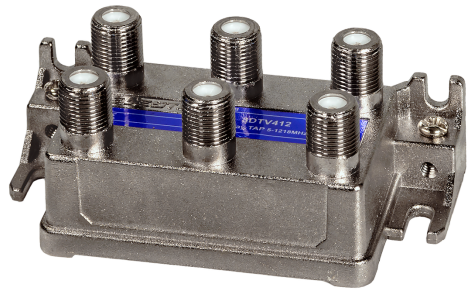




PRODUCT FAMILY	DESCRIPTION
<b>INDOOR RF PASSIVES</b>	<b>3D-LINE SPLITTERS AND TAPS</b>

**FEATURES**



- >> **DOCSIS® 3.1** compliant with frequency range up to 1218 MHz
- >> Electromagnetic compatibility **EXCEEDING CLASS A**
- >> Very good **INTERMODULATION** performance
- >> **SUPERIOR** housing design ensures fast and easy installation
- >> Optional **BarrIER®** technology for ingress/egress protection


**SPECIFICATIONS**

	ELECTRICAL SPECIFICATIONS - 3D-LINE SPLITTERS						
	2-way	3-way	3-way	3-way unbalanced	4-way	6-way	8-way
	3DSS2 3DSS2-B 3DSE2 3DSV2	3DSS3 3DSS3-B 3DSE3	3DSV3	3DSS3U 3DSS3U-B 3DSE3U	3DSS4 3DSS4-B 3DSE4 3DSV4	3DSV6	3DSV8

PORT LOSS (dB, Max.) - IN TO PORT							
Frequency (MHz)							
5 - 10	3.5	6.0	6.0	3.8 7.2	7.3	9.2	10.8
10 - 65	3.7	6.0	6.0	3.8 7.0	7.3	9.0	10.8
65 - 470	3.8	6.1	6.5	3.8 7.0	7.3	9.3	10.8
470 - 862	4.1	6.1	6.5	4.0 7.5	7.5	10.4	11.4
862 - 1006	4.3	6.5	6.8	4.2 8.0	8.0	10.6	12.0
1006 - 1218	4.6	7.0	7.3	4.5 8.5	8.5	11.5	13.0

RETURN LOSS (dB, Min.) - ALL PORTS							
5 - 1218	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)

ISOLATION (dB, Min.) - OUT TO OUT							
5 - 10	30.0	28.0	28.0	30.0	30.0	28.0	28.0
10 - 65	35.0	32.0	32.0	35.0	35.0	32.0	32.0
65 - 470	26.0	28.0	28.0	30.0	30.0	28.0	28.0
470 - 862	26.0	26.0	26.0	26.0	26.0	25.0	25.0
862 - 1006	25.0	24.0	24.0	25.0	25.0	24.0	24.0
1006 - 1218	21.0	21.0	21.0	21.0	21.0	21.0	21.0

	ELECTRICAL SPECIFICATIONS - 3D-LINE 1-WAY TAPS						
	6 dB	8 dB	10 dB	12 dB	16 dB	20 dB	24 dB
	3DTS106	3DTS108	3DTE110 3DTS110	3DTS112	3DTS116	3DTS120	3DTS124
<b>INSERTION LOSS (dB, Max.) - IN TO OUT</b>							
Frequency (MHz)							
5 - 10	2.8	1.8	1.8	1.0	0.9	0.9	0.9
10 - 65	2.8	1.8	1.8	1.0	0.9	0.9	0.9
65 - 470	2.8	1.8	1.8	1.0	0.9	0.9	0.9
470 - 862	2.9	2.2	2.1	1.5	1.2	1.2	1.2
862 - 1006	3.2	2.4	2.3	1.7	1.4	1.4	1.4
1006 - 1218	3.5	2.7	2.6	2.2	1.7	1.5	1.5
<b>TAP LOSS (dB, Min.) - IN TO TAP</b>							
5 - 65	6.5 ± 1.5	8.5 ± 1.5	10.5 ± 1.5	12.5 ± 1.5	16.0 ± 1.0	20.0 ± 1.0	24.0 ± 1.0
65 - 1006	6.5 ± 1.0	8.5 ± 1.0	10.5 ± 1.0	12.5 ± 1.0	16.0 ± 1.0	20.0 ± 1.0	24.0 ± 1.0
1006 - 1218	6.5 ± 1.5	8.5 ± 1.5	10.5 ± 1.5	12.5 ± 1.5	16.0 ± 2.0	20.0 ± 2.0	24.0 ± 2.0
<b>RETURN LOSS (dB, Min.) - ALL PORTS</b>							
5 - 1218	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>	22.0 <sup>(1)</sup>
<b>ISOLATION (dB, Min.) - OUT TO TAP</b>							
5 - 10	20.0	22.0	25.0	25.0	32.0	35.0	38.0
10 - 65	25.0	28.0	30.0	30.0	35.0	38.0	42.0
65 - 470	23.0	25.0	27.0	30.0	32.0	35.0	38.0
470 - 862	20.0	20.0	22.0	25.0	30.0	32.0	35.0
862 - 1006	20.0	20.0	21.0	22.0	28.0	30.0	32.0
1006 - 1218	18.0	18.0	20.0	20.0	25.0	26.0	28.0

