



## SPDT Electro-Mechanical Switch DC-40GHz



### Features

- SPDT configuration
- Magnetic latching
- Operating life of 1 million cycles
- Guaranteed repeatability of 0.05dB up to 1 million cycles
- Excellent isolation, typically >80 dB to 20GHz
- Terminated ports
- TTL/5V CMOS compatible (optional)
- Internal termination 0.5W.

### Description

RF-Lambda multiport switch improves insertion loss repeatability and isolation, which is necessary for higher performance test systems. The repeatability and reliability of this switch is vital to ATS measurement accuracy and can cut the cost of ownership by reducing calibration cycles and increasing test system up time. The RF-Lambda terminated multiport switch provides the long life and reliability required for automated test and measurement, signal monitoring, and routing applications. Highly repeatable switching capability is made possible through RF-Lambda's rigorous design and tight manufacturing specifications. Low insertion loss repeatability reduces sources of random errors in the measurement path, which improves measurement accuracy.

| Part Number                       | description                       | Type                              | Low Freq (GHz)                 | High Freq (GHz)     | Avg. Power (Watts)                    |
|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|---------------------|---------------------------------------|
| RFSPDT40EMA-T<br>RFSPDT40EMA-S    | Electromechanical Switches        | SPDT                              | DC                             | 40                  | 2 (hot switching)                     |
| Insert. Loss (dB)                 | VSWR (Max:1)                      | Isolation (dB)                    | Actuator Type                  | Switcing Speed (ms) | Contact                               |
| 1.5(DC~26.5GHz)<br>2.0(26.5~40GH) | 1.8(DC~26.5GHz)<br>2.0(26.5~40GH) | 50(DC~26.5 GHz)<br>45(26.5~40GHz) | Latching Holding<br>reflection | 20                  | Break Before<br>Make                  |
| Repeatability (dB)<br>max.        | Life Cycles (Tims)                | Connector                         | Biasing (VDC)                  | Current (A)         | Control                               |
| 0.05                              | 1,000,000                         | 2.4mm                             | 15                             | 0.2                 | -T for TTL type<br>-S for Ground type |

