Cisco Flexible Solutions Taps,

Two-Way, Four-Way, & Eight-Way

The Cisco Flexible Solutions Tap (FST) offers the benefits of our existing Surge-Gap taps plus the additional benefit of increased flexibility in system design via two types of optional plug-ins.

The optional plug-in Reverse Attenuators used in the FST are available in 0, 3, 6, 9, and 12 dB values. The attenuators increase the reverse path tap loss with only a minimal effect on forward tap loss. By selectively adding reverse attenuation to lower value taps, reverse path tap losses can be made more similar across the various values of taps used in an HFC network. This allows the range of RF levels transmitted from closed loop customer premise equipment (CPEs) to be narrowed – thus improving the reliability of upstream transmissions.

The optional plug-in Forward EQs used in the FST are available in 6, 9, and 12 dB values. The Forward EQs increase the forward path tap loss in a standard cable-tilted fashion, with greater loss at lower frequencies than higher frequencies. The plug-in Forward EQ allows optimization of tap output levels at tap locations near the end of the feeder line.

The optional plug-in Forward Inverse EQs used in the FST are available in 3, 6, 9, and 12 dB values. The Inverse EQs increase the forward path tap loss in a down-tilted fashion, with greater loss at higher frequencies than lower frequencies, and with only a minimal effect on reverse tap loss. The plug-in Forward Inverse EQ allows optimization of tap output levels at tap locations with high-level forward RF signals and significant up-tilt (typically tap locations closest to nodes and amplifiers).

The Flexible Solutions Taps all have IEEE compliant 6 kV surge protection, providing significantly improved protection against voltage transients in lightning strike areas and locations with unreliable power networks. In addition, the new tap products offer the same make-before-break capabilities of previous Cisco tap products, enabling the tap faceplate to be removed without interrupting service to downstream customers. The taps pass up to 12 amps of current, enabling operators to access power at locations within the HFC plant where additional power is needed.

