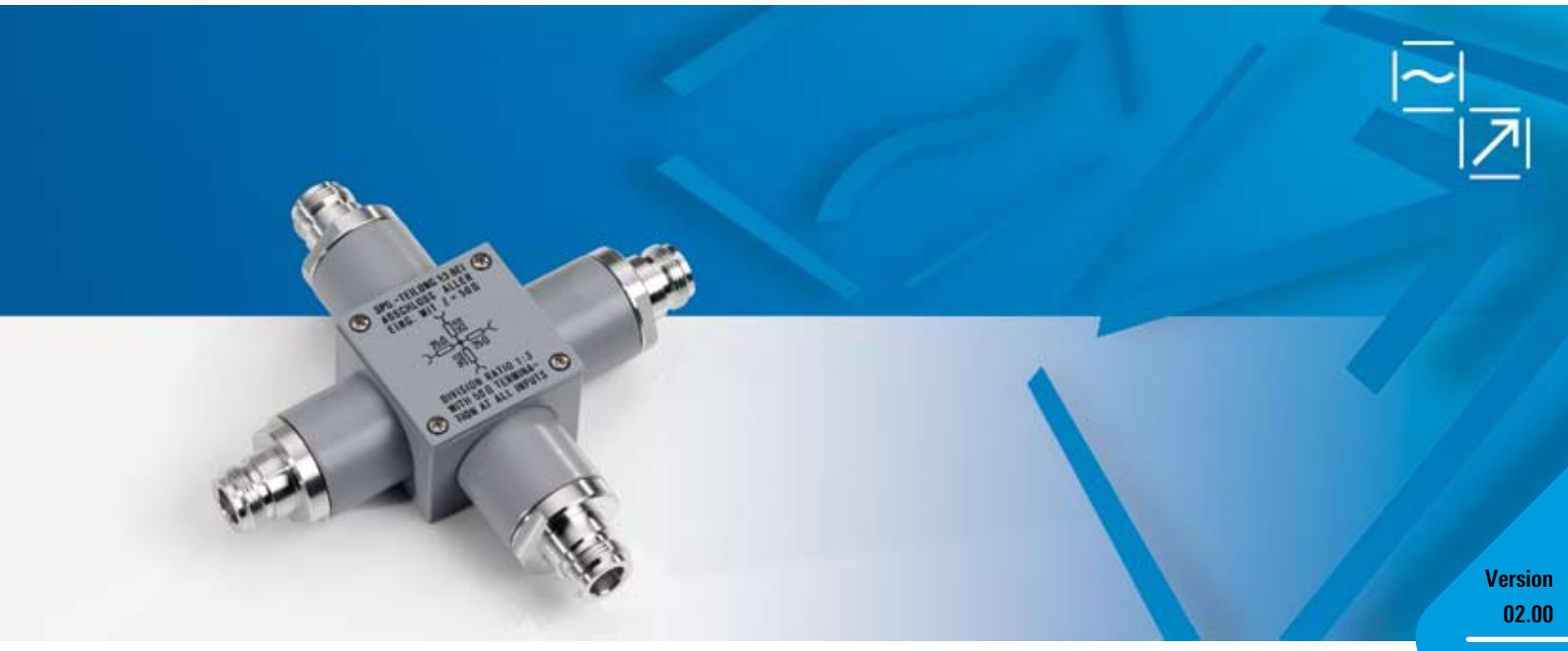

Version
02.00

January
2007

R&S®DVS Power Splitter/Combiner, R&S®DVU4 Junction Box

ROHDE&SCHWARZ

R&S®DVS

In the case of measurements with multiple signal generators, the attenuators used for decoupling normally require a high output voltage from the generators. This requirement is avoided by using the R&S®DVS power splitter/combiner. The R&S®DVS exhibits a high attenuation between inputs with a low transmission loss (typ. 3 dB). Therefore, no additional attenuators are necessary.

R&S®DVS (0.1 MHz to 400 MHz)

R&S®DVU4

Uses

The R&S®DVU4 junction box is used to combine two (three) channels with correct impedance matching or to split them up (e.g. for measurements on radio-telephone equipment with multiple signal generators).

Description

The junction box is of coaxial design and equipped with adaptable N or Dezifix B connectors. Matching is achieved by Z/2 or Z/3 impedances in a star-shaped configuration. These features open up a wide range of applications.

R&S®DVU4 (0 Hz to 1 GHz)

Specifications

Specifications apply only if Dezifix B or N connectors are used.

