

RFSPACE BF915

863-928 MHz 8x8 Butler Beamforming Matrix

Features:

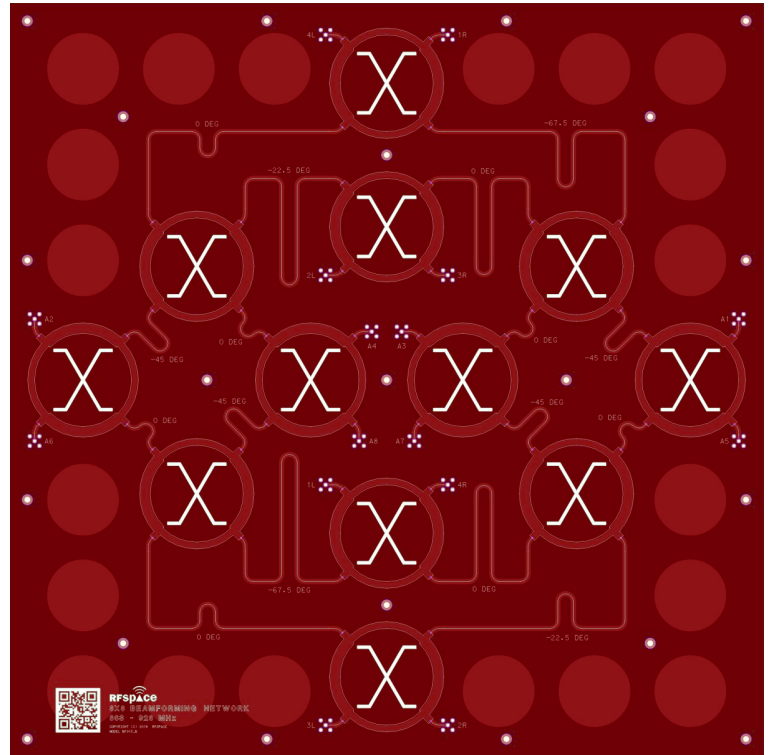
- Broad frequency range optimized for 863 MHz to 928 MHz
- Generates 8 simultaneous beams from 8 antennas
- Cascadable to form 2D phased arrays (8x8 ant / 64 beams etc.)
- Low loss substrate
- High phase and amplitude accuracy
- Low cost
- Good return loss and isolation
- Gold plated SMA connector
- 100 Watt CW

Applications:

- Phased Array Antennas
- ISM, IoT Beamforming
- Signal Tracking and Direction Finding
- MIMO Testing
- Sub Module of Larger Beamformers
- Interferometer Testing
- Multipath Testing

Description:

The RFSPACE BF915 is a PCB, Butler beamforming network optimized for phase and amplitude accuracy, low VSWR and broadband response. The BF915 is ideal as a transmit or receive beamformer. In its simplest configuration, an eight antenna array spaced 0.5 lambda apart connected to a BF915, will generate eight simultaneous beams. The beams in this configuration will be at -61,-39,-22,-7,+7,+22,+39,+61 degrees from boresight. It is also possible to connect 64 antennas to eight of the BF915s to generate 64 simultaneous beams. There are simpler configurations using switches. Antennas can range from verticals, dipoles or patch varieties.



Specifications

Excess Loss 8-split:	1.7 dB (above theoretical 9 dB) Typ.
Beam direction error:	+/- 5 degrees (Beams 4L,4R Typ.)
Phase error:	+/- 8 degrees (Beams 4L,4R Typ.)
VSWR: 863 - 928 MHz	<1.5:1 Typ.
Power Handling:	100 Watts
Dimensions:	400mm x 400mm
Connector:	50Ω SMA (Right angle option -RA)

	Ant 1	Ant 2	Ant 3	Ant 4	Ant 5	Ant 6	Ant 7	Ant 8
Beam 4L	157.5	-45.0	112.5	-90.0	67.5	-135.0	22.5	-180.0
Beam 3L	157.5	-90.0	22.5	135.0	-112.5	0.0	112.5	-135.0
Beam 2L	135.0	-157.5	-90.0	-22.5	45.0	112.5	-180.0	112.5
Beam 1L	90.0	112.5	135.0	157.5	-180.0	-157.5	-135.0	-112.5
Beam 1R	-112.5	-135.0	-157.5	-180.0	157.5	135.0	112.5	90.0
Beam 2R	-112.5	-180.0	112.5	45.0	-22.5	-90.0	-157.5	135.0
Beam 3R	-135.0	112.5	0.0	-112.5	135.0	22.5	-90.0	157.5
Beam 4R	-180.0	22.5	-135.0	67.5	-90.0	112.5	-45.0	157.5