

TV COUPLERS

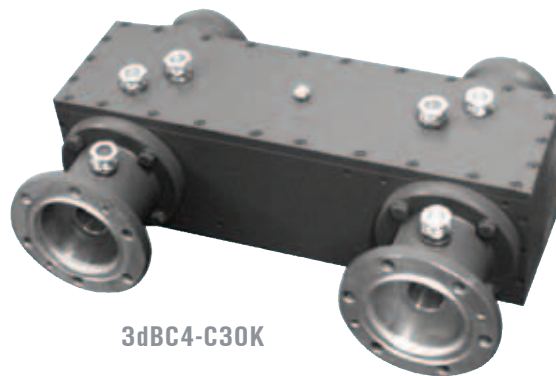
TYPES

3dBC4-C100
3dBC4-C1K0
3dBC4-C5K0
3dBC4-C30K
3dBC4-C40K
3dBC4-P100
3dBC4-P1K0
3dBC4-P5K0
3dBC4-P30K
3dBC4-P40K

The 3 dB couplers can be used as power-splitters or as power combiners, and their most common application is as components in the design of combiners. They are also used to combine power amplifiers to the transmitters and translators.

They consist of two identical parallel transmission lines coupled over a length equal to $1/4$ and mounted in a common exterior conductor.

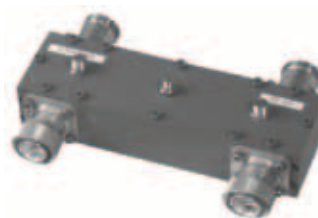
The couplers are designed to achieve coupling differences in the operating frequency range at the output ports. The phase-shift between the two outputs is always 90° and is independent of frequency. The isolation between the two ports depends heavily on the VSWR of the port loads.



3dBC4-C30K



3dBC4-C5K0



3dBC4-C1K0

TYPE DESCRIPTION

xy-zppp

x - type of coupler
3dBC - 3 dB coupler
6dBC - 6 dB coupler
10dBC - 10 dB coupler

y - frequency range:
4 - UHF band IV and V
(470 - 862 MHz)

z - type of transmission lines:
C - crossing
P - parallel

ppp - output power:
100 - up to 100 W
5K0 - up to 5 kW
30K - up to 30 kW

Specifications

	3dBC4-C100 3dBC4-P100	3dBC4-C1K0 3dBC4-P1K0	3dBC4-C5K0 3dBC4-P5K0
Frequency range	470 - 862 MHz		
Impedance	50 Ω		
Return loss	≥ 23 dB	≥ 28 dB	
Coupling	3 ± 0,2dB		
Maximum output power	100 W	1 kW	5 kW
Directivity	≥ 30 dB		
Input and output connectors *	4 x N female	4 x EIA 7/8" or 7/16	4 x EIA 1 5/8"
Weight	0,4 kg	1,2 kg	4 kg
Dimensions (mm)	81 x 28 x 25	200 x 120 x 55	270 x 204 x 90
Material	aluminium, silver plated brass		

* for special requests indicate type of the input/output connector

Specifications

	3dBC4-C30K 3dBC4-P30K	3dBC4-C40K 3dBC4-P40K
Frequency range	470 - 862 MHz	
Impedance	50 Ω	
Return loss	≥ 28 dB	
Coupling	3 ± 0,2 dB	
Maximum output power	30 kW	40 kW
Directivity	≥ 30 dB	
Input and output connectors *	4 x EIA 3 1/8"	4 x EIA 4 1/2"
Weight	14,2 kg	39 kg
Dimensions (mm)	430 x 300 x 130	510 x 385 x 170
Material	aluminium, silver plated brass	

* for special requests indicate type of the input/output connector

Circuit Diagram