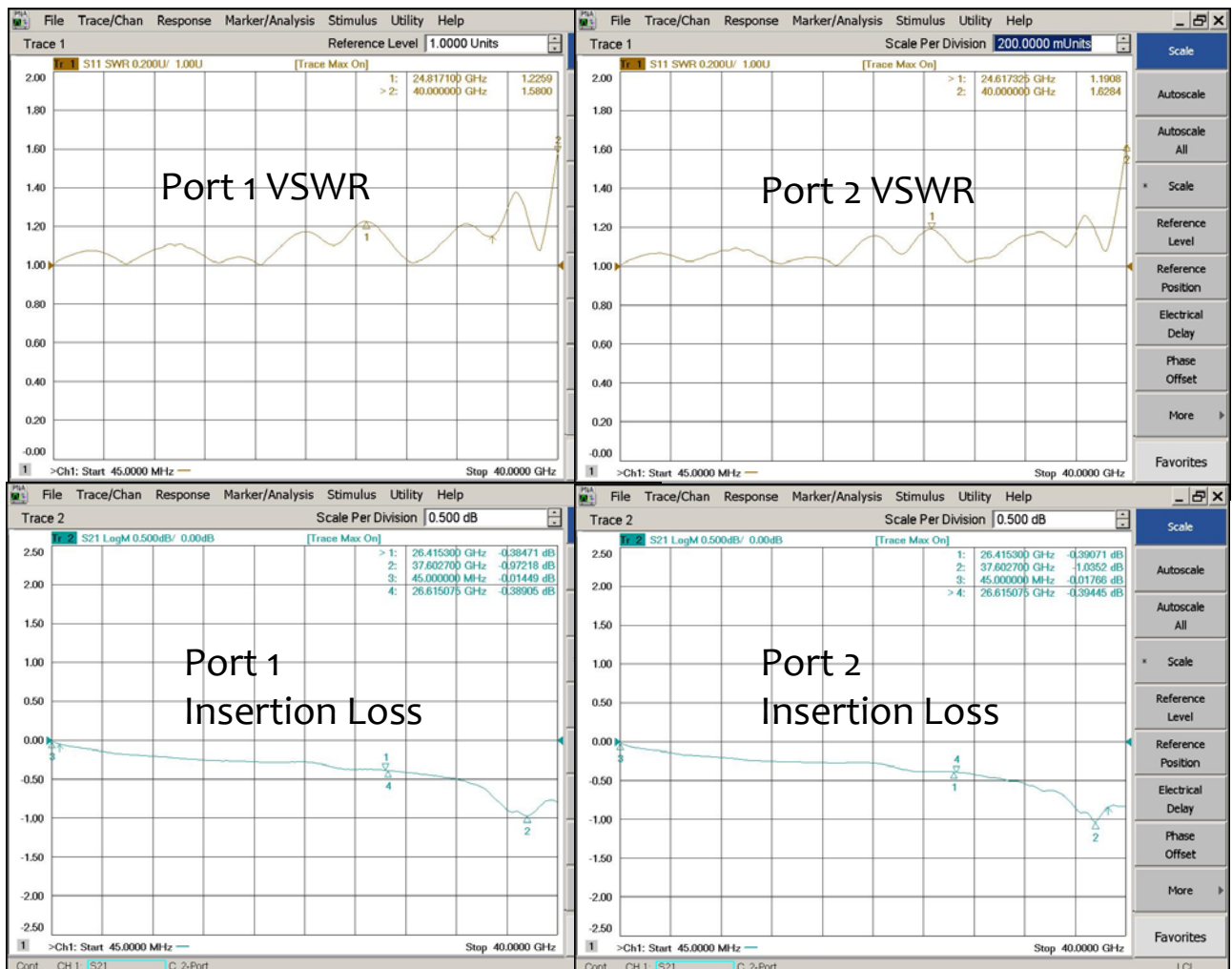
\* Result taken at 25°C +15VDC



## Environmental Specification

|                        |                                                          |
|------------------------|----------------------------------------------------------|
| Operating temperature: | -25 to 75° C                                             |
| Storage temperature:   | -55 to 85° C                                             |
| Thermal Shocking:      | -25 to 70° C (1.5 hours holding, 10 times.)              |
| Sine Vibration:        | 25 grams rms                                             |
| Life Cycles:           | 1,000,000 times                                          |
| Vibration:             | 20 grams rms.                                            |
| Moisture resistance:   | 65° C, 95% RH, 10 days per MIL-STD-202F, Method 106E     |
| Altitude storage:      | 30,000 feet (per MIL-STD-202F, Method 105C, Condition B) |
| RFI:                   | Per MIL-STD-461C, RE02, Part 4                           |
| Magnetic field:        | <5 gauss 1/4 inch from surface                           |
| Hot switching:         | 2W CW 100W peak, 10us max pulse width                    |

