

**SVP**  
**Broadcast**  
**Microwave**

## **PD-02 and PD-04 Power Dividers**

**MANUAL V1.0**



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**DEAR CUSTOMER:**

At the same time that we express our gratitude to have pleased us with the election of this equipment, it is pleasing for us to welcome you to the growing range of the SVP products.

The incorporation of this equipment to those that you already have, will provide you a great satisfaction. We are sure of it.

We would like you to read this datasheet and you to have it near to you in case you need it.

# 1 Description

SVP provides power dividers with 2 and 4 outputs (PD-02 and PD-04 respectively), with low insertion loss (less than 0.20 dB) and high isolation among the outputs (> 22 dB).

It is a quadrature hybrid. Therefore, there is a 90° phase difference among the different outputs.

The maximum operating power is 20 Watts and the operation frequency range available from 2.0 to 2.7GHz

It is very important to consider that these power dividers must be installed on heat radiators in order to ease heat dissipation.

These power dividers can be very interesting elements to use in a lot of applications.

In the following figures they are showed two examples in which these power dividers can be used.

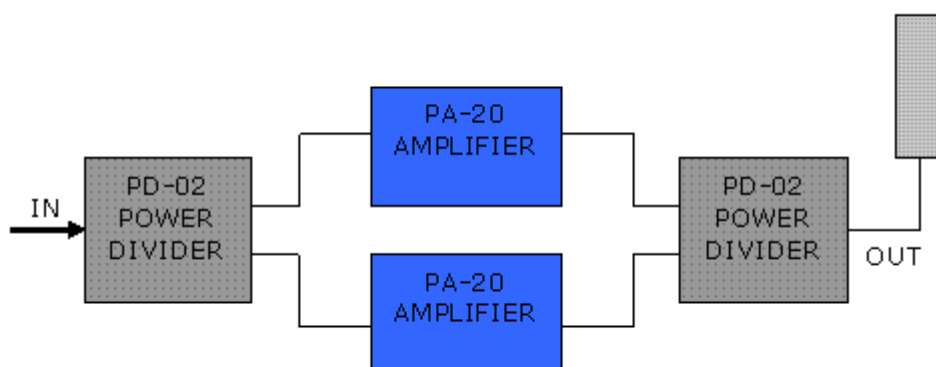


Figure 1.1: Application diagram of the PD-02 power divider

Using this configuration the output power level is equivalent to the sum of the two amplifiers' power levels.

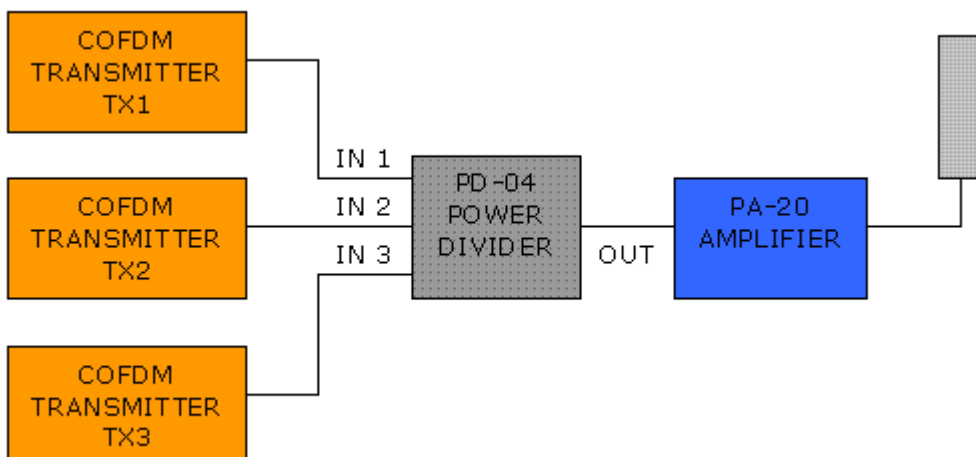


Figure 1.2: Application diagram of the PD-04 power divider

With this second configuration we can amplify the signals of the three transmitters using an only amplifier and we can transmit them through an only transmission antenna. Using this configuration we can simplify noticeably the installation.



