



SSNT TYPE D  
4 OUTPUT ACTIVE RETURN  
With EMTA PORT



SSNT TYPE E  
8 OUTPUT ACTIVE RETURN  
With EMTA PORT

## SSNT - TYPE D and E House Amplifiers

The ACI Communications Home Amplifier with a MoCA filter and a dedicated modem port is a house-type active device that delivers superior performance up to 1 GHz in today's expanding RF telecommunications networks. The modem pass through port is designed to keep the modem connection active if the residential power is lost to provide uninterrupted VoIP services. This device also has a built in LPF MoCA filter that prevents the MoCA signals (1125-1525 MHz) getting out of the internal home network. The internal MoCA bypass connection allows for in-home networking between the modem, eMTA, set top boxes and other in-home networking devices such as game consoles, computers, ect.

### Features

- ◆ 1002 MHz bandwidth
- ◆ 5.0 to 8.0 dB forward gain
- ◆ -4.25 dB to -8.25 dB reverse gain
- ◆ MoCA LFP filter and bypass connection for in-home networking
- ◆ Superior performance specifications for full channel loading at design bandwidth
- ◆ Die-cast aluminum housing for excellent heat dissipation and corrosion protection
- ◆ Remote or co-located powering capability
- ◆ Perfect for both indoor and outdoor applications
- ◆ 6 Kv combination wave surge protection on amplifier – all ports (IEEE587 category B3)
- ◆ 6 Kv combination wave surge protection on the transformer (IEEE587 category B3).
- ◆ High performance “F” connectors – SCTE compliant )
- ◆ Universal range AC power pack ensures normal

**SSNT House Amplifiers  
Type D & E**

STATION PARAMETERS:		Type	TYPE D1				TYPE E1				
		Part Number	SSNT-5-S4D1				SSNT-9-S4E1				
		Description	UNITS	Four outputs with active reverse & passive modem port				Eight outputs with active reverse & passive modem port			
<b>FORWARD</b>			MHz	54	552	750	1002	54	552	750	1002
Gain	Min	dB	1.25	3.75	4.25	5.00	1.25	3.75	4.25	5.00	
	Ideal	dB	1.75	5.00	5.75	6.75	1.75	5.00	5.75	6.75	
	Max	dB	3.25	6.00	7.00	8.00	3.25	6.00	7.00	8.00	
Return loss - All ports power on		Min	-dB				18				
Output to output isolation - all ports		Worst case frequency	dB				≥ 25				
Noise figure		Worst case	dB				≥ 16				
<b>Group Delay (n = Sec / 3.58 MHz)</b>											
Channel 2-4		Max	ns				30				
Channel 5 & up		Max	ns				5				
<b>CHANNLE LOADING</b>											
Station Input Levels - See Note 1											
Input Levels - Tap-on-bridger-port		Case 1	dBmV				+18 dBmV @ 1002 MHz, +6 dBmV @ 54 MHz				
Input Levels - Flat amp inputs		Case 2	dBmV				+12 dBmV @ 1002 MHz, +12 dBmV @ 54 MHz				
Input Levels - Tap-at-end-of-line		Case 3	dBmV				+8 dBmV @ 1002 MHz, +16 dBmV @ 54 MHz				
Station Distortions (Worst Case)											
Composite Triple Beat (CTB)			-dBc				75				
Composite Second Order (CSO)			-dBc				63				
Cross Modulation (XMOD)			-dBc				77				
CNN @ 55.25 MHz			dBc				49				
CNN @ 999 MHz			-dBc				53				
HUM Modulation		Time Domain Method	-dBc				75				
<b>REVERSE</b>			MHz	5	10	40	42	5	10	40	42
Gain	Min	dB	-9.25	-7.25	-7.25	-8.25	-9.25	-7.25	-7.25	-8.25	
	Ideal	dB	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	-6.25	
	Max	dB	-3.25	-5.25	-5.25	-4.25	-3.25	-5.25	-5.25	-4.25	
Return loss	Min 5-15 MHz	dB	18				18				
	Min 15-40 MHz	dB	30 Output Ports / 25 Input port				30 Output Ports / 25 Input port				
	Min 40-42 MHz	dB	18				18				
Output to output isolation - all ports	Min 5-15 MHz	dB	≥ 25				≥ 25				
	Min 15-40 MHz	dB	≥ 35				≥ 35				
	Min 40-42 MHz	dB	≥ 25				≥ 25				
Noise figure		Worst case	dB				≤ 16				
<b>Group Delay</b>											
Group Delay - 5 MHz to 6.5 MHz		Maximum Inequality	ns				23				
Group Delay - Any 1.5 MHz, 6.5 MHz to 40 MHz		Maximum Inequality	ns				10				
Group Delay - 40 MHz to 42 MHz		Maximum Inequality	ns				30				
<b>CHANNLE LOADING</b>			T8 (13 MHz) & T9 (19 MHz) Per ANSI/SCTE 115 2006								
Station Input Levels - Specified at housing reverse input (forward RF output ports)											
Input Levels		Per Carrier	dBmV				+55				
Station Distortions (Worst Case) - See Note 3											
Discrete Second Order (DSO)			-dBc				55				
Discrete Third Order (DTO)			-dBc				55				
Cross Modulation (XMOD)			-dBc				65				
HUM Modulation		Time Domain Method	-dBc				65				

