



ValuDAS™ Passive Devices

Reliable, affordable components for distributed antenna systems

CommScope provides thoroughly tested passive DAS components that power many of the world's most efficient wireless networks.

Proven, practical passive solutions

As wireless data traffic continues to grow, operators are grappling with the best way to deploy carefully calibrated, sophisticated indoor equipment where usage is high and reliable signal strength is vital. However this is only part of the equation: every active device must be supported by a series of passive devices that ensure consistent, optimal performance.

As a true single-source distributed antenna systems (DAS) provider, CommScope blends intelligent technology with local insight and a global presence to provide reliable **ValuDAS™ Passive Devices** — non-active, supportive components that sustain our solutions and deliver outstanding network reliability and quality of service.

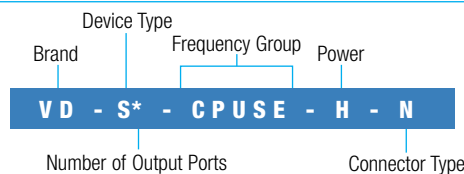
Smart, safe, efficient and affordable — our suite of **ValuDAS Passive Devices** enables operators to achieve and maintain effective network performance that also supports cost-effective business practices.

Rising 829 record-breaking meters above downtown Dubai

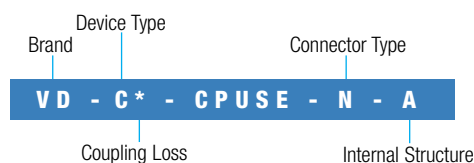
CommScope created a custom fiber-optic DAS solution for the Burj Khalifa, the world's tallest skyscraper and magnificent centerpiece of downtown Dubai, rising 829 meters through 163 stories. The system manages 2G/3G-HSPA+ and GSM/UMTS traffic for three wireless carriers.



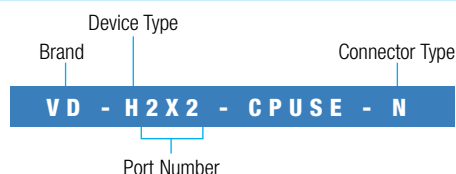
Splitter



Coupler



Hybrid coupler



Brand

VD = ValuDAS™

Device type

S = Splitter C = Coupler H = Hybrid

Frequency group

C = 700–1000 MHz LTE/Cellular/GSM Band

P = 1700–2000 MHz PCN/PCS Band

U = 2000–2300 MHz UMTS/3G Band

S = 2300–2400 MHz Spread Spectrum Band

E = 698–800/2400–2700 MHz Evolution Band

Power

H = High Power

Connector type

N = N female

Number of output ports

* = 2, 3, 4 ways

Coupling loss

* = 6, 8, 10, 13, 15, 20, 25, 30 dB

Port number

2X2 = 2 Input Ports, 2 Output Ports

ION™-M covers five-star, 550,000-sq.-ft. Macau casino

CommScope relied on its in-building wireless expertise to supply ION™-M optical repeaters, splitters, antennas and TETRA base stations that boosted coverage for this lucrative Chinese destination resort. More than 2,200 suites and villas across three world-class hotels now enjoy reliable voice and data communication.



A proactive, cost-effective approach to network performance

Why pay unnecessary costs to maintain, repair or replace low-quality passive devices? Optimize your OPEX and expand network longevity with a proactive approach: choose ValuDAS Passive Devices from CommScope.

ValuDAS components are designed to ensure that RF components function properly, remain durable and perform well. Ideally suited for indoor use, ValuDAS passives are distinguished by three design principles:

- **Quality** — A two-year confidence warranty based on a variety of industry-leading stress tests
- **Reliability** — All CommScope passive devices are thoroughly tested for extended durability, year after year
- **Affordability** — Reliable, high-quality solutions should be budget friendly, the hallmark of the ValuDAS brand

ValuDAS passive devices not only connect networks, they help businesses connect and grow. Hybrid couplers combine two wireless carriers in a single antenna feeder cable. High-power splitters dissipate loss and minimize reflection by evenly distributing wireless signals across multiple bands. Directional couplers support indoor applications in various bands.