,, **HIGH TEMPERATURES CAN DAMAGE SOLDERED COMPONENTS...**

We use automated induction soldering meaning shorter exposure for high temperatures. This soldering technology guarantees higher product quality and leads to many benefits such as a better EMC performance.





**ELECTRICAL SPECIFICATIONS - 3D-LINE 2-WAY TAPS**

	<b>8 dB</b> 3DTS208	<b>10 dB</b> 3DTE210 3DTS210	<b>12 dB</b> 3DTS212	<b>16 dB</b> 3DTS216	<b>20 dB</b> 3DTS220
<b>INSERTION LOSS (dB, Max.) - IN TO OUT</b>					
Frequency (MHz)					
5 - 10	4.8	2.7	1.9	1.7	1.2
10 - 65	4.4	2.7	1.6	1.4	1.2
65 - 470	4.3	3.0	1.7	1.6	1.2
470 - 862	4.3	3.4	1.9	1.8	1.4
862 - 1006	4.4	3.5	2.4	1.9	1.7
1006 - 1218	5.2	4.3	3.2	2.5	2.3
<b>TAP LOSS (dB, Min.) - IN TO TAP</b>					
5 - 65	8.5 ± 1.5	10.0 ± 1.0	12.0 ± 1.5	16.0 ± 1.0	20.0 ± 1.0
65 - 1006	8.5 ± 1.5	10.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	20.0 ± 1.0
1006 - 1218	8.5 ± 2.0	10.0 ± 1.5	12.0 ± 2.0	16.0 ± 2.0	20.0 ± 2.0
<b>RETURN LOSS (dB, Min.) - ALL PORTS</b>					
5 - 10	18.0	22.0	22.0	22.0	22.0
10 - 1218	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)
<b>ISOLATION (dB, Min.) - OUT TO TAP</b>					
5 - 10	25.0	28.0	30.0	32.0	35.0
10 - 65	27.0	29.0	31.0	35.0	39.0
65 - 470	24.0	26.0	28.0	32.0	36.0
470 - 862	22.0	24.0	26.0	30.0	34.0
862 - 1006	20.0	22.0	24.0	28.0	32.0
1006 - 1218	20.0	20.0	22.0	26.0	28.0
<b>ISOLATION (dB, Min.) - TAP TO TAP</b>					
5 - 10	36.0	36.0	36.0	36.0	36.0
10 - 65	40.0	40.0	40.0	40.0	40.0
65 - 470	34.0	36.0	36.0	36.0	36.0
470 - 862	32.0	32.0	32.0	32.0	32.0
862 - 1006	30.0	30.0	30.0	30.0	30.0
1006 - 1218	28.0	30.0	30.0	30.0	30.0



**ELECTRICAL SPECIFICATIONS - 3D-LINE 4/8-WAY TAPS**

10 dB	12 dB	16 dB	20 dB	14 dB	16 dB	20 dB
3DTV410	3DTV412	3DTV416	3DTV420	3DTV814	3DTV816	3DTV820

**INSERTION LOSS (dB, Max.) - IN TO OUT**

Frequency (MHz)	3DTV410	3DTV412	3DTV416	3DTV420	3DTV814	3DTV816	3DTV820
5 - 10	4.3	4.3	2.8	1.5	4.3	3.0	2.0
10 - 65	4.1	4.1	2.7	1.3	4.3	3.0	2.0
65 - 470	4.5	3.9	2.4	1.3	4.3	3.3	2.6
470 - 862	4.6	3.9	2.6	1.6	4.8	3.6	2.8
862 - 1006	4.6	4.5	2.6	1.8	4.8	3.6	2.8
1006 - 1218	4.9	4.7	2.9	3.2	5.1	3.9	3.1

