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FlexNet® 900 Series Trunk and Bridger Amplifiers



C-COR ***FlexNet 900 Series Trunk and Bridger Amplifiers*** are ideally suited for HFC architectures delivering analog and digital signals.

FlexNet 900 Series Trunk and Bridger Amplifiers are also available with Transfer Linearization (TL) Technology, which improves the linear characteristics of standard, highly reliable silicon technology hybrids, thereby allowing for higher operating level capabilities and/or improved distortion performance, in addition to higher channel capacities and improved system level performance. TL enhanced products also translate into fewer active devices necessary in the HFC architecture, thus reducing maintenance, installation, and powering costs.

In addition, FlexNet 900 Series Trunk and Bridger Amplifiers can be upgraded to optical nodes with our naviCOR FlexNet Lid Upgrade.

And C-COR has established relationships with major providers of element management systems to provide rich, open, standards-based interfaces to our equipment, to ensure that our customers' needs are met.

FlexNet Trunk Amplifiers

The FlexNet Trunk (FNT) is a three active output station that provides one trunk level output and two distribution level outputs that can be field configurable to provide four outputs. FNTs provide a high performance trunk level output to "express" to other FNTs in a cascade for maximum distortion performance.

FlexNet Bridger Amplifiers

The FlexNet Bridger (FNB), which is used at the end of trunk-level lines, provides two active, high-level distribution outputs that can be field configurable to provide four outputs.

Features

- TL Technology for improved performance capabilities over standard silicon-based technology
- High efficiency, switching regulator power supply for 60 or 90 volt operation
- Reversible RF module allows the amplifier to open to roadside
- Die-cast, aluminum alloy housing with unique RFI and weather sealing for durability and protection of internal electronics; pressure tested to 12 psi
- Optional 90° access to corner ports for improved cost effectiveness in underground installations
- Upgradable to an optical node with our naviCOR FlexNet Lid Upgrade

C-COR.net