Table of Contents

Air Directional Couplers

VD-C6-CPUSE-N-A.	3
VD-C8-CPUSE-N-A	3
VD-C10-CPUSE-N-A.	3
VD-C13-CPUSE-N-A.	4
VD-C15-CPUSE-N-A.	4
VD-C20-CPUSE-N-A.	4
VD-C30-CPUSE-N-A.	4

Hybrid Couplers

VD-H2X2-CPUSE-N	5
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Reactive Power Splitters

VD-S2-CPUSE-H-N.	6
VD-S3-CPUSE-H-N.	6
VD-S4-CPUSE-H-N	6

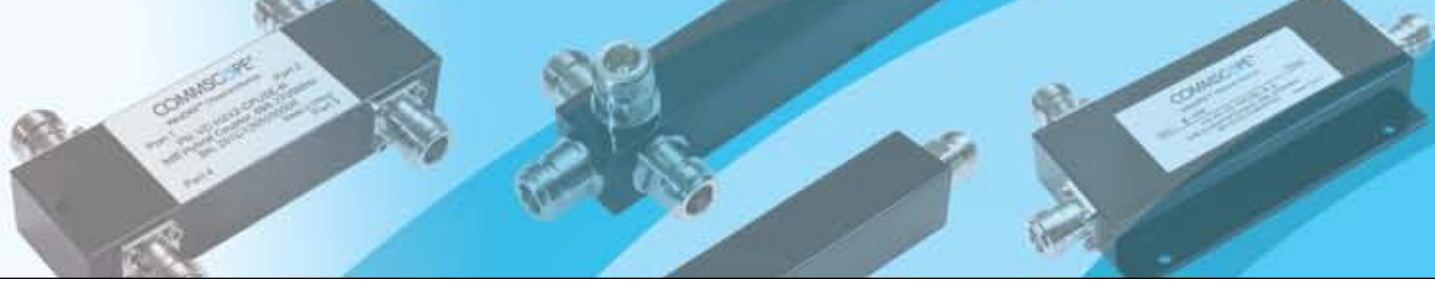
ValuDAS performance: passing the durability test

There's a reason CommScope is the leading supplier of affordable passive components. To ensure product performance under extreme environmental conditions and after long-term usage, our engineers expose components to a variety of stringent tests, including simulations of:

- **Electrical stress:** for Voltage Standing Wave Ratio (VSWR), isolation, insertion and coupling plots
- **Excessive vibration:** random, repetitive shocks ranging from 10 to 50 Gauss gauge device integrity
- **Temperature change:** rapid cycling from -35 to +85 degrees Celsius simulates extreme temperature fluctuation
- **Accelerated life testing (ALT/HALT):** severe thermal conditions measure degradation, help identify and eliminate design flaws and improve long-term reliability

Whether we help you deploy on a high-speed train, within a sprawling stadium or throughout a towering skyscraper, the goal remains the same: provide affordable passive components that enable dependable, cost-effective wireless coverage and capacity.

To learn more about ValuDAS passive devices, contact your local CommScope sales representative.



Air Directional Couplers



● VD-C6-CPUSE-N-A

Very low passive intermodulation, air dielectric version of VD-Cx-CPUSE-N-A range, make this range ideal for more complex applications.

- N Female Connectors
- Multiband frequency coverage
- 200-watt average main line power
- Minimal RF insertion loss
- High reliability
- Air-dielectric

	VD-C6-CPUSE-N-A	VD-C8-CPUSE-N-A	VD-C10-CPUSE-N-A
General Specifications			
Device Type		Coupler	
Interface		N Female	
Brand		ValuDAS™	
Color		Black	
Electrical Specifications			
Operating Frequency Band		698–2700 MHz	
Passive Intermodulation, PIM (3rd order dBc @ 2x 43 dBm)		-150 dBc (relative to carrier)	
Average Power, maximum		200 W	
Coupling	6.0 dB	8.0 dB	10.0 dB
Coupling Tolerance		±1.0 dB	
Impedance		50 ohm	
Insertion Loss at Frequency Band @ 698–2700 MHz	1.7 dB	1.1 dB	0.8 dB
Isolation at Frequency Band @ 698–2700 MHz	26 dB	28 dB	30 dB
Peak Power, maximum		1 kW	
Reflected Power, maximum	40 W	70 W	100 W
Return Loss, minimum		20.8 dB	
VSWR		1.2:1	
Mechanical Specifications			
Inner Contact Plating		Silver	
Outer Contact Plating		Trimetal	
Environmental Specifications			
Application		Indoor	
Ingress Protection Test Method		IEC 60529:2001, IP65	
Operating Temperature		-35 °C to +85 °C (-31 °F to +185 °F)	
Relative Humidity		Up to 100%	
Dimensions			
Height		22.00 mm 0.87 in	
Length		155.00 mm 6.10 in	
Width		75.00 mm 2.95 in	
Net Weight		370.00 g 0.82 lb	
Packed Dimensions			
Height		38.0 mm 1.5 in	
Length		178.0 mm 7.0 in	
Width		88.0 mm 3.5 in	
Shipping Weight		420.00 g 0.93 lb	
Volume		595.2320 cc	

