



Outdoor RF passives

1.2 GHz SA STYLE

Taps, Splitters, DC Couplers & Power Inserter

The SA Outdoor Line **Taps** are high performance passives. The signal and power are constantly present on IN and OUT ports while the Tap ports are used to feed the subscriber outlets. The SA Series offers a wide range of different line taps that meet frequency range up to 1218 MHz. All the housings are well screened to meet and exceed the Cenelec Class A+ standards. Moreover, the **Line Splitters**, **DC Couplers** and **Power Inserter** are high performance passives to split signal and power in coaxial trunk and distribution lines of HFC networks.

SA Style features

- Frequency range up to 1218 MHz, Docsis 3.1 compliant
- High performance for extreme environmental conditions
- Electromagnetic compatibility exceeds Class A+ (= Class A +10 dB)
- Weather resistant powder coating
- F-ports DC blocked and waterproof designed
- Surge withstand complies to global surge immunity Standards IEC 61000-4-5 and IEEE C62.41

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OUTDOOR RF PASSIVES / LINE TAPS - SA STYLE

ELECTRICAL SPECIFICATIONS - 2-WAY TAPS (3TP2-xx-yy)											
Frequency range (MHz)	4	8	11	14	17	20	23	26	29	32	35
Insertion loss (dB, Max.) - In to Out											
5 - 65	T	3.4	1.6	1.1	1.0	0.8	0.8	0.7	0.7	0.7	0.7
65 - 300	T	3.4	1.8	1.3	1.0	0.9	0.8	0.8	0.8	0.8	0.7
300 - 550	T	4.0	2.1	1.6	1.3	1.1	1.1	1.1	1.1	1.1	1.0
550 - 750	T	4.3	2.6	1.6	1.4	1.3	1.3	1.3	1.2	1.2	1.1
750 - 860	T	4.6	2.6	2.1	1.8	1.5	1.5	1.5	1.3	1.3	1.3
860 - 1000	T	4.8	2.8	2.2	1.9	1.7	1.7	1.7	1.4	1.4	1.4
1000 - 1218	T	4.8	3.1	2.3	2.1	1.9	1.9	1.9	1.7	1.7	1.7
Insertion loss (dB, Max.) -In to Tap											
5 - 65	5.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
65 - 860	5.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
860 - 1218	5.5	9.5	12.5	15.5	18.5	21.5	24.5	27.5	30.5	33.5	36.5
Isolation (dB, Min.) - Out to Tap											
5 - 10	NA	20.5	22.0	23.5	26.0	29.5	33.0	34.5	38.0	39.5	41.0
10 - 65	NA	27.5	29.0	30.5	32.0	33.5	35.0	36.5	38.0	39.5	41.0
65 - 860	NA	27.5	27.0	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0
860 - 1218	NA	23.5	25.0	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0
Isolation (dB, Min.) - Tap to Tap											
5 - 10	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
10 - 65	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
65 - 860	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
860 - 1218	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Return loss (dB, Min.) - Input/Output/Tap											
5 - 15	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
15 - 65	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
65 - 752	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
752 - 1218	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
ELECTRICAL SPECIFICATIONS - 4-WAY TAPS (3TP4-xx-yy)											
Frequency range (MHz)	4	8	11	14	17	20	23	26	29	32	35
Insertion loss (dB, Max.) - In to Out											
5 - 65	NA	T	3.3	1.6	1.1	1.1	0.8	0.8	0.7	0.7	0.7
65 - 300	NA	T	3.3	1.8	1.3	1.2	0.8	0.8	0.8	0.7	0.7
300 - 550	NA	T	3.8	2.2	1.6	1.5	1.1	1.1	1.1	1.0	1.0
550 - 750	NA	T	4.3	2.4	1.7	1.6	1.3	1.3	1.2	1.1	1.1
750 - 860	NA	T	4.8	2.7	2.0	1.7	1.5	1.5	1.4	1.2	1.2
860 - 1000	NA	T	4.8	3.0	2.1	1.8	1.7	1.6	1.5	1.4	1.4
1000 - 1218	NA	T	4.8	3.2	2.3	2.0	1.9	1.8	1.8	1.6	1.6
Insertion loss (dB, Max.) - In to Tap											
5 - 65	NA	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
65 - 860	NA	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
860 - 1218	NA	9.5	12.5	15.5	18.5	21.5	24.5	27.5	30.5	33.5	36.5
Isolation (dB, Min.) - Out to Tap											
5 - 10	NA	NA	22.0	23.5	26.0	29.5	33.0	34.5	38.0	39.5	41.0
10 - 65	NA	NA	29.0	30.5	32.0	33.5	35.0	36.5	38.0	39.5	41.0
65 - 860	NA	NA	27.0	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0
860 - 1218	NA	NA	25.0	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0
Isolation (dB, Min.) - Tap to Tap											
5 - 10	NA	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
10 - 65	NA	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
65 - 860	NA	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
860 - 1218	NA	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0