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STATION PARAMETERS:		Type	TYPE D1				TYPE E1			
		Part Number	SSNT-5-S4D1				SSNT-9-S4E1			
<b>MODEM PORT</b>										
Forward		MHz	54	552	750	1002	54	552	750	1002
Insertion Loss	Min	dB	-3.50	-3.75	-4.00	-4.00	-3.50	-3.75	-4.00	-4.00
	Ideal	dB	-4.00	-4.25	-4.50	-4.75	-4.00	-4.25	-4.50	-4.75
	Max	dB	-5.00	-5.25	-5.50	-6.00	-5.00	-5.25	-5.50	-6.00
Return loss - worst case frequency, power off		dB	≥ 9				≥ 9			
Reverse		MHz	5	10	40	42	5	10	40	42
Insertion Loss	Min	dB	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5
	Ideal	dB	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0
	Max	dB	-5.5	-4.5	-4.5	-4.5	-5.5	-4.5	-4.5	-4.5
<b>Multimedia over Coax Alliance (MoCA)</b>		MHz	1125-1225		1225-1525		1125-1225		1225-1525	
Upstream isolation: Any amplified output port to input port	Min	dB	36.0				36.0			
Downstream isolation: (MoCA isolation from system input): Input port to any amplified output port	Min	dB	23.0		26.0		23.0		26.0	
Insertion Loss - Between output ports	Max	dB	30.0				42.0			
Insertion Loss - Modem port to any output port	Max	dB	30.0				42 (36 Typical)			
Isolation - bi-directional isolation: Modem port < > input port	Min	dB	30.0				30.0			
<b>Physical Information</b>										
RFI Shielding	See Note 2	dB	≥ 100							
Impedance		ohm	75							
Surge protection	Required on all active outputs, input port, passive modem port, & power port (with transformer)	KV	IEEE 587 categories, B3, 6kV/3kA (combination wave) A3, 6KV (ring wave)							
Corrosion Withstand			1000 hours, ANSI/SCTE 143 2007, Test Method for Salt Spray							
Seal Integrity		PSIG	≥ ±15							
DC input voltage range	Measured at the amplifier	VDC	10 to 15							
Power consumption		mA	600				600			
Operating temperature range		°F (°C)	-40 to +140 (-40 to +60)							
Dimensions	Height x Width x Depth	in. (cm)	1.5 x 3.5 x 5.0 (3.8 x 8.9 x 12.7)				1.5 x 3.5 x 6.9 (3.8 x 8.9 x 17.6)			
Weight	With external power supply	lbs. (kg)	1.0 (0.45)				1.3 (0.6)			

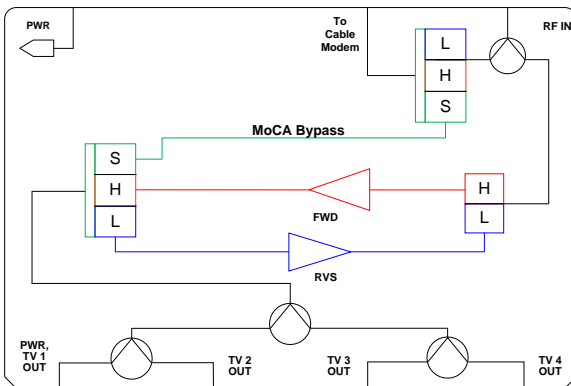
Notes:

1. Worst case channel with specified channel load over specified temperature range.
2. ANSI/SCTE 48-1 2007, Test Method for Measuring Shielding Effectiveness of Passive and Active Devices Using a GTEM Cell.

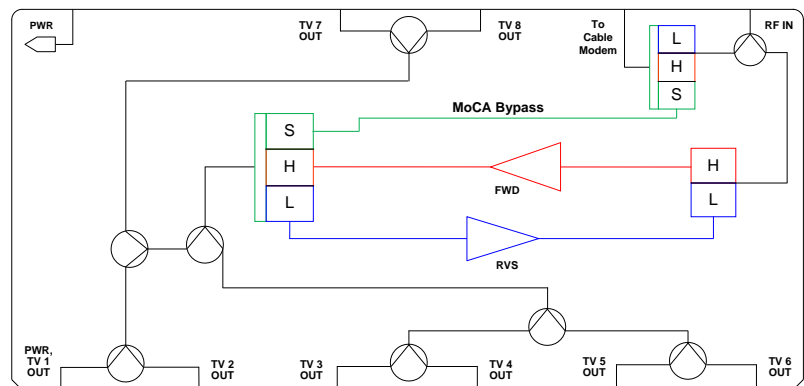
## Part Number Ordering Information:

Part Number	Description
<b>Amplifier Only</b>	
SSNT-5-S4D1	TYPE D - 4 Output Active Reverse & Cable Modem Port
SSNT-9-S4E1	TYPE E - 8 Output Active Reverse & Cable Modem Port
<b>Amplifier with 120 VAC Power Supply</b>	
SSNT-5-S4D1-01	TYPE D - 4 Output Active Reverse & Cable Modem Port - With 120 VAC PWS
SSNT-9-S4E1-01	TYPE E - 8 Output Active Reverse & Cable Modem Port - With 120 VAC PWS
<b>Amplifier with 120 VAC Power Supply &amp; Power Inserter</b>	
SSNT-5-S4D1-02	TYPE D - 4 Output Active Reverse & Cable Modem Port - With 120 VAC PWS & PI-30 Power inserter
SSNT-9-S4E1-02	TYPE E - 8 Output Active Reverse & Cable Modem Port - With 120 VAC PWS & PI-30 Power inserter

## Block Diagrams:



MoCA Multimedia 5 Port House Amplifier  
With Active Reverse Gain  
Type D



MoCA Multimedia 9 Port House Amplifier  
With Active Reverse Gain  
Type E

# ACI

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