



FlexiRay™

SF2

Ultra Slim RFID UHF Antenna

FlexiRay™ SF2



Features



- Esthetic design suitable for indoor / interior RFID applications, entrances or passages
- Ultra slim design suitable for smart rack and smart shelf applications
- Modular antenna length
- Low mounting depth
- Middle read range applications 4-7 meters*
- Completely invisible installation into door-frame
- On metal / off metal placement options

Description



Modular ultra-slim planar antenna FlexiRay SF2 with unique radiation pattern enables creation of RFID portals and reading zones in entrances, gates, doors and corridors. Thanks to its thickness it is also suitable for smart racks, display cabinets and RFID smart shelves for asset tracking, document tracking or retail applications. The antenna allows completely invisible installation into door-frame suitable for creation of RFID gateways in interiors.

Applications



- Interior / indoor access control, asset tracking or retail applications
- RFID portals and reading zones in entrances, gates, doors and corridors
- Smart rack, display cabinet or RFID smart shelves
- Desktop, point of sale or access control applications
- Embedded and invisible RFID installations
- Ground mat, over head & ceiling antenna applications
- Sport timing

FlexiRay SF2 Antenna Options

The FlexiRay SF2 thin antenna is supplied in 4 various lengths thus allowing optimal adaptation to specific installation. The antenna thickness is only 3 mm without connector. FlexiRay SF antenna can be attached to any surface and it works very well on metal surface. FlexiRay SF provides flexible mounting capability by using double sided tape or screws. Antenna has circular polarization and is available for FCC and ETSI frequencies. Antenna is equipped with SMA female / pigtail. Antenna with gain 5,5 dBic was designed for middle range smart gate applications requiring reading characteristics along the whole antenna length. Using 2W EIRP power output it can achieve reading distance from 4 to 7 meters*, depending on the type of antenna, used reader, cable length, used RFID tags and environment.

** Tested in open air, Alien and Impinj reader 30 dBm, 4m RG-58 cable, Alien Squiggle tag*

3 most important features of the antenna

- Modular length of the antenna (4 variants)
- Thickness is only 3 mm
- Aesthetic design for indoor installation



SF2 front side



SF2 back side

Technical Specification

Model Number	SF-2100	SF-2110	SF-220X	SF-230X	SF-240X
Frequency Range	866 - 868 MHz (ETSI) 902 - 928 MHz (FCC)				
Connector	SMA female or 250 mm pigtail SMA				
Polarization	RHCP	RHCP	RHCP	RHCP	RHCP
Gain	5,5 dBic	5,5 dBic	5,5 dBic	5,5 dBic	5,5 dBic
Impedance	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
Max. Input Power	10 W	10 W	10 W	10 W	10 W
VSWR - ETSI	<1,3	<1,3	<1,3	<1,3	<1,3
VSWR – FCC	<1,5	<1,5	<1,5	<1,5	<1,5

Dimensions*

Length (ETSI) (mm)	280	110	560	810	1060
Length (FCC) (mm)	295	110	510	765	1000
Width (mm)	110	110	110	110	110
Height (mm)	3	3	3	3	3
Weight (kg)	0,140	0,1	0,3	0,4	0,5
Operating Temperature	0°C / 60°C	0°C / 60°C	0°C / 60°C	0°C / 60°C	0°C / 60°C

