

3 dB Hybrid Coupler RK3-544P-6G-S1

MTS-No.: 27670

Description

The 3 dB Hybrid Couplers of this series are designed to work at frequency ranges between 380 MHz and 6000 MHz. They cover for example TETRA, GSM, DECT, UMTS, Bluetooth, WiMAX, Wi-Fi (2.4G / 5G) and all LTE frequency bands.

The multisection stripline design exhibits good flatness and VSWR at all ports.



Technical data:

1 RF-specifications:

1.1 Coupler type	RK3, 3 dB		
1.2 Impedance	50 Ω		
1.3 Input power	50 W max.		
1.4 Frequency range	380 - 6000 MHz		
	min.	typ.	max.
1.5 VSWR (at all ports) @ 380 - 5850 MHz		1.05	1.25
@ 5850 - 6000 MHz		1.15	1.35
1.6 Insertion loss / Coupling (+3 dB) @ 3000 MHz		0.7 dB	0.8 dB
@ 5850 MHz		1.1 dB	1.3 dB
1.7 Isolation @ 380 - 2750 MHz	30 dB	35 dB	
@ 2750 - 5400 MHz	23 dB	28 dB	
@ 5400 - 5850 MHz	20 dB	25 dB	
@ 5850 - 6000 MHz	17 dB	22 dB	
1.8 Amplitude balance		±0.4 dB	±0.9 dB
1.9 Phase balance (90°)		±1°	±5°

2 Connections:

2.1 RF-in- and outputs	4x SMA female (4x N female available)
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3 General specifications:

3.1 Operating temperature	-55 °C - +75 °C
3.2 Reference temperature for specifications	+25 °C
3.3 Dimensions (without connections)	132 mm x 35 mm x 17 mm (LxWxH)
3.4 Case style	Milled aluminium enclosure
3.5 Colour	SurTec650 (Chrome alloy)
3.6 Weight	225 grams

4 Delivered parts:

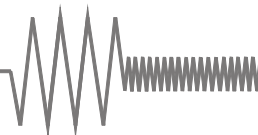
RK3-544P-6G-S1
Datasheet

5 Comments:

Warranty	12 months
RoHS-compliant	Yes

6 Recommended accessories:

RF-cables
Attenuators series PAH



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Typical measurements:

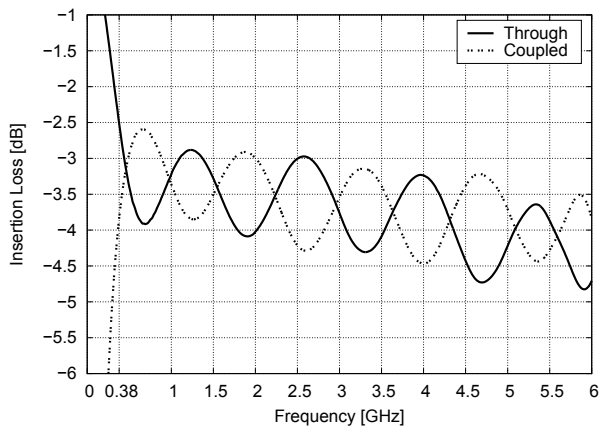


Fig. 1: Through and coupled line insertion loss

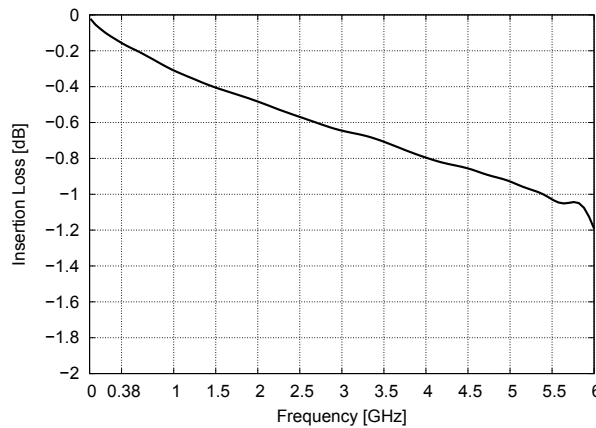


Fig. 2: Through plus coupled line insertion loss

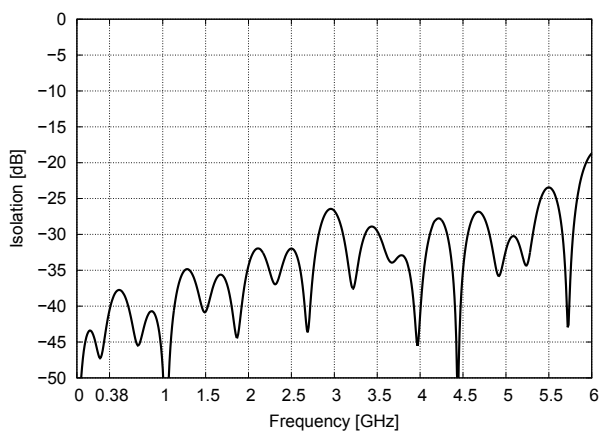


Fig. 3: Isolation between output ports

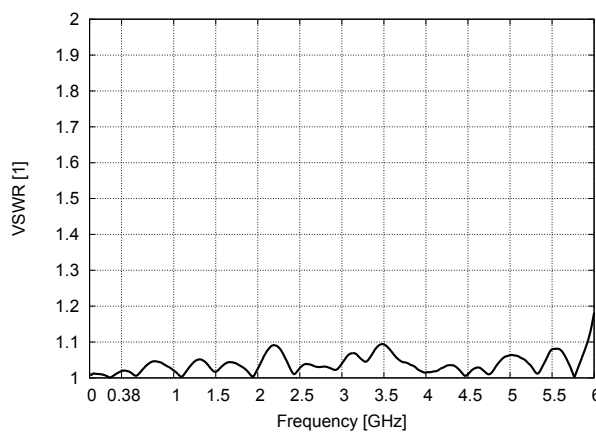


Fig. 4: VSWR at all ports

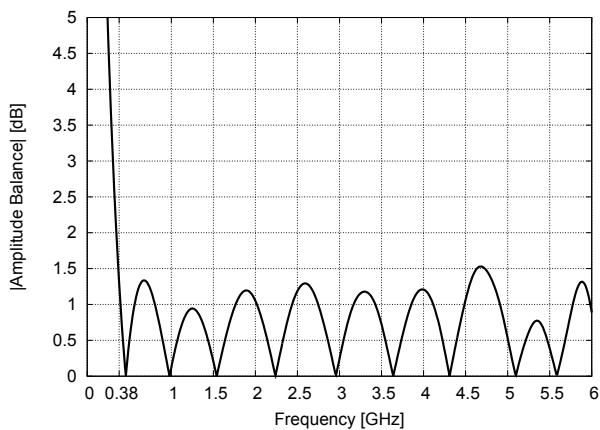


Fig. 5: Amplitude balance between output ports

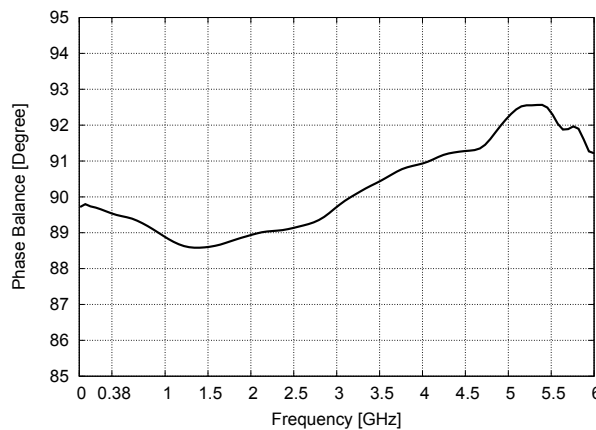
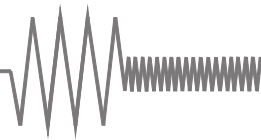


Fig. 6: Phase balance between output ports



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Port configuration:

Input	IN	ISO	-3 dB / 0°	-3 dB / 90°
IN	---	ISOLATION	-3 dB / 0°	-3 dB / 90°
ISO	ISOLATION	---	-3 dB / 90°	-3 dB / 0°
-3 dB / 0°	-3 dB / 0°	-3 dB / 90°	---	ISOLATION
-3 dB / 90°	-3 dB / 90°	-3 dB / 0°	ISOLATION	---

Views:

