

Polarization RF Switch Unit

Small Signal Absorptive SPDT PIN Switch

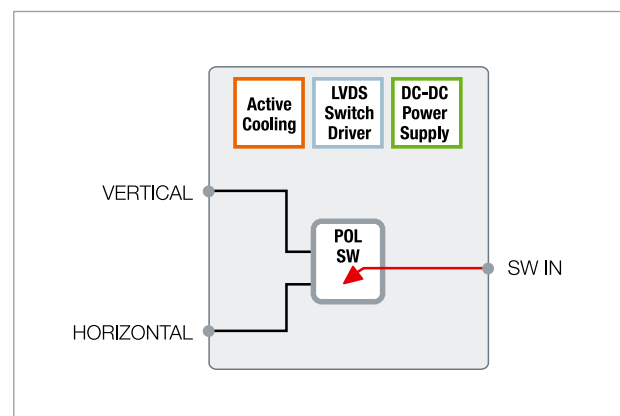


Solid state absorptive polarization PIN switches are an optimal solution to operate dual polarized antennas. They are suitable for use with compact range feed antennas and for near field probes. Covering a wide frequency range, up to 50 GHz at a switching time of 50 nsec, these switching units work well with systems which combine low and high-power antenna measurement (with high power attenuator according to customer request).

Main features

- Frequency range: 0.5-50 GHz
- Low Loss, 3.0 dB up to 18 GHz;
6.0 dB up to 40 GHz;
11.0 dB up to 50 GHz per switch
- Switching time of 50 ns
- Power handling of 0.1 W maximum
- LVDS control logic

Functional Block Diagram



Specifications

EXAMPLE MODEL	OFR-SPDT20POL-1	OFR-SPDT40POL-1
Type	H/V PIN absorptive SPDT switch, 0.5-18 GHz	H/V PIN absorptive SPDT switch, 0.5-40 GHz
Operation Frequencies	0.5-18 GHz	0.5-40 GHz
Switching Time	50 ns	100 ns
Unit Insertion Loss	5 dB typical	8 dB typical
Power Handling	0.5 W max	0.1 W max
Switch Isolation	70 dB typical	<ul style="list-style-type: none"> • 100 dB typical (0.1-18 GHz) • 95 dB typical (18-26.5 GHz) • 75 dB typical (26.5-40 GHz)
VSWR	2.2:1 typical	2.5:1 typical
Connectors	SMA (F)	2.92 mm (F)
Power Supply	24 V DC, 0.15 A max	24 V DC, 0.15 A max

Model index for polarization RF switches

PART NUMBER	FREQUENCY BAND	DESCRIPTION
OFR-SPDT27POL-1	0.05-27 GHz	RF SPDT PIN switch 0.05-27 GHz, with external DC power for dual polarization antenna
OFR-SPDT20POL-1	0.5-18 GHz	RF SPDT PIN switch 0.5-18 GHz, with external DC power for dual polarization antenna
OFR-SPDT20POL-1-2	-	Without RF SPDT PIN switch, with external DC power(± 5 V) for dual polarization antenna
OFR-SPDT20POL-1-3	0.5-18 GHz	RF SPDT PIN switch 0.5-18 GHz with external DC power (+ 5 V,-12 V) for dual polarization antenna
OFR-SPDT40POL-1	0.1-40 GHz	RF SPDT PIN switch 0.1-40 GHz, with external DC power(± 5 V) for dual polarization antenna
OFR-SPDT40POL-1-2	-	Without RF SPDT PIN switch, with external DC power(± 5 V) for dual polarization antenna
OFR-SPDT40POL-1-3	0.5-40 GHz	RF SPDT PIN switch 0.1-40 GHz with external DC power (+ 5 V,-12 V) for dual polarization antenna
OFR-SPDT50POL-1	0.1-50 GHz	RF SPDT PIN switch 0.1-50 GHz, with external DC power(± 5 V) for dual polarization antenna
FR-SPDT50POL-1	0.1-50 GHz	Without RF SPDT PIN switch, with external DC power(± 5 V) for dual polarization antenna
OFR-SPDT50POL-1-3	0.1-50 GHz	RF SPDT PIN switch 0.1-50 GHz with external DC power (+ 5 V,-12 V) for dual polarization antenna



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