	R&S®DVU4	R&S®DVS
Frequency range	0 Hz to 1 GHz[1]	0.1 MHz to 400 MHz
Maximum frequency range	0 Hz to 1.5 GHz	–
Characteristic impedance	50 Ω	
VSWR		
0 Hz to 1 GHz	<1.1	typ. 1.2 (0.1 MHz to 400 MHz)
1 GHz to 1.5 GHz	typ. 1.2	–
Attenuation[2]	9.54 dB	approx. 3 dB
Frequency response of attenuation	see figures on next page	
Attenuation between inputs[2]	9.54 dB	20 dB to 40 dB (see figure 2)
Maximum continuous load	0.25 W ≙ 3.5 V into 50 Ω per input	1 W ≙ 7 V into 50 Ω total
Maximum pulse peak voltage	300 V	–
Connectors	4 × Dezifix B[3] or 4 × N connectors[3]	BNC female
Operating temperature range	–40 °C to +50 °C	–40 °C to +70 °C
Overall dimensions (W × H × D)	120 mm × 120 mm × 35 mm (4.72 in × 4.72 in × 1.38 in)	57 mm × 36 mm × 41 mm (2.24 in × 4.72 in × 1.61 in)
Weight	0.5 kg (1.10 lb)	75 g (0.17 lb)
Labeling	German and English	

Ordering information

Designation	Type	Order No.
Four-Port Junction Box	R&S®DVU4	
50 Ω model (Dezifix B)		201.4018.02
50 Ω model (N female)		201.4018.03
Power Splitter/Combiner	R&S®DVS	
50 Ω model (N female, BNC)		342.1014.50
Recommended extras		
Termination	R&S®RMC	
50 Ω, Dezifix B		100.2940.50
60 Ω, Dezifix B		100.2940.60
75 Ω, Dezifix B		100.2940.70
50 Ω, N male		100.4910.50

1) The R&S®DVU4 junction box can also be used at frequencies above 1 GHz; in this case, however, the specified data cannot be warranted.
2) With correct impedance matching of all connections.
3) When using screw-in assemblies, the user can easily adapt these connectors to many other systems.

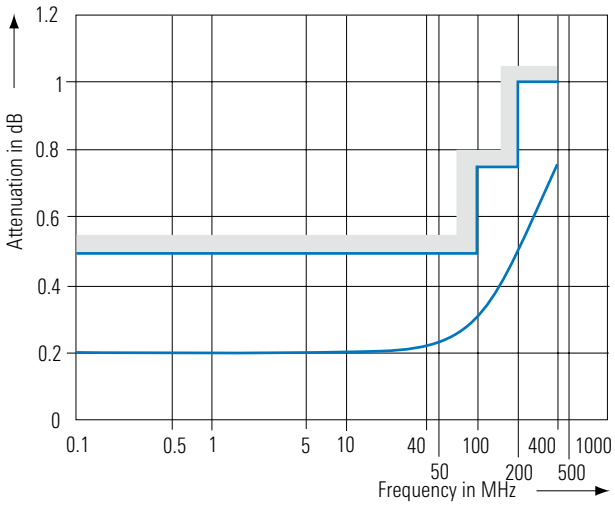

Fig. 1: Frequency dependence of the attenuation of the R&S®DVS (in addition to 3 dB power splitting)

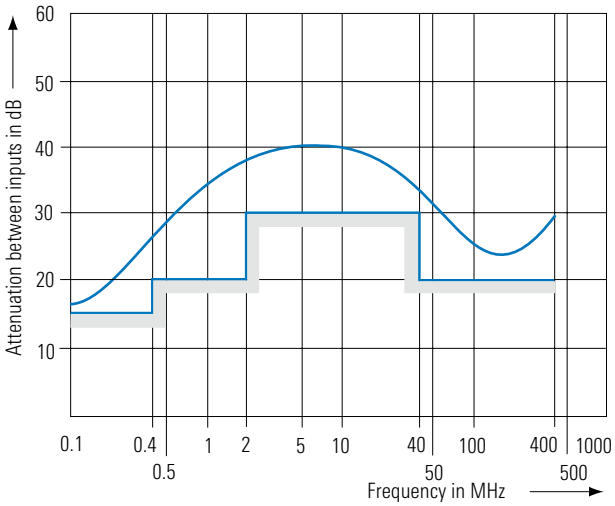

Fig. 2: Attenuation between the inputs of the R&S®DVS as a function of frequency

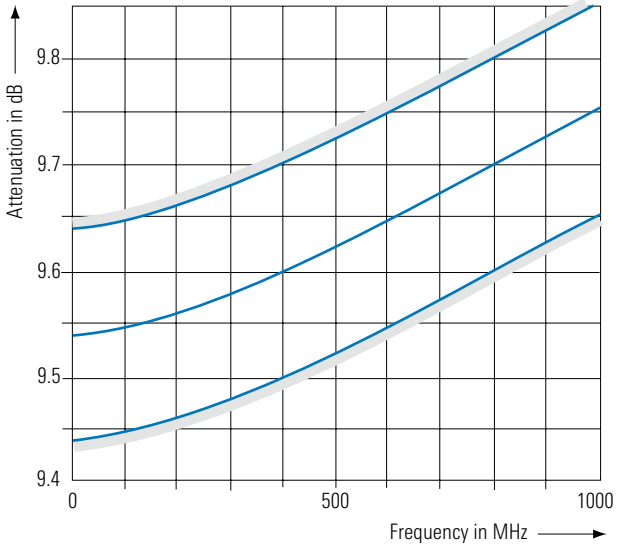

Fig. 3: Characteristic curve and spread of the attenuation above the frequency between any of the four inputs with correct impedance matching of the R&S®DVU4

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