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OUTDOOR RF PASSIVES / LINE TAPS - SA STYLE

ELECTRICAL SPECIFICATIONS - 4-WAY TAPS (3TP4-xx-yy)											
Frequency range (MHz)	4	8	11	14	17	20	23	26	29	32	35
Return loss (dB, Min.) - Input/Output/Tap											
5 - 15	NA	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
15 - 65	NA	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
65 - 752	NA	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
752 - 1218	NA	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
ELECTRICAL SPECIFICATIONS - 8-WAY TAPS (3TP8-xx-yy)											
Frequency range (MHz)	4	8	11	14	17	20	23	26	29	32	35
Insertion loss (dB, Max.) - In to Out											
5 - 65	NA	NA	T	3.3	1.6	1.1	1.1	0.8	0.8	0.7	0.7
65 - 300	NA	NA	T	3.4	1.8	1.2	1.1	0.9	0.8	0.8	0.8
300 - 550	NA	NA	T	3.9	2.3	1.6	1.5	1.3	1.1	1.1	1.1
550 - 750	NA	NA	T	4.1	2.6	1.8	1.5	1.5	1.3	1.3	1.2
750 - 860	NA	NA	T	4.5	2.9	2.0	1.7	1.7	1.5	1.5	1.3
860 - 1000	NA	NA	T	4.8	3.0	2.1	1.8	1.7	1.6	1.6	1.4
1000 - 1218	NA	NA	T	4.8	3.2	2.3	2.0	1.8	1.8	1.8	1.6
Insertion loss (dB, Max.) -In to Tap											
5 - 65	NA	NA	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
65 - 860	NA	NA	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.0	36.0
860 - 1218	NA	NA	12.5	15.5	18.5	21.5	24.5	27.5	30.5	33.5	36.5
Isolation (dB, Min.) - Out to Tap											
5 - 10	NA	NA	NA	23.5	26.0	29.5	33.0	34.5	38.0	39.5	41.0
10 - 65	NA	NA	NA	30.5	32.0	33.5	35.0	36.5	38.0	39.5	41.0
65 - 860	NA	NA	NA	28.5	30.0	31.5	33.0	34.5	36.0	37.5	39.0
860 - 1218	NA	NA	NA	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0
Isolation (dB, Min.) - Tap to Tap											
5 - 10	NA	NA	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
10 - 65	NA	NA	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0
65 - 860	NA	NA	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
860 - 1218	NA	NA	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Return loss (dB, Min.) - Input/Output/Tap											
5 - 15	NA	NA	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
15 - 65	NA	NA	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
65 - 752	NA	NA	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
752 - 1218	NA	NA	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
ORDERING INFORMATION - LINE TAPS											
<p>3TP2-xx-yy Outdoor 2-way tap xdB, 5-1218MHz, terminated 3TP4-xx-yy Outdoor 4-way tap xdB, 5-1218MHz, terminated 3TP8-xx-yy Outdoor 8-way tap xdB, 5-1218MHz, terminated</p> <p>xx = tap value in dB : 4, 8, 11, 14, 17, 20, 23, 26, 29, 32 or 35 dB yy = type of housing: SA = Scientific Atlanta</p> <p><u>Available values:</u> 3TP2-4-8-11-14-17-20-23-26-29-32-35 3TP4-8-11-14-17-20-23-26-29-32-35 3TP8-11-14-17-20-23-26-29-32-35</p> <p><u>Versions:</u> - Faceplate only: 3TP2-xx-yy-FP, 3TP4-xx-yy-FP, 3TP8-xx-yy-FP</p>											