**TAP LOSS (dB, Min.) - IN TO TAP**

5 - 10	10.0 ± 1.5	12.5 ± 1.5	16.0 ± 1.5	19.5 ± 1.5	14.0 ± 1.0	16.0 ± 1.5	19.5 ± 1.5
10 - 65	10.0 ± 1.0	12.5 ± 1.0	16.0 ± 1.0	19.5 ± 1.0	14.0 ± 1.0	16.0 ± 1.0	19.5 ± 1.0
65 - 470	10.5 ± 1.0	12.5 ± 1.0	16.5 ± 1.0	19.5 ± 1.0	14.0 ± 1.0	16.0 ± 1.0	20.0 ± 1.0
470 - 862	11.0 ± 1.0	12.5 ± 1.0	16.5 ± 1.0	19.5 ± 1.0	14.0 ± 1.5	16.0 ± 1.0	20.0 ± 1.5
862 - 1006	11.0 ± 1.0	12.5 ± 1.0	16.5 ± 1.0	19.5 ± 1.0	14.5 ± 1.5	16.0 ± 1.0	20.0 ± 1.5
1006 - 1218	11.0 ± 1.5	12.5 ± 1.5	16.5 ± 1.5	19.5 ± 2.0	15.5 ± 2.0	17.0 ± 1.5	20.0 ± 2.0

**RETURN LOSS (dB, Min.) - ALL PORTS**

5 - 1218	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)
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**ISOLATION (dB, Min.) - OUT TO TAP**

5 - 10	30.0	32.0	32.0	35.0	30.0	30.0	30.0
10 - 65	30.0	32.0	35.0	40.0	30.0	30.0	34.0
65 - 470	28.0	32.0	32.0	35.0	28.0	28.0	34.0
470 - 862	24.0	27.0	30.0	32.0	24.0	24.0	34.0
862 - 1006	24.0	27.0	30.0	30.0	24.0	24.0	33.0
1006 - 1218	24.0	24.0	28.0	28.0	24.0	24.0	30.0

**ISOLATION (dB, Min.) - TAP TO TAP**

5 - 10	22.0	22.0	22.0	22.0	22.0	22.0	22.0
10 - 65	30.0	30.0	30.0	30.0	32.0	32.0	32.0
65 - 470	28.0	28.0	28.0	28.0	28.0	28.0	28.0
470 - 862	25.0	25.0	25.0	25.0	25.0	25.0	25.0
862 - 1006	22.0	22.0	22.0	22.0	22.0	22.0	22.0
1006 - 1218	20.0	20.0	20.0	20.0	20.0	20.0	20.0



**ELECTRICAL SPECIFICATIONS - 3D-LINE 2-MULTITAPS**

**4-way**  
**3DMV4**

**5-way**  
**3DMV5T**

**6-way**  
**3DMV6**

**8-way**  
**3DMV8**

**INSERTION LOSS (dB, Max.) - IN TO OUT**

Frequency (MHz)	4-way 3DMV4	5-way 3DMV5T	6-way 3DMV6	8-way 3DMV8
5 - 10	4.6	-	7.8	9.5
10 - 65	4.6	-	7.5	9.3
65 - 470	4.7	-	7.3	8.5
470 - 862	4.7	-	7.5	9.5
862 - 1006	4.7	-	8.0	9.5
1006 - 1218	5.1	-	8.3	10.0

**TAP LOSS (dB) - IN TO TAP**

Frequency (MHz)	Port	4-way 3DMV4	5-way 3DMV5T	6-way 3DMV6	8-way 3DMV8
5 - 65 ± 1.5	Port1	12.5	12.5	12.5	12.5
	Port2	13.5	12.5	13.5	13.5
65 - 1006 ± 1.5	Port3	14.5	12.5	14.5	14.5
	Port4	15.5	12.5	15.5	15.5
1006 - 1218 ± 1.5	Port5	-	12.5	16.5	16.5
	Port6	-	-	17.5	17.5
	Port7	-	-	-	18.5
	Port8	-	-	-	19.5

**RETURN LOSS (dB, Min.) - ALL PORTS**

Frequency (MHz)	4-way 3DMV4	5-way 3DMV5T	6-way 3DMV6	8-way 3DMV8
5 - 1218	22.0 (1)	22.0 (1)	22.0 (1)	22.0 (1)

**ISOLATION (dB, Min.) - OUT TO TAP**

Frequency (MHz)	4-way 3DMV4	5-way 3DMV5T	6-way 3DMV6	8-way 3DMV8
5 - 10	26.0	-	26.0	26.0
10 - 65	26.0	-	26.0	26.0
65 - 470	30.0	-	30.0	30.0
470 - 862	26.0	-	25.0	26.0
862 - 1006	24.0	-	25.0	26.0
1006 - 1218	22.0	-	22.0	24.0