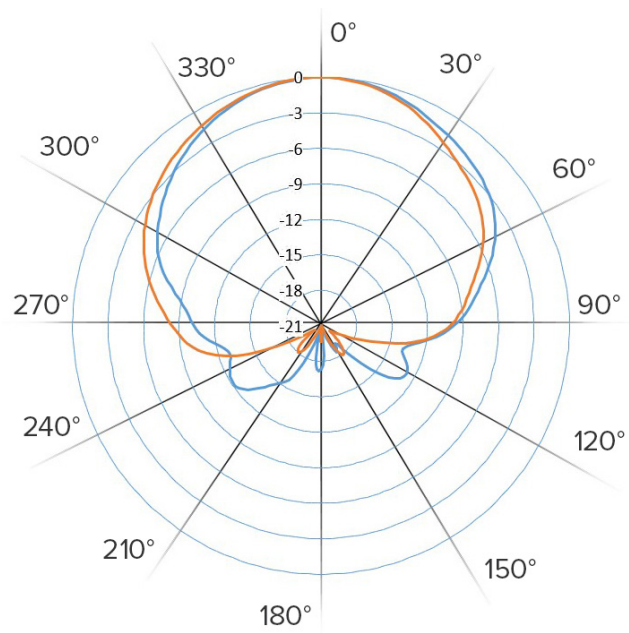
** Dimensions without connector*

Ordering code

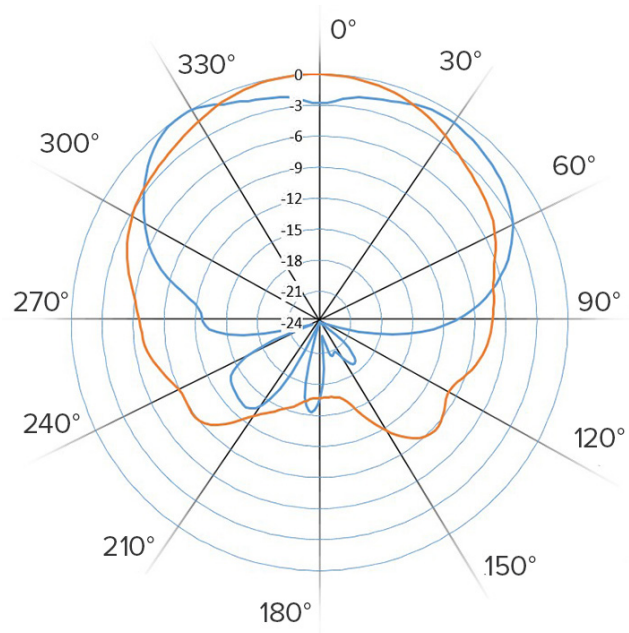
ETSI (865 - 868 MHz), SMA (F)	SF-2100	SF-2110	SF-2200	SF-2300	SF-2400
FCC (902 - 928 MHz), SMA (F)	SF-2101	SF-2111	SF-2201	SF-2301	SF-2401
ETSI (865 - 868 MHz), SMA (F) pigtail 25 cm	SF-2120	—	SF-2220	SF-2320	SF-2420
FCC (902 - 928 MHz), SMA (F) pigtail 25 cm	SF-2121	—	SF-2221	SF-2321	SF-2421

Antenna radiation patterns

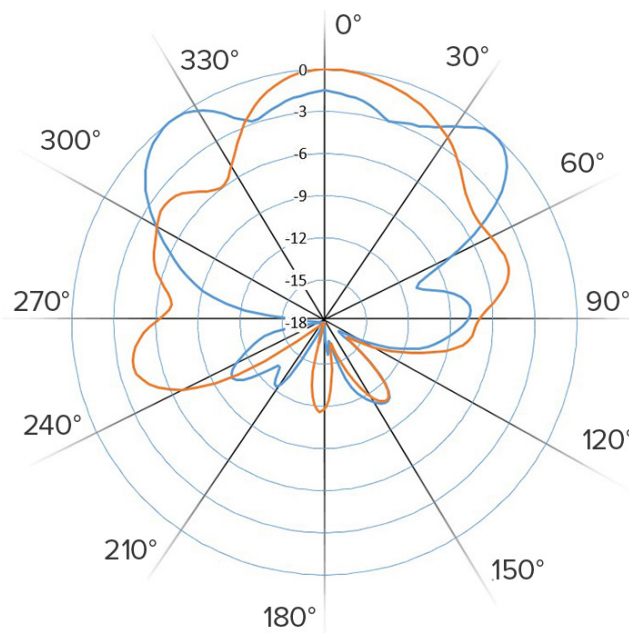
SF – 2100



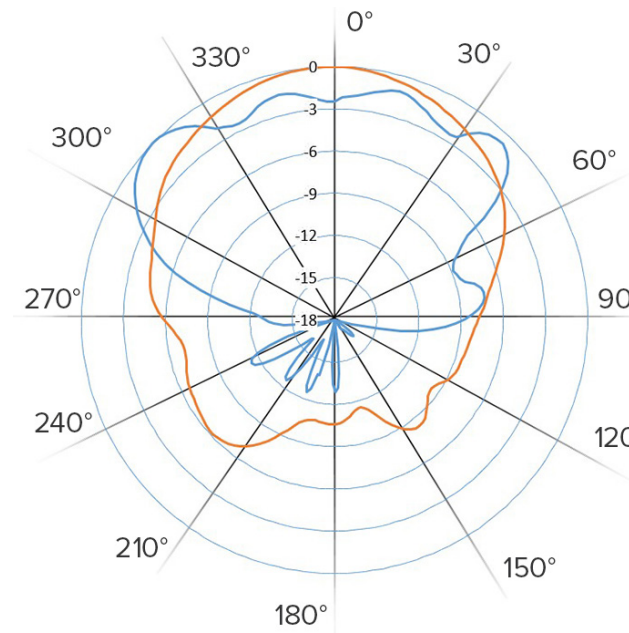
SF – 2200



SF – 2300



SF – 2400



Horizontal

Vertical



Connector Options

Antennas are equipped with RP-TNC connector

SMA connector

or optionally 250 mm (9,8") pigtail
SMA female connector

