N00173-14-Q-0035
ATTACHMENT 1

RF Switch Requirements

Ref.: PR No. 55-2011-14

Following are requirements for the RF switches that were called out in the PR No. 55-2011-14.

- Type: electromechanical
  - Single Pole Double Throw (1P2T): Quantity: eleven (11)
  - Single Pole six throw (1P6T): Quantity: one (1)
- Impedance: 50 Ohms
- Termination: Self terminating, e.g. absorptive type
- Control: manual and remote
  - Manual control: through front keypad and LCD display
  - Remote control: Through RS-232 (9600, 19200, and 38400 baud rates) and RJ-45 10/100 Ethernet port
- Switching speed: 20 milliseconds
- Operating frequency range: DC – 18 GHz
- VSWR:
  - DC – 8 GHz: 1.3:1 max
  - 8 GHz – 12 GHz: 1.4:1 max
  - 12 GHz – 18 GHz: 1.5:1 max
- Insertion Loss:
  - DC – 8 GHz: 0.3 dB max
  - 8 GHz – 12 GHz: 0.4 dB max
  - 12 GHz – 18 GHz: 0.5 dB max
- Isolation:
  - 1P2T: DC – 8 GHz: 65 dB min; 8 GHz – 18 GHz: 60 dB min
  - 1P6T: DC – 8 GHz: 75 dB min; 8 GHz – 12 GHz: 70 dB min; 12 GHz – 18 GHz: 60 dB min
- RF power handling:
  - 1P2T:
    - DC – 8 GHz: ≥ 70 Watts average
    - 8 GHz – 12 GHz: ≥ 60 Watts average
    - 12 GHz – 18 GHz: ≥ 45 Watts
  - 1P6T:
    - DC – 4 GHz: ≥ 100 Watts average
    - 4 GHz – 12 GHz: ≥ 35 Watts average
    - 12 GHz – 18 GHz: ≥ 25 Watts average
  - Self terminations: ≥ 2 Watts average
- Switch chassis: All eleven 1P2Ts and one 1P6T shall be enclosed in one 19: rack-mount chassis:
  - RF input and output port: SMA female
  - Width: for 19" rack-mount
  - Height: 3.25" max
  - Front panel: with keypad and LCD for local control

- Operating temperature: 0°C to 50°C
- Power supply: 100 – 240 VAC @ 60 Hz