**ISOLATION (dB, Min.) - TAP TO TAP**

Frequency (MHz)	4-way 3DMV4	5-way 3DMV5T	6-way 3DMV6	8-way 3DMV8
5 - 10	36.0	28.0	36.0	36.0
10 - 65	40.0	30.0	40.0	40.0
65 - 470	32.0	28.0	32.0	32.0
470 - 1006	30.0	25.0	30.0	30.0
1006 - 1218	25.0	20.0	25.0	25.0

**GENERAL SPECIFICATIONS**

3D-Line	All Models
<b>Nominal impedance</b>	75 Ohm
<b>Frequency range</b>	5-1218 MHz
<b>Operating temperature range</b>	-25 C° to +70 C°
<b>Electromagnetic comp.</b> ( <sup>2</sup> ) (dB, Min.)	
5-300	95.0
300-470	90.0
470-950	85.0
950-1218	75.0
<b>Surge immunity</b> ( <sup>3</sup> ) Each port (Min.)	1 kV
<b>Intermodulation</b> ( <sup>4</sup> ) (2f1, f1+f2, 2f2) (dB,Min.)	-122.0 dBc( <sup>a</sup> ) -115.0 dBc( <sup>b</sup> )

” **PURE-FERRITE DESIGN...**

Our Inter Modulation (IM) performance is reached with the “pure-ferrite” design. In practice it means less components and higher Mean-Time-Between-Failures (MTBF). Benefits are not limited to more robust quality because the pure-ferrite approach offers improved RF performance like better flatness as well.

**Notes:**

- (1) At F≥40 MHz -1.5 dB per octave
- (2) Exceeding Class A (+10dB), according to IEC 60728-2 2010 (new 2012), EMC
- (3) 1 kV, 1,2/50 μs Surge voltage according to IEC 61000-4-5, EMC (class 2, level 2) applied between the inner and outer conductor of each port
- (4) Two carriers (60 & 65 MHz), applied to each output port, @120dBμV
- (a) No surge
- (b) Measured after 10 pulses 25VDC(1,2/500μS) have been applied to each port

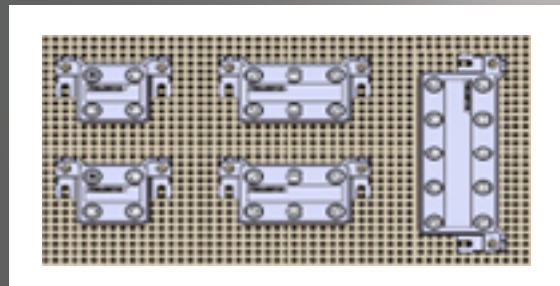
**Additional Notes:**

- ✓ Between 5MHz and 10MHz the above specifications are typical values and not min or max values
- ✓ The 3D models with “-B” behind the product name features the BarrIER® Lite Technology
- ✓ CableLabs is owner of the trademark DOCSIS®
- ✓ Teleste reserves the rights to alter specifications, features, manufacturing release dates and even the general availability of the products at any time.

” **DETAILS MATTER...**

Our product dimensions are thought out carefully. For example in some countries like in Germany passives can be installed to an existing backplane.








**OUR PASSIVES FIT TO THIS GRID SEAMLESSLY.**



**MECHANICAL SPECIFICATIONS**

<b>Housing</b>	Material	Zinc die cast, NiSn plating
<b>Back Cover</b>	Construction Material	Machine Soldered Brass, Nickel plating
<b>Connectors</b>	Material Port spacing Protection cap Physical dimensions Rotational Torque	Zinc die cast 22 mm Yes ANSI/SCTE 01 2006 IEC 61169-24 ≥10 Nm
<b>F-Spring</b>	Material Plating Test pin acceptance Insertion & Withdrawal force	Phosphor Bronze Silver 0.51 mm - 1.3 mm Withdrawal ≥0.30N Insertion ≤25N
<b>Grounding Block</b>		Yes
<b>Salt mist cyclic test</b>	IEC 60068-2-52: 1996	672 hrs Number of cycles: 4 Severity: 5
<b>Vibration</b>	IEC 60068-2-6: 1995	Frequency range: 10-55 Hz Sweep rate: 1 octave /p/m Sweep cycles: 10 Displacement ampl.: 0.75 mm Axis: 3
<b>Protection</b>	IEC 60529: 1989	IP67

**HOUSING STYLE DESCRIPTION**

 <p><b>3DSSx</b></p>	 <p><b>3DSEx</b></p>	 <p><b>3DSVx</b></p>
 <p><b>3DTExxx</b></p>	 <p><b>3DTSxxx</b></p>	 <p><b>3DTVxxx</b></p>
 <p><b>3DMVx</b></p>	<p><b>NOTE:</b> The width of the housing varies depending on the number of ways/connectors</p>	