Air Directional Couplers



● VD-C13-CPUSE-N-A



● VD-C15-CPUSE-N-A



● VD-C30-CPUSE-N-A

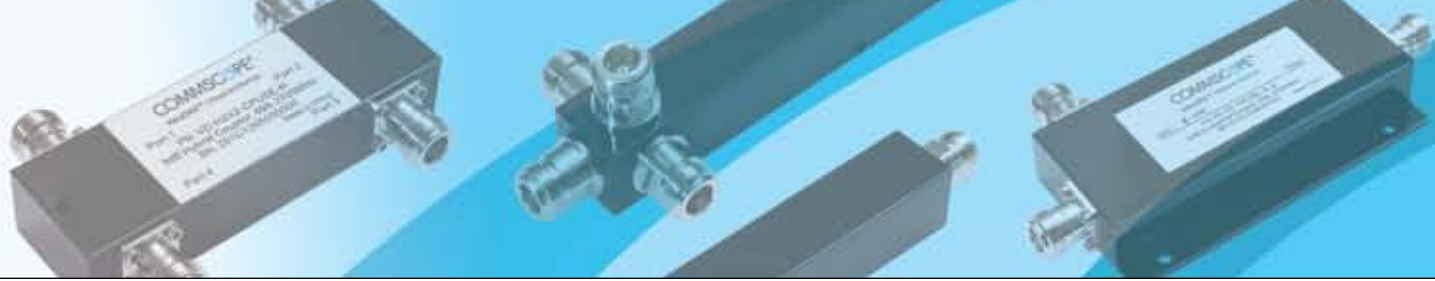
VD-C13-CPUSE-N-A

VD-C15-CPUSE-N-A

VD-C20-CPUSE-N-A

VD-C30-CPUSE-N-A

General Specifications				
Device Type	Coupler			
Interface	N Female			
Brand	ValuDAS™			
Color	Black			
Electrical Specifications				
Operating Frequency Band	698–2700 MHz			
Passive Intermodulation, PIM (3rd order dBc @ 2x 43 dBm)	-150 dBc (relative to carrier)			
Average Power, maximum	200 W			
Coupling	13.0 dB	15.0 dB	20.0 dB	30.0 dB
Coupling Tolerance	±1.0 dB			
Impedance	50 ohm			
Insertion Loss at Frequency Band @ 698–2700 MHz	0.5 dB	0.4 dB	0.2 dB	0.2 dB
Isolation at Frequency Band @ 698–2700 MHz	33 dB	35 dB	40 dB	50 dB
Peak Power, maximum	1 kW			
Reflected Power, maximum	200 W	200 W	200 W	200 W
Return Loss, minimum	20.8 dB			
VSWR	1.2:1			
Mechanical Specifications				
Inner Contact Plating	Silver			
Outer Contact Plating	Trimetal			
Environmental Specifications				
Application	Indoor			
Ingress Protection Test Method	IEC 60529:2001, IP65			
Operating Temperature	-35 °C to +85 °C (-31 °F to +185 °F)			
Relative Humidity	Up to 100%			
Dimensions				
Height	22.00 mm 0.87 in			
Length	155.00 mm 6.10 in			
Width	75.00 mm 2.95 in			
Net Weight	370.00 g 0.82 lb			
Packed Dimensions				
Height	38.0 mm 1.5 in			
Length	178.0 mm 7.0 in			
Width	88.0 mm 3.5 in			
Shipping Weight	420.00 g 0.93 lb			
Volume	595.2320 cc			



Hybrid Coupler



ValuDAS hybrid couplers are designed to meet the specific needs of the wireless market. ValuDAS hybrid couplers are most commonly used to combine two wireless carriers to a single antenna feed or cable. This requires the termination of one output port in 50 ohms, and results in a 3 dB loss in each signal. In situations where two similar feeds are required — for example in-building applications — both outputs may be used, eliminating the need for a termination and the 3 dB loss.

