenuator 20dB	1
SMB-JJ Connector	9
SMB-50kkk Connector	3
SYV-50-2-1 Shielding Line	6
Technical notes	1
Experimental reference books	1

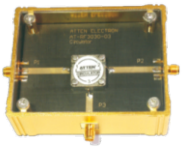
VCO

f=1300-2350MHz、
Po≥5dBm
Adjustable Voltage:0～20V



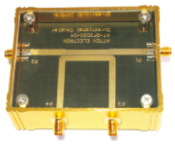
Mixer

RF/LO：f=200-3000MHz、
IF=50-1000MHz、
Loss L≤12dB（PLO≥7dBm）



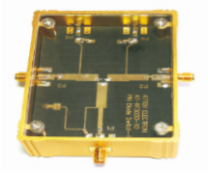
Microstrip ring

fo=1950MHz-2050MHz
△F≥400MHz、
Insertion loss L≤3dB
Insertion loss I≥15dB



Directional couplers

Single-directional coupling
fo=1950MHz-2050MHz
△F≥800MHz、
C=-(10±2)dB　I≥20dB



PIN RF switching

Use PIN Diodes f=750-2500MHz
Insertion loss L=3dB M
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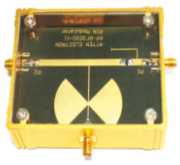
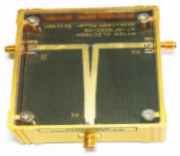


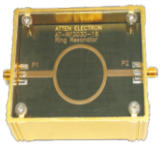
PIN Modulator

1KHz Square wave modulation,
Modulationm=30%-90%



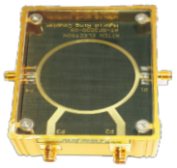
Power Distributor

f=1000-3000MHz、
L≤-3dB
I≥10dB



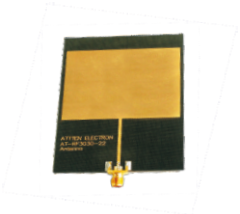
Round resonator

fo=1950MHz-2050MHz
Insertion lossL≤7dB
△F≥30MHz



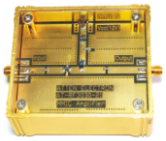
Hybrid Ring

fo=2050−2150 MHz
△F≥450MHz
[Σ/△≥20 dB]



Microstrip Antennas

f=1930−1990MHz
G≥5dB
△F=40MHz

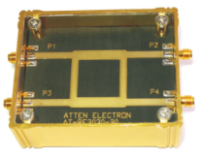


RF Amplifiers

f=50-3000MHz
G≥10dB

Filter

LPF:0-(2050～2150)MHZ
L≤1.5dB
BPF:fo=1900MHz-2000MHz
△F≤Fo*15%MHZ
HPF:f≥1750MHz-1850MHz
L≤1dB
BSF:fo=1750-1850MHz
△F≥600MHz [L≥25dB]
△F≤1500MHz [L≤3dB]



Branch coupler

Fo=2000-2100 MHz
△F≥300MHz
D≥12dB

Slotted Transmission line

Microstrip structure
Moving distance ≥170mm
Remaining VSWR ≤1.05

Coaxial detector

f= 0.5-3GHz
Sensitivity ≥0.15mv / mW; VSWR ≤1.7
Frequency response ≤0.6

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