

**RF TRAINING SYSTEM Technical Specifications:**

**RF Tuned Amplifier Module**

Center freq. : 100-150 MHz typ. varactor tuned

**RF Oscillators:**

**a. RFT-02-A Colpitts RF Oscillator Module:**

Frequency : >100 MHz typical

**b. RFT-02-B Hartley RF Oscillator Module:**

Frequency : >100 MHz varactor tunable

**c. RFT-02-C Clapp RF Oscillator Module:**

Frequency : >100 MHz varactor tunable

**d. RFT-02-D Pierce RF Oscillator Module:**

Frequency : 48.25 MHz

**RF Crystal Oscillators:**

**a. RFT-03-A Feedback Crystal Oscillator Mod.:**

Frequency : 10 MHz typical

**b. RFT-03-B Colpitts Crystal Oscillator module:**

Frequency : 38.9 MHz typical

**c. RFT-03-C Butler Crystal oscillator module:**

Frequency : above 80 MHz

**d. RFT-03-D Crystal frequency multiplier mod.:**

2nd harmonic : >10dB fundamental

**IF Amplifiers:**

**a. RFT-04-A FM IF amplifier module:**

Center freq. : 10.7 MHz

**b. RFT-04-B TV VIF amplifier module:**

Center freq. : 36.15 MHz

**c. RFT-04-C Satellite IF amplifier module:**

Center freq. : 479.5MHz typical

**RF Mixers:**

**a. RFT-05-A Single ended Diode Mixer:**

LO/RF freq. : 500-1000 MHz typical

**b. RFT-05-B Single Balanced Diode mixer:**

LO/RF freq. : 25-500 MHz typical

**c. RFT-05-C Double balanced diode mixer:**

RF / LO freq. : 500-1000 MHz typical

**d. RFT-05-D Transistor Mixer Module:**

LO input typical : 400-600 MHz

Conversion gain : +3dB

**RF Filters:**

**a. RFT-06-A1 High Pass Filter Module:**

Filter type : Butterworth 7th order

Cut off freq. : 350 MHz typical

**b. RFT-06-A2 High Pass Filter Module:**

Filter type : Chebyshev 7th order

Cut off freq. : 350 MHz typical

**c. RFT-06-B1 Low Pass Filter Module:**

Filter type : Butterworth 7th order

Cut off freq. : 350 MHz typical

**d. RFT-06-B2 Low Pass Filter Module:**

Filter type : Chebyshev 7th order

Cut off freq. : 350 MHz typical

**e. RFT-06-C1 Band Pass Filter Module:**

Filter type : Butterworth 5th order

F1 & F2 : 100 & 350 MHz typical

**f. RFT-06-C2 Band Pass Filter Module:**

Filter type : Chebyshev 5th order

F1 & F2 : 100 & 350 MHz typical

**g. RFT-06-D Notch Filter Module:**

Center freq. : 350 MHz nominal



**E-Manual: Installation Video for ease of Learning**

**List of experiments:**

1. To measure the center frequency of RF tuned amplifier.
2. To measure the gain of RF tuned amplifier module.
3. To measure the bandwidth of RF tuned amplifier.
4. To measure the variation of center frequency with tuning
5. To measure the 1dB compression of RF amp.
6. To measure the frequency of RF oscillator.
7. To measure the output power level of RF oscillator.
8. To measure the frequency and level of various harmonics
9. To observe the effect of capacitive feedback ratio
10. To observe the effect of voltage on frequency, level, harmonics
11. To measure the frequency of RF crystal oscillator.
12. To measure the level of RF crystal oscillator.
13. To measure the harmonics of RF crystal oscillator
14. To measure the frequency pulling characteristic of RF crystal osc
15. To measure the phase noise of RF oscillator.
16. To measure the center frequency of IF amplifier.
17. To measure the gain of IF amplifier modules.
18. To measure the bandwidth of IF amplifier modules.
19. To measure the 1dB compression of IF amplifier
20. To measure conversion gain/loss for mixer.
21. To measure the 1dB compression level for mixer.
22. To measure the LO/RF, LO/IF isolation for mixer.
23. To measure the optimum LO drive level for minimum distortion/conversion loss for mixer.
24. To measure the dynamic range for mixer modules.
25. To measure VSWR of mixer RF/LO/IF ports.
26. To measure the LO/RF frequency range of mixer.
27. To measure the IF frequency range of mixer.
28. To measure the insertion loss of RF filter.
29. To measure the pass band and stop band frequency
30. To measure the cut off frequency of RF filters.

Note: Specifications are subject to change.

**Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tesca.in