

RI 3041
BUTLER MATRIX

4x4 Butler Matrix
2.4 to 8 GHz

OVERVIEW

The RI 3041 Butler Matrix is a beamforming network that controls the directions of a beam, or beams, of a radio transmission. The beam direction is controlled by switching power to the desired beam port. In transmit mode it delivers the full power of the transmitter to the beam, and in receive mode it collects the signal from each of the beam directions with the full gain of the antenna array.

APPLICATION

The Ranatec Butler Matrix supports multichannel MIMO testing for up to 4+4 antenna ports, over a large frequency range. It covers all present Bluetooth and WIFI bands from 2.4 to 7.125 GHz. The Ranatec Butler Matrix can also be used for antenna array beamforming and interface testing for multiple systems in the frequency range, and for multichannel multipath emulation.



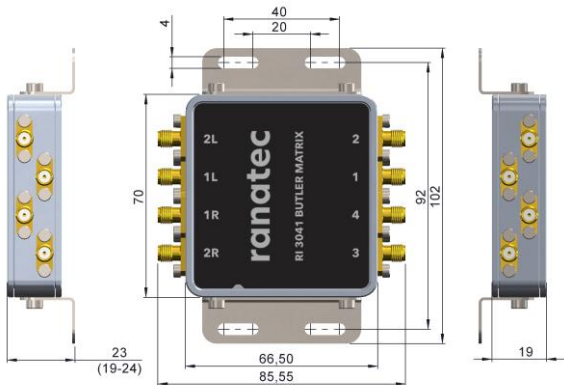
FEATURES

- Good Output Phase Accuracy
- Large operating bandwidth
- Compact design

SPECIFICATION (Preliminary values)

Frequency range	2.4-8 GHz
Return loss (50 Ohm reference)	13 dB typical ¹
Output phase deviation from nominal	<±10° typical
Output amplitude deviation from nominal	<±1.5 dB ²
Insertion Loss	<8 dB ³
Isolation	>13 dB ⁴
Maximum power	5 W ⁵
Dimensions (WxLxT)	70x86x19 mm
Mass	0.25 kg
Connector type	SMA-F

- ¹) VSWR = 1.6
²) Nominal is equal amplitude in the 4 output ports
³) 6 dB of total 8 dB is splitting loss (1:4)
⁴) Measured as isolation between input ports
⁵) Total input power (average)



Mechanical Outline Drawing (mm)

ORDERING

RI 3041 Butler Matrix
OPTION Mounting brackets