## Typical test curve

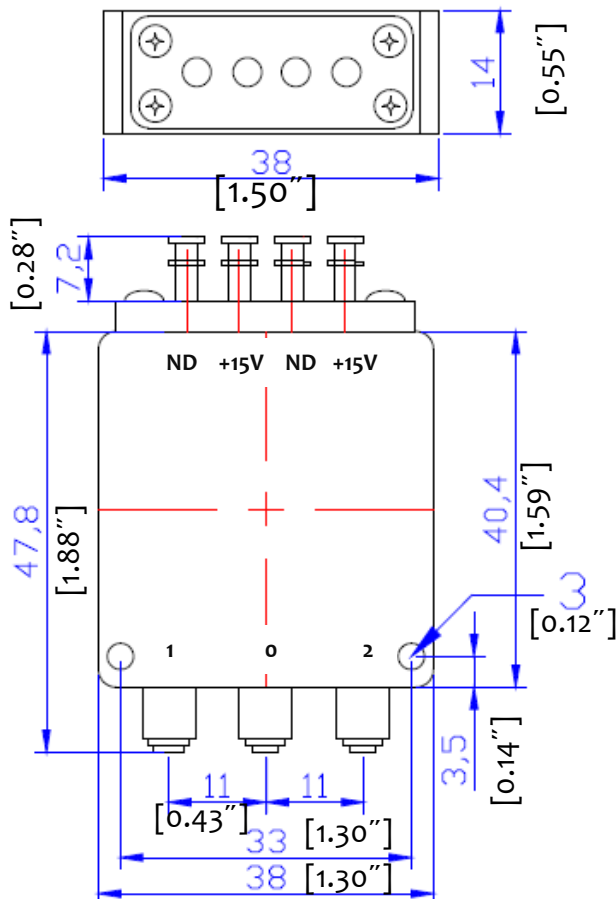
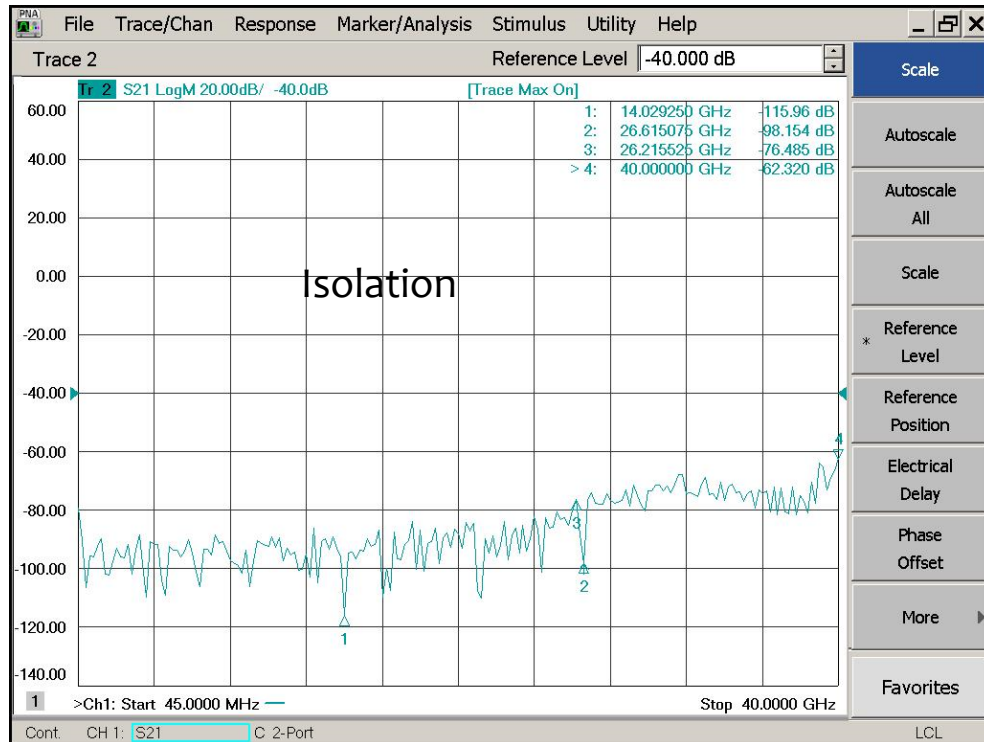




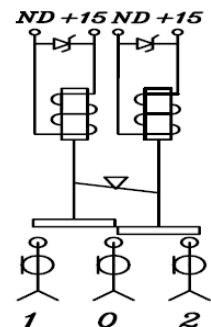
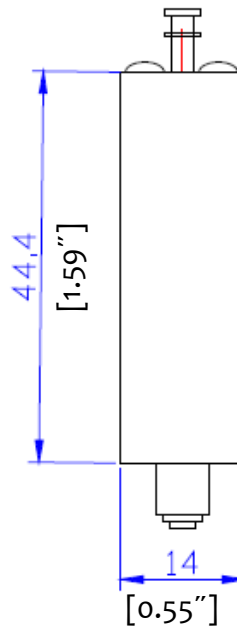
# RF-LAMBDA

The power beyond expectations

RFSPDT40EMA



| STATUS \ PIN     | PIN  |      |      |      |
|------------------|------|------|------|------|
|                  | I    | II   | III  | IV   |
| PORT 0 TO PORT 1 | GND  | 15V  | OPEN | OPEN |
| PORT 0 TO PORT 2 | OPEN | OPEN | GND  | 15V  |



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