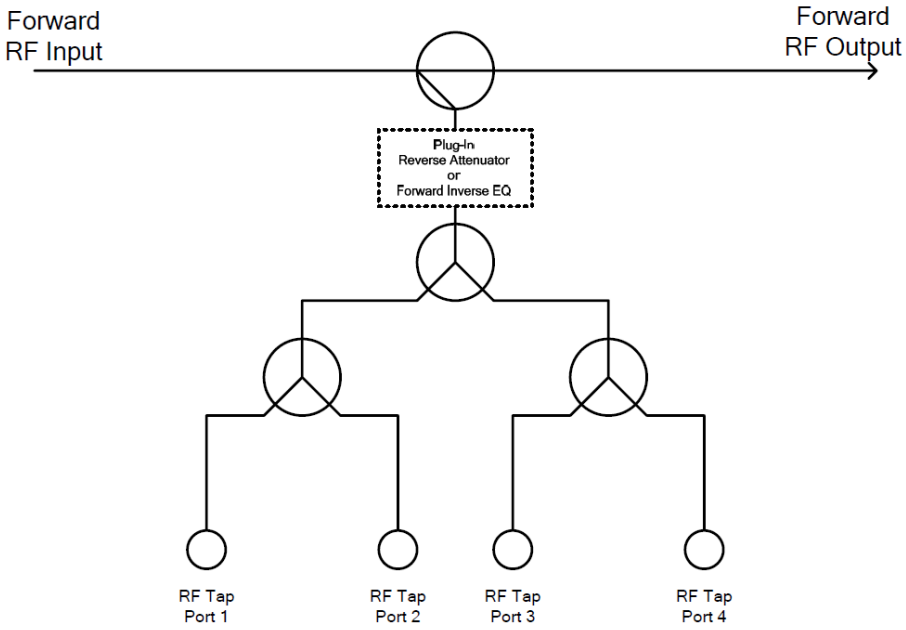
Figure 1. Cisco Flexible Solutions Taps

Features

- Optional plug-in Reverse Attenuators, Forward EQs, and Forward Inverse EQs offer design flexibility
- Available in 2-, 4- and 8-way versions
- Increased Surge Tolerance - Rugged design helps enable the products to continue to operate after surges that would typically damage ordinary products and interrupt service
- 12 amp through current rating
- Improved Return Loss - improved return loss performance to lessen reflected signals for a “cleaner” signal
- AC/RF bypass switch provides interruption free service to rest of network during faceplate removal
- Backwards compatible housing supports economical faceplate upgrades
- AL360T housing with powder coating for superior environmental protection
- Sealed and swaged extended F-ports for resistance to moisture ingress
- Nickel plated brass F-ports to provide a corrosion-resistant drop interface
- Component covers for additional protection of faceplate circuitry during maintenance
- Versatile housing design permits aerial, pedestal, or MDU mounting schemes

Block Diagram

Figure 2. Block Diagram



Product Specifications

See the tables below for product specifications.

Table 1. General Specifications

Items	Frequency	Value
Power Passing	-	12 amps
Tap-Tap Isolation (minimum)	5-50 MHz	20 dB
	51-750 MHz	22 dB
	751-1000 MHz	20 dB
In-Out Return Loss (minimum)	5-1000 MHz	18 dB
Tap Port Return Loss (minimum)	5-1000 MHz	18 dB
Hum Modulation @ 10 amps (typical)	5-450 MHz	70 dBc
	451-750 MHz	65 dBc
	751-1000 MHz	55 dBc
EMI Shielding (minimum)	5-15 MHz	85 dB
	16-1000 MHZ	100 dB*

Note: Tested per ANSI / SCTE 48-2 2003.

Table 2. AC/RF Bypass Switch Performance

Items	Value
System Open Circuit Time	0 ms
Contact Resistance	10 mOhms (max)
Through current capacity	12 amps
Voltage capacity	90 VAC
RF Frequency Range	5 to 1000 MHz
Insertion Loss & Return Loss	See Loss Table
Operating Temperature	-40 ºC to +60 ºC

Table 3. AC/RF Bypass Switch Insertion Loss & Return Loss

AC/RF Bypass	Items	5 MHz	500 MHz	750 MHz	870 MHz	1 GHz
Short Circuited Insertion Loss (dB)	Max	0.02 dB	0.6 dB	0.8 dB	0.7 dB	0.7 dB
	Mean	<0.01 dB	0.4 dB	0.5 dB	0.4 dB	0.5 dB
Short Circuited Return Loss (dB)	Min	45 dB	16 dB	16 dB	18 dB	21 dB
	Mean	50 dB	16.5 dB	16.5 dB	18.5 dB	22 dB

Mechanical Specifications

Table 4. Mechanical Specifications

Mechanical Specifications	
Standard Tap (2-Way/4-Way)	
Height	3.6 in. 91.44 mm
Width	3.6 in. 91.44 mm
Depth	3.0 in. 76.2 mm
Full Profile Tap (2-Way/4-Way/8-Way)	
Height	4.25 in. 107.95 mm
Width	5.25 in. 133.35 mm
Depth	3.0 in. 76.2 mm
Surge Resistance Input / Output ports - (combination wave) Tap ports (ring wave)	 6 kV 6 kV
Compliance Standards	
Mechanical	ANSI / SCTE 01 1996 - F-port interface specification, SCTE IPS-SP-500 - entry port interface specification
Emissions	FCC - Part 76, Subpart K, EN 50083-2/A1: 1998
Environmental	ASTM G 53 - weathering specification, ASTM B 117 - salt spray specification, ASTM D 31 - chip resistance specification, EN 60529: 1992 (IP test), Bellcore GR-63-CORE - vibration/transportation, ANSI/EEEE C62.41 - lightning
Electrical Safety	UL Subject 1697, EN 50083-1/A2: 1997, EN 60065: 1998, IEC 60065: 1998

Note: Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 ºC). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

2-Way FST – Standard and Full Profile Housing

Table 5. Insertion Loss (In-Out) for 2-Way FST

Insertion Loss (dB)																
Frequency	4 dB		8 dB		11 dB		14 dB		17 dB		20 dB		23 dB		26 dB	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
5 MHz	-	-	3.2	2.5	2.0	1.8	1.2	1.0	1.1	0.8	0.8	0.8	0.7	0.4	0.6	0.4
55 MHz	-	-	2.5	2.0	1.6	1.2	1.1	0.7	0.9	0.5	0.6	0.5	0.6	0.3	0.6	0.4
550 MHz	-	-	3.6	3.3	2.5	2.1	1.7	1.4	1.6	1.1	1.3	1.1	1.1	1.0	1.2	1.0
650 MHz	-	-	3.9	3.6	2.6	2.3	1.8	1.6	1.5	1.2	1.3	1.2	1.2	1.0	1.3	1.1
750 MHz	-	-	4.1	3.8	2.7	2.5	1.9	1.7	1.6	1.3	1.4	1.3	1.4	1.1	1.4	1.2
870 MHz	-	-	4.3	4.0	3.0	2.8	2.3	2.0	1.8	1.5	1.7	1.5	1.5	1.3	1.6	1.3
1000 MHz	-	-	4.6	4.3	3.6	3.3	2.7	2.4	2.2	1.8	1.9	1.8	1.8	1.6	1.8	1.6

Table 6. Tap Loss Tolerance and Out-Trap Isolation for 2-Way FST

Tap Loss Tolerance (dB)								
Frequency	4 dB	8 dB	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5 MHz	1.0	1.0	1.2	1.0	1.0	1.0	1.0	1.0
55 MHz	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0
550 MHz	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
650 MHz	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
750 MHz	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
870 MHz	1.0	1.3	1.0	1.0	1.0	1.0	1.0	1.0
1000 MHz	1.1	1.8	1.0	1.0	1.4	1.0	1.0	1.0
Out-Trap Isolation (Minimum) (dB)								
Frequency	4 dB	8 dB	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5-50 MHz	-	20	18	22	24	32	33	39
51-550 MHz	-	26	28	30	32	35	35	41
551-650 MHz	-	24	28	28	33	32	34	38
651-750 MHz	-	23	26	27	33	29	32	36
751-870 MHz	-	22	24	27	33	28	29	34
871-1000 MHz	-	22	23	26	28	26	26	32

Note: Tap Loss Tolerances above are with 0 dB Reverse Attenuator installed. For changes to listed Tap losses with other values of Reverse Attenuators or with Forward EQ / Forward Inverse EQ installed, refer to “Reverse Attenuator Loss Table” or “Forward EQ / Forward Inverse EQ Loss Table.”

4-Way FST – Standard and Full Profile Housing

Table 7. Insertion Loss (In-Out) for 4-Way FST

Insertion Loss (dB)														
Frequency	8 dB		11 dB		14 dB		17 dB		20 dB		23 dB		26 dB	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
5 MHz	-	-	3.2	2.7	2.1	1.7	1.4	1.0	0.8	0.6	0.8	0.4	0.7	0.3
55 MHz	-	-	2.5	2.2	1.5	1.2	1.2	0.7	0.9	0.5	0.7	0.4	0.6	0.3
550 MHz	-	-	3.8	3.4	2.5	2.2	1.9	1.4	1.6	1.1	1.3	1.0	1.2	0.9
650 MHz	-	-	4.2	3.8	2.7	2.4	1.9	1.6	1.5	1.2	1.3	1.0	1.3	0.9
750 MHz	-	-	4.5	4.0	2.9	2.6	2.1	1.8	1.6	1.3	1.4	1.1	1.3	1.0
870 MHz	-	-	4.8	4.2	3.2	3.0	2.3	2.0	1.8	1.5	1.6	1.2	1.5	1.1
1000 MHz	-	-	5.1	4.5	3.6	3.4	2.7	2.4	2.1	1.9	1.9	1.5	1.9	1.4

Table 8. Tap Loss Tolerance and Out-Trap Isolation for 4-Way FST

Tap Loss Tolerance (dB)							
Frequency	8 dB	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5 MHz	1.0	1.0	1.0	1.0	1.0	1.7	1.5
55 MHz	1.1	1.2	1.0	1.0	1.0	1.0	1.0
550 MHz	1.0	1.6	1.0	1.0	1.0	1.0	1.0
650 MHz	1.0	1.7	1.0	1.0	1.0	1.0	1.0
750 MHz	1.0	1.8	1.0	1.0	1.0	1.0	1.0
870 MHz	1.0	2.1	1.0	1.0	1.0	1.2	1.5
1000 MHz	1.5	2.8	1.6	1.3	1.0	1.3	1.5
Out-Trap Isolation (Minimum) (dB)							
Frequency	8 dB	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5-50 MHz	-	22	21	26	34	32	35
51-550 MHz	-	27	30	36	35	36	37
551-650 MHz	-	25	29	33	33	36	36
651-750 MHz	-	24	27	33	33	34	35
751-870 MHz	-	23	24	28	28	32	32
871-1000 MHz	-	23	22	25	28	29	29

Note: Tap Loss Tolerances above are with 0 dB Reverse Attenuator installed. For changes to listed Tap losses with other values of Reverse Attenuators or with Forward EQ / Forward Inverse EQ installed, refer to “Reverse Attenuator Loss Table” or “Forward EQ / Forward Inverse EQ Loss Table.”

8-Way FST – Standard and Full Profile Housing

Table 9. Insertion Loss (In-Out) for 8-Way FST

Insertion Loss (dB)												
Frequency	11 dB		14 dB		17 dB		20 dB		23 dB		26 dB	
	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
5 MHz	-	-	3.5	3	2.4	1.4	1.1	0.9	0.9	0.7	0.6	0.4
55 MHz	-	-	3.1	2.7	1.9	1.2	1	0.7	0.8	0.5	0.6	0.3
550 MHz	-	-	4.6	4	2.6	2.2	1.9	1.5	1.6	1.2	1.3	1
650 MHz	-	-	4.7	4.3	2.7	2.4	2	1.6	1.6	1.2	1.4	1
750 MHz	-	-	5	4.6	2.9	2.7	2.1	1.8	1.8	1.3	1.5	1.1
870 MHz	-	-	5.2	4.9	3.2	3	2.4	2.2	2	1.5	1.8	1.3
1000 MHz	-	-	5.5	5.1	3.6	3.4	2.8	2.5	2.3	1.7	2.1	1.5

Table 10. Tap Loss Tolerance and Out-Trap Isolation for 8-Way FST

Tap Loss Tolerance (dB)						
Frequency	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5 MHz	1.0	1.0	1.0	1.0	1.0	1.0
55 MHz	1.0	1.0	1.2	1.0	1.0	1.0
550 MHz	1.0	1.7	1.6	1.5	1.0	1.1
650 MHz	1.0	1.9	1.4	1.3	1.0	1.2
750 MHz	1.0	2.1	1.5	1.4	1.1	1.2
870 MHz	1.4	2.4	1.8	1.4	1.2	1.2
1000 MHz	1.8	2.9	2.0	1.8	1.6	1.6
Out-Trap Isolation (Minimum) (dB)						
Frequency	11 dB	14 dB	17 dB	20 dB	23 dB	26 dB
5-50 MHz	-	24	25	31	29	37
51-550 MHz	-	29	29	30	33	39
551-650 MHz	-	27	28	32	34	36
651-750 MHz	-	25	27	30	34	33
751-870 MHz	-	24	26	29	34	30
871-1000 MHz	-	24	26	28	33	29

Note 1: Tap Loss Tolerances above are with 0 dB Reverse Attenuator installed. For changes to listed Tap losses with other values of Reverse Attenuators or with Forward EQ / Forward Inverse EQ installed, refer to “Reverse Attenuator Loss Table” or “Forward EQ / Forward Inverse EQ Loss Table.”

Note 2: Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 ºC). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

Reverse Attenuator Loss

Table 11. Reverse Attenuator Loss 42/54

Tap Loss Tolerance (dB)		Reverse Attenuator Used				
	Frequency	0 dB	3 dB	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5-42 MHz	-	3.0	6.0	9.0	12.0
	54 MHz	-	0.8	0.8	0.8	0.8
	550 MHz	-	0.3	0.3	0.3	0.3
	650 MHz	-	0.4	0.4	0.4	0.4
	750 MHz	-	0.5	0.5	0.5	0.5
	870 MHz	-	0.6	0.6	0.6	0.6
	1000 MHz	-	0.8	0.8	0.8	0.8

Table 12. Reverse Attenuator Loss 55/70

Tap Loss Tolerance (dB)		Reverse Attenuator Used				
	Frequency	0 dB	3 dB	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5-55 MHz	-	3.0	6.0	9.0	12.0
	70 MHz	-	0.6	0.6	0.6	0.6
	550 MHz	-	0.3	0.3	0.3	0.3
	650 MHz	-	0.4	0.4	0.4	0.4
	750 MHz	-	0.5	0.5	0.5	0.5
	870 MHz	-	0.6	0.6	0.6	0.6
	1000 MHz	-	0.8	0.8	0.8	0.8

Table 13. Reverse Attenuator Loss 65/86

Tap Loss Tolerance (dB)		Reverse Attenuator Used				
	Frequency	0 dB	3 dB	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5-65 MHz	-	3.0	6.0	9.0	12.0
	86 MHz	-	0.6	0.6	0.6	0.6
	550 MHz	-	0.3	0.3	0.3	0.3
	650 MHz	-	0.4	0.4	0.4	0.4
	750 MHz	-	0.5	0.5	0.5	0.5
	870 MHz	-	0.6	0.6	0.6	0.6
	1000 MHz	-	0.8	0.8	0.8	0.8

Table 14. Reverse Attenuator Loss 85/105

Tap Loss Tolerance (dB)		Reverse Attenuator Used				
	Frequency	0 dB	3 dB	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5-85 MHz	-	3.0	6.0	9.0	12.0
	105 MHz	-	0.8	0.8	0.8	0.8
	550 MHz	-	0.3	0.3	0.3	0.3
	650 MHz	-	0.4	0.4	0.4	0.4
	750 MHz	-	0.5	0.5	0.5	0.5
	870 MHz	-	0.6	0.6	0.6	0.6
	1000 MHz	-	0.8	0.8	0.8	0.8

Note 1: Tap Loss Tolerances shown on previous pages are with 0 dB Reverse Attenuator installed. The “Reverse Attenuator Loss Table” above shows the additional Tap Loss incurred when utilizing the plug-in Reverse Attenuators.

Note 2: Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 ºC). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

Other Specifications

Table 15. Forward EQ Loss Table

Tap Loss Tolerance (dB)		Forward EQ Used		
	Frequency	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5 MHz	6.2	9.1	12.0
	42 MHz	5.7	8.1	10.6
	55 MHz	5.6	7.9	10.2
	70 MHz	5.4	7.5	9.8
	86 MHz	5.2	7.3	9.5
	550 MHz	2.5	3.4	4.2
	650 MHz	2.0	2.8	3.3
	750 MHz	1.6	2.1	2.5
	870 MHz	1.1	1.3	1.5
	1000 MHz	0.8	0.8	0.8

Table 16. Forward Inverse EQ Loss Table

Tap Loss Tolerance (dB)		Forward Inverse EQ Used			
	Frequency	3 dB	6 dB	9 dB	12 dB
Tap Loss Increase* (dB)	5 MHz	0.1	0.1	0.1	0.1
	42 MHz	0.1	0.1	0.1	0.1
	55 MHz	0.1	0.1	0.1	0.2
	70 MHz	0.1	0.2	0.2	0.3
	86 MHz	0.2	0.2	0.2	0.4
	550 MHz	1.9	3.5	4.8	7.1
	650 MHz	2.1	4.1	5.8	8.4
	750 MHz	2.2	4.4	6.5	9.4
	870 MHz	2.4	5.0	7.4	10.5
	1000 MHz	2.6	5.6	8.2	11.4

Note 1: Tap Loss Tolerances shown on previous pages are with 0 dB Reverse Attenuator installed. The “Forward EQ Loss Table” and “Forward Inverse EQ Loss Table” above shows the additional Tap Loss incurred when utilizing the plug-in Forward EQs and Forward Inverse EQs.

Note 2: Unless otherwise noted, specifications reflect typical performance and are referenced to 68 F (20 ºC). Specifications are based upon measurements made in accordance with SCTE/ANSI standards (where applicable), using standard frequency assignments.

Ordering Information

The following tables list the part numbers (P/N) for the FST.

Table 17. Standard Profile FST

2-Way Taps	Part Number
FST Tap, 2-way, 4 dB	4013433
FST Tap, 2-way, 8 dB	4013434
FST Tap, 2-way, 11 dB	4013435
FST Tap, 2-way, 14 dB	4013436
FST Tap, 2-way, 17 dB	4013437
FST Tap, 2-way, 20 dB	4013438
FST Tap, 2-way, 23 dB	4018364
FST Tap, 2-way, 26 dB	4018365
4-Way Taps	**Part Number**
FST Tap, 4-way, 8 dB	4013439
FST Tap, 4-way, 11 dB	4013440
FST Tap, 4-way, 14 dB	4013441
FST Tap, 4-way, 17 dB	4013442
FST Tap, 4-way, 20 dB	4013443
FST Tap, 4-way, 23 dB	4018366
FST Tap, 4-way, 26 dB	4018367
2-Way Tap Face Plates	**Part Number**
FST Face Plate, 2-way, 4 dB	4013459
FST Face Plate, 2-way, 8 dB	4013460
FST Face Plate, 2-way, 11 dB	4013461
FST Face Plate, 2-way, 14 dB	4013462
FST Face Plate, 2-way, 17 dB	4013463
FST Face Plate, 2-way, 20 dB	4013464
FST Face Plate, 2-way, 23 dB	4018374
FST Face Plate, 2-way, 26 dB	4018375
4-Way Tap Face Plates	**Part Number**
FST Face Plate, 4-way, 8 dB	4013465
FST Face Plate, 4-way, 11 dB	4013466
FST Face Plate, 4-way, 14 dB	4013467
FST Face Plate, 4-way, 17 dB	4013468
FST Face Plate, 4-way, 20 dB	4013469
FST Face Plate, 4-way, 23 dB	4018376
FST Face Plate, 4-way, 26 dB	4018377

Table 18. Full Profile FST

2-Way Full Profile Taps	Part Number
FST Tap, 2-way, 4 dB	4013448
FST Tap, 2-way, 8 dB	4013449
FST Tap, 2-way, 11 dB	4013450
FST Tap, 2-way, 14 dB	4013451
FST Tap, 2-way, 17 dB	4013452
FST Tap, 2-way, 20 dB	4013453
FST Tap, 2-way, 23 dB	4018370
FST Tap, 2-way, 26 dB	4018371
4-Way Full Profile Taps	**Part Number**
FST Tap, 4-way, 8 dB	4013454
FST Tap, 4-way, 11 dB	4013455
FST Tap, 4-way, 14 dB	4013456
FST Tap, 4-way, 17 dB	4013457
FST Tap, 4-way, 20 dB	4013458
FST Tap, 4-way, 23 dB	4018372
FST Tap, 4-way, 26 dB	4018373
8-Way Full Profile Taps	**Part Number**
FST Tap, 8-way, 11 dB	4013444
FST Tap, 8-way, 14 dB	4013445
FST Tap, 8-way, 17 dB	4013446
FST Tap, 8-way, 20 dB	4013447
FST Tap, 8-way, 23 dB	4018368
FST Tap, 8-way, 26 dB	4018369
2-Way Full Profile Tap Face Plates	**Part Number**
FST Full Profile Face Plate, 2-way, 4 dB	4013474
FST Full Profile Face Plate, 2-way, 8 dB	4013475
FST Full Profile Face Plate, 2-way, 11 dB	4013476
FST Full Profile Face Plate, 2-way, 14 dB	4013477
FST Full Profile Face Plate, 2-way, 17 dB	4013478
FST Full Profile Face Plate, 2-way, 20 dB	4013479
FST Full Profile Face Plate, 2-way, 23 dB	4018380
FST Full Profile Face Plate, 2-way, 26 dB	4018381
4-Way Full Profile Tap Face Plates	**Part Number**
FST Full Profile Face Plate, 4-way, 8 dB	4013480
FST Full Profile Face Plate, 4-way, 11 dB	4013481
FST Full Profile Face Plate, 4-way, 14 dB	4013482
FST Full Profile Face Plate, 4-way, 17 dB	4013483
FST Full Profile Face Plate, 4-way, 20 dB	4013484
FST Full Profile Face Plate, 4-way, 23 dB	4018382
FST Full Profile Face Plate, 4-way, 26 dB	4018383
8-Way Full Profile Tap Face Plates	**Part Number**
FST Full Profile Face Plate, 8-way, 11 dB	4013470
FST Full Profile Face Plate, 8-way, 14 dB	4013471
FST Full Profile Face Plate, 8-way, 17 dB	4013472
FST Full Profile Face Plate, 8-way, 20 dB	4013473
FST Full Profile Face Plate, 8-way, 23 dB	4018378
FST Full Profile Face Plate, 8-way, 26 dB	4018379

Table 19. Plug-In Reverse Attenuators for 42/54 MHz Split

Description	Part Number
0 dB FST Reverse Attenuator (factory installed in each unit)	-
3 dB FST Reverse Attenuator	4013485
6 dB FST Reverse Attenuator	4013486
9 dB FST Reverse Attenuator	4013487
12 dB FST Reverse Attenuator	4013488

Table 20. Plug-In Reverse Attenuators for 55/70 MHz Split

Description	Part Number
0 dB FST Reverse Attenuator (factory installed in each unit)	-
3 dB FST Reverse Attenuator	4018384
6 dB FST Reverse Attenuator	4018385
9 dB FST Reverse Attenuator	4018386
12 dB FST Reverse Attenuator	4018387

Table 21. Plug-In Reverse Attenuators for 65/86 MHz Split

Description	Part Number
0 dB FST Reverse Attenuator (factory installed in each unit)	-
3 dB FST Reverse Attenuator	4018388
6 dB FST Reverse Attenuator	4018389
9 dB FST Reverse Attenuator	4018390
12 dB FST Reverse Attenuator	4018391

Table 22. Plug-In Reverse Attenuators for 85/105 MHz Split

Description	Part Number
0 dB FST Reverse Attenuator (factory installed in each unit)	-
3 dB FST Reverse Attenuator	4038258
6 dB FST Reverse Attenuator	4038259
9 dB FST Reverse Attenuator	4038260
12 dB FST Reverse Attenuator	4038261

Table 23. Plug-In Forward EQs

Description	Part Number
6 dB FST Forward EQ	4022293
9 dB FST Forward EQ	4022294
12 dB FST Forward EQ	4022295

Table 24. Plug-In Forward Inverse EQs

Description	Part Number
3 dB FST Inverse EQ	4018392
6 dB FST Inverse EQ	4018393
9 dB FST Inverse EQ	4018394
12 dB FST Inverse EQ	4018395

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