- N female connectors
- 120-watt average power rating
- Maximize isolation in the wireless bands
- High reliability
- Combines non-coherent signals

VD-H2X2-CPUSE-N

General Specifications	
Device Type	Hybrid
Interface	N Female
Brand	ValuDAS™
Color	Black
Electrical Specifications	
Operating Frequency Band	698–2700 MHz
Passive Intermodulation, PIM (3rd order dBc @ 2x 43 dBm)	-140 dBc (relative to carrier)
Average Power, maximum	120 W
Coupling	3.1 dB
Coupling Tolerance	±0.5 dB
Impedance	50 ohm
Insertion Loss at Frequency Band @ 698–2700 MHz	0.2 dB
Isolation at Frequency Band @ 698–2700 MHz	23 dB
Peak Power, maximum	1 kW
Reflected Power, maximum	120 W
Return Loss, minimum	20.8 dB
VSWR	1.2:1
Mechanical Specifications	
Inner Contact Plating	Silver
Outer Contact Plating	Trimetal
Environmental Specifications	
Application	Indoor
Ingress Protection Test Method	IEC 60529:2001, IP65
Operating Temperature	-25 °C to +85 °C (-13 °F to +185 °F)
Relative Humidity	Up to 100%
Dimensions	
Height	24.00 mm 0.94 in
Length	117.00 mm 4.61 in
Width	72.00 mm 2.83 in
Net Weight	340.00 g 0.75 lb
Packed Dimensions	
Height	38.0 mm 1.5 in
Length	178.0 mm 7.0 in
Width	88.0 mm 3.5 in
Shipping Weight	390.00 g 0.86 lb
Volume	595.2320 cc

Reactive Power Splitters



The ValuDAS multiband, high-power splitters evenly split high-power cellular signals with minimal reflections or loss. The reactive design employs no resistors, eliminating PIM contribution to potential damage. The wide frequency range allows use with single or multiband antennas and radiating cable systems. With few solder joints and an air dielectric, loss has been minimized and reliability enhanced.

- Multiband frequency range
- Minimal RF insertion loss
- High reliability
- Designed for indoor applications
- Supplied with spring clip accessory for ease of mounting to wall

	VD-S2-CPUSE-H-N	VD-S3-CPUSE-H-N	VD-S4-CPUSE-H-N
General Specifications			
Device Type		Splitter	
Interface		N Female	
Brand		ValuDAS™	
Color		Black	
Electrical Specifications			
Operating Frequency Band		698–2700 MHz	
Passive Intermodulation, PIM (3rd order dBc @ 2x 43 dBm)		-150 dBc (relative to carrier)	
Average Power, maximum		300 W	
Dissipative Loss at Frequency Band @ 698–2700 MHz	0.2 dB	0.3 dB	0.4 dB
Impedance		50 ohm	
Peak Power, maximum		3 kW	
Power Rating, Splitting	300 W	300 W	300 W
Reflected Power, maximum	300 W	300 W	300 W
Return Loss, minimum		20.8 dB	
Split Loss	3 dB	4.8 dB	6.0 dB
VSWR		1.2:1	
Mechanical Specifications			
Inner Contact Plating		Silver	
Outer Contact Plating		Trimetal	
Environmental Specifications			
Application		Indoor/Outdoor	
Ingress Protection Test Method		IEC 60529:2001, IP65	
Operating Temperature		-35 °C to +85 °C (-31 °F to +185 °F)	
Relative Humidity		Up to 100%	
Dimensions			
Height	23.00 mm 0.91 in	23.00 mm 0.91 in	41.00 mm 1.61 in
Length	217.00 mm 8.54 in	279.00 mm 10.98 in	279.00 mm 10.98 in
Width	59.00 mm 2.32 in	59.00 mm 2.32 in	59.00 mm 2.32 in
Net Weight	300.00 g 0.66 lb	380.00 g 0.84 lb	410.00 g 0.90 lb
Packed Dimensions			
Height	38.0 mm 1.5 in	42.0 mm 1.7 in	55.0 mm 2.2 in
Length	247.0 mm 9.7 in	315.0 mm 12.4 in	315.0 mm 12.4 in
Width	73.0 mm 2.9 in	77.0 mm 3.0 in	77.0 mm 3.0 in
Shipping Weight	360.00 g 0.79 lb	430.00 g 0.95 lb	480.00 g 1.06 lb
Volume	685.1780 cc	1018.7100 cc	1164.2400 cc

We're proud to be a part of your network's story

At CommScope, we embrace our role as a trusted resource, partner and facilitator. We create the infrastructure that connects the world and evolves with every advance in technology. By investing all of our capabilities, resources, relationships and products into your toughest challenges, we continue our long history of solving problems together — paving the way for new ideas and fresh ways of thinking.

We're a trusted resource and partner around the world because we're invested in you: your people, your networks, your success. It inspires us to build relationships and infrastructure, connect people and technologies across protocols, oceans and time zones — and share what we learn along the way. We'll never stop connecting and evolving networks for the business of life at home, at work and on the go.

**This is our promise to you.
This is CommScope.**

COMMScope®

www.commscope.com

Visit our website or contact your local CommScope representative for more information.

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