Figure 1.3: PD-02 Power Divider with 2 outputs



Figure 1.4: PD-04 Power Divider with 4 outputs

## 2 Technical Specifications

Table 2.1: Technical Specifications

| Item                  | Specification                                        |
|-----------------------|------------------------------------------------------|
| Frequency range       | From 2.0 to 2.7 GHz<br>PD-02 from 800 MHz to 2.7 GHz |
| Isolation             | >22 dB                                               |
| Insertion loss        | <0.20 dB                                             |
| VSWR                  | 1.18                                                 |
| Power                 | 20 W                                                 |
| Amplitude balance     | $\pm 0.20$ dB Max                                    |
| Phase balance         | $\pm 3^\circ$                                        |
| Operating temperature | -55°C to +85°C                                       |

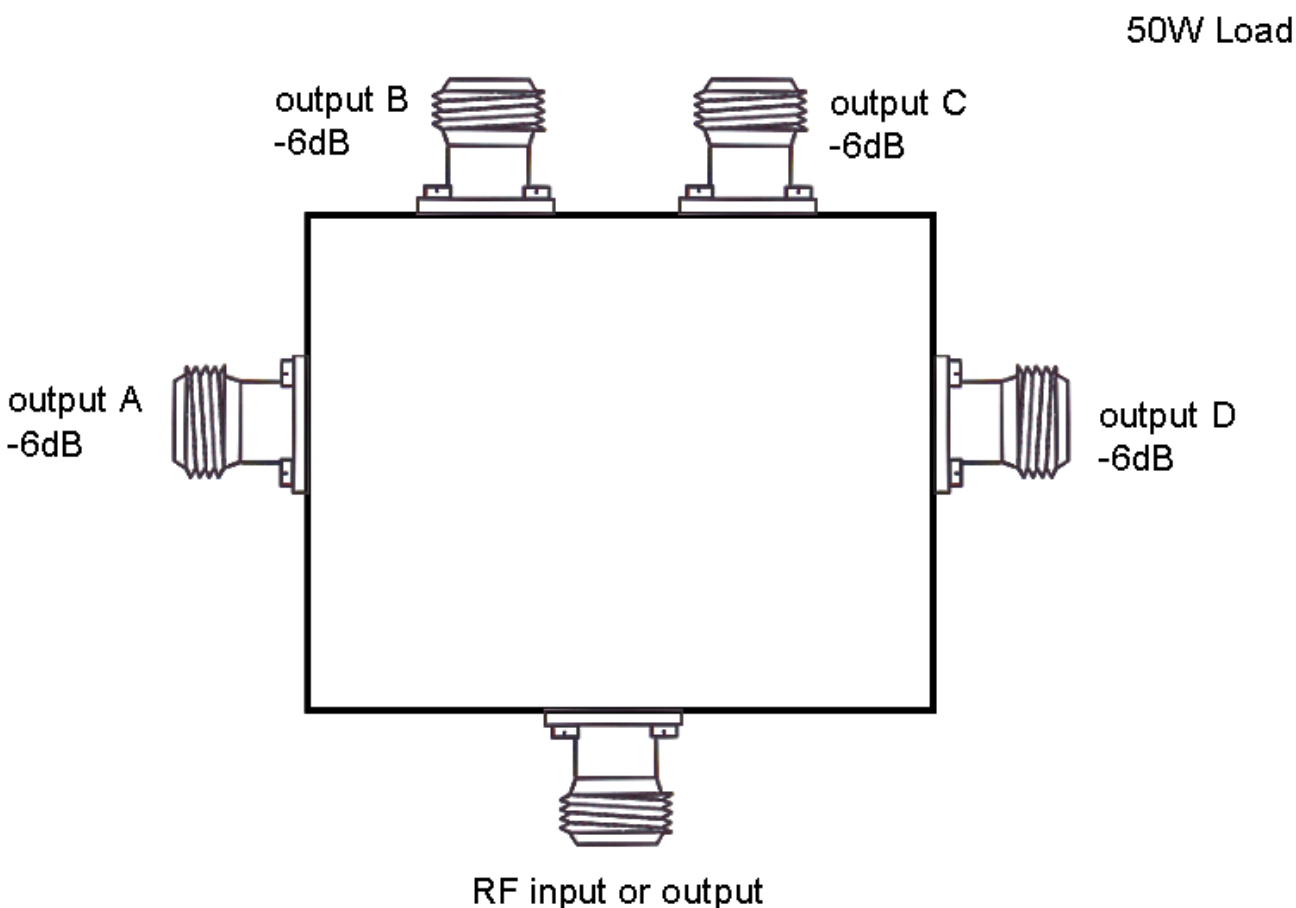


Figura 2.1: PD-4 Scheme

In the following graphics can be seen the typical performance of the PD-02 and PD-04 power dividers, referring to coupling, return loss, isolation and phase balance:

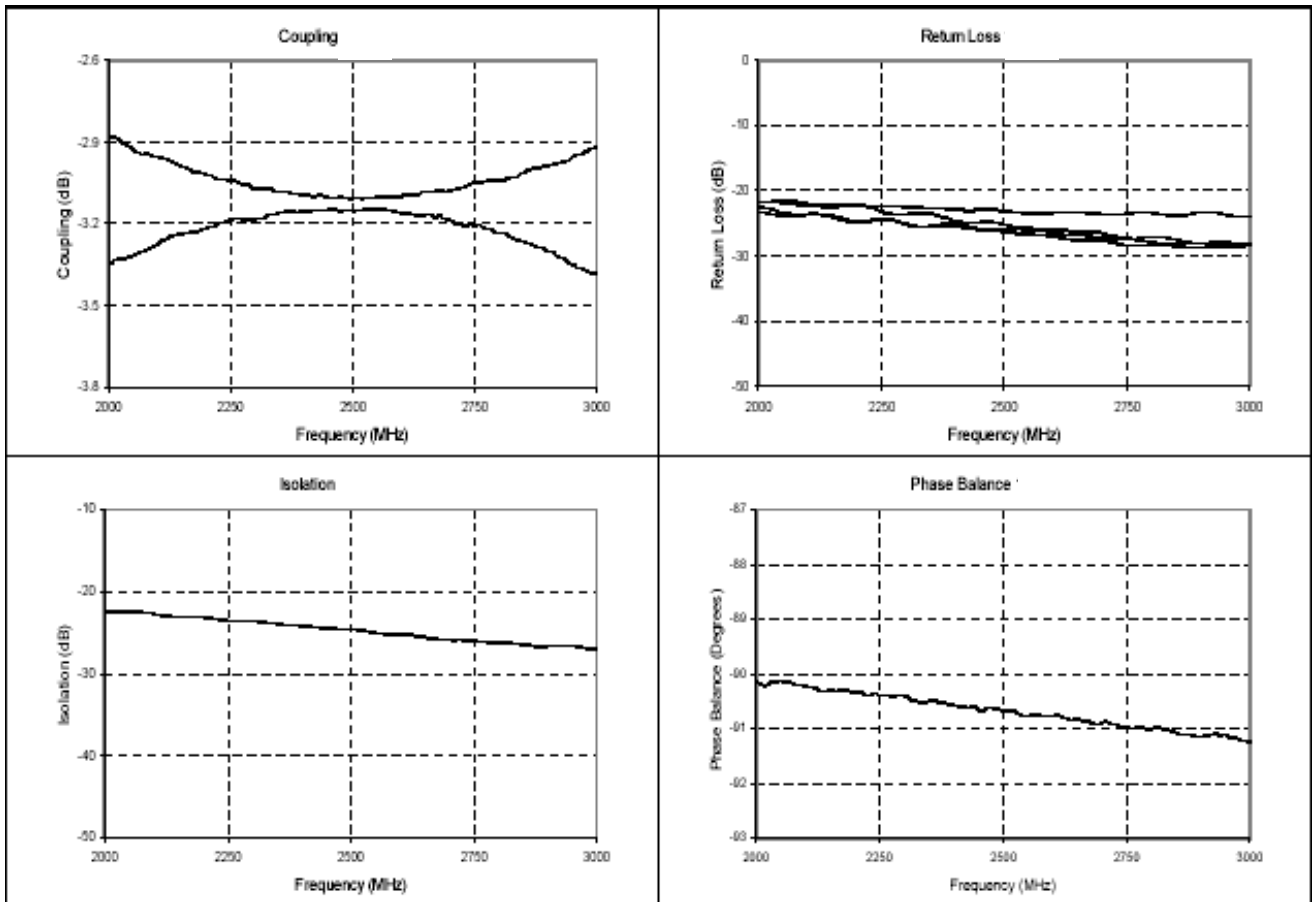


Figure 2.1: Coupling, return loss, isolation and phase balance of the PD-02 and PD-04 power dividers in the 2 GHz to 3 GHz frequency band



**NOTES:**

## **End note**

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