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OUTDOOR RF PASSIVES / DC COUPLERS & SPLITTERS - SA STYLE

ELECTRICAL SPECIFICATIONS - DC COUPLERS (3DC-xx-yy)			
Frequency range (MHz)	3DC-8-SA -2/-8	3DC-12-SA -1/-12	3DC-16-SA -1/-16
Insertion loss (dB, Max.) - In to Out - OUT port			
5 - 65	1.8	1.3	1.0
65 - 300	2.3	1.7	1.2
300 - 550	2.5	1.9	1.4
550 - 750	2.7	2.1	1.6
750 - 860	2.9	2.3	1.9
860 - 1000	3.1	2.5	2.0
1000 - 1218	3.3	2.7	2.5
Insertion loss (dB, Max.) -In to Tap - TAP port			
5 - 1000	8.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0
1000 - 1218	8.0 + 1.5 / -1.0	12.0 + 1.5 / -1.0	16.0 + 1.5 / -1.0
Isolation (dB, Min.) - Out to Tap			
10 - 65	26.5	27.0	32.0
65 - 860	24.0	27.0	30.0
860 - 1218	22.0	25.0	26.0
Return loss (dB, Min.) - Input/Output/Tap			
10 - 65	18.0	18.0	18.0
65 - 752	18.0	18.0	18.0
752 - 1218	17.0	17.0	17.0
ELECTRICAL SPECIFICATIONS - SPLITTERS (3SP-xx-yy)			
Frequency range (MHz)	3SP-2-SA -4/-4	3SP-3U-SA -4/-8/-8	3SP-3-SA -7/-7/-7
Insertion loss (dB, Max.) - In to Out - OUT1 port			
5 - 65	4.1	4.1	6.3
65 - 300	4.3	4.3	6.3
300 - 550	4.5	4.5	6.5
550 - 750	4.6	4.6	7.0
750 - 860	4.8	4.9	7.2
860 - 1000	4.8	5.0	7.3
1000 - 1218	5.0	5.3	8.0
Insertion loss (dB, Max.) - In to Out - OUT2 port			
5 - 65	4.1	7.4	6.3
65 - 300	4.3	7.5	6.3
300 - 550	4.5	7.6	6.5
550 - 750	4.6	7.7	7.0
750 - 860	4.8	8.0	7.2
860 - 1000	4.8	8.0	7.3
1000 - 1218	5.0	8.5	8.0
Insertion loss (dB, Max.) - In to Out - OUT3 port			
5 - 65	T	7.4	6.3
65 - 300	T	7.5	6.3
300 - 550	T	7.6	6.5
550 - 750	T	7.7	7.0
750 - 860	T	8.0	7.2
860 - 1000	T	8.0	7.3
1000 - 1218	T	8.5	8.0
Isolation (dB, Min.) - Port to Port			
10 - 65	26.0	26.0	26.0
65 - 860	24.0	24.0	24.0
860 - 1218	22.0	22.0	22.0



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OUTDOOR RF PASSIVES / SPLITTERS - SA STYLE

ELECTRICAL SPECIFICATIONS - SPLITTERS (3SP-xx-yy)				
Frequency range (MHz)	3SP-2-SA -4/-4	3SP-3U-SA -4/-8/-8	3SP-3-SA -7/-7/-7	
Return loss (dB, Min.) - All ports				
10 - 65	18.0	18.0	18.0	
65 - 752	18.0	18.0	18.0	
752 - 1218	17.0	17.0	17.0	
ELECTRICAL SPECIFICATIONS - POWER INSERTER (3LPI-SA)				
Frequency range (MHz)	Insertion loss (dB, Max.)	Return loss (dB, Min.)		Isolation RF to AC (dB, Min.)
5 - 65	0.8	18.0		60.0
65 - 300	1.1	18.0		60.0
300 - 550	1.2	18.0		60.0
550 - 750	1.3	18.0		60.0
750 - 860	1.3	17.0		60.0
860 - 1000	1.3	17.0		52.0
1000 - 1218	1.4	17.0		52.0
GENERAL SPECIFICATIONS				
Frequency Range (MHz)	5 - 1218 MHz		Nominal Impedance	75 Ohm
Operating temperature range	-40 ... +65 °C		Protection	IP67
Connectors	IN-OUT		TAP	
	Type	5/8"-24 female	Type	F connector
	Compliance	ANSI/SCTE91-2007	Compliance	ANSI/SCTE 2015 01 IEC61169-24 2010
			Body	Material: Brass + Plating: NiSn
			Inner contact	Material: Beryllium Copper + Plating: NiSn
			Acceptance dia. range	0.7 - 1.2 mm
			Clamp force	≥ 115 gr. @ 0.7 mm pin
			Torque	Nom. tightening torque 4.5 Nm
Surge Immunity Test	2 kV , 1.2/50 μs surge voltage acc. to IEC61000-4-5:2006		EMC compatibility	EN60728-2 2012, Class A+
HUM modulation	Taps > 65 dB in 5-10MHz and 860-1218 MHz > 70 dB in 10-860 MHz 8A current passing		DC Couplers, Splitters & Power Inserter > 70 dB in 10-1218 MHz 10A current passing	
Weight	2-4 way: 0.32 kg 8 way: 0.65 kg		F port isolation	600 V
Dimensions (H x W x D)	2-4 way: 90 x 80 x 90 mm 8 way: 135 x 80 x 125 mm		Maximum current	12 A @ 90 VAC
ORDERING INFORMATION - DC COUPLERS & SPLITTERS & POWER INSERTER				
3DC-8-SA	Outdoor directional coupler 8 dB, 5-1218MHz, SA			
3DC-12-SA	Outdoor directional coupler 12 dB, 5-1218MHz, SA			
3DC-16-SA	Outdoor directional coupler 16 dB, 5-1218MHz, SA			
3SP-2-SA	Outdoor 2-way splitter 5-1218MHz, SAI			
3SP-3-SA	Outdoor 3-way splitter, 5-1218MHz, SA			
3SP-3U-SA	Outdoor 3-way splitter unbalanced, 5-1218MHz, SA			
3LPI-SA	Outdoor Power Inserter, 5-1218MHz, SA			



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3xP-SA_1.2GHz Outdoor Passives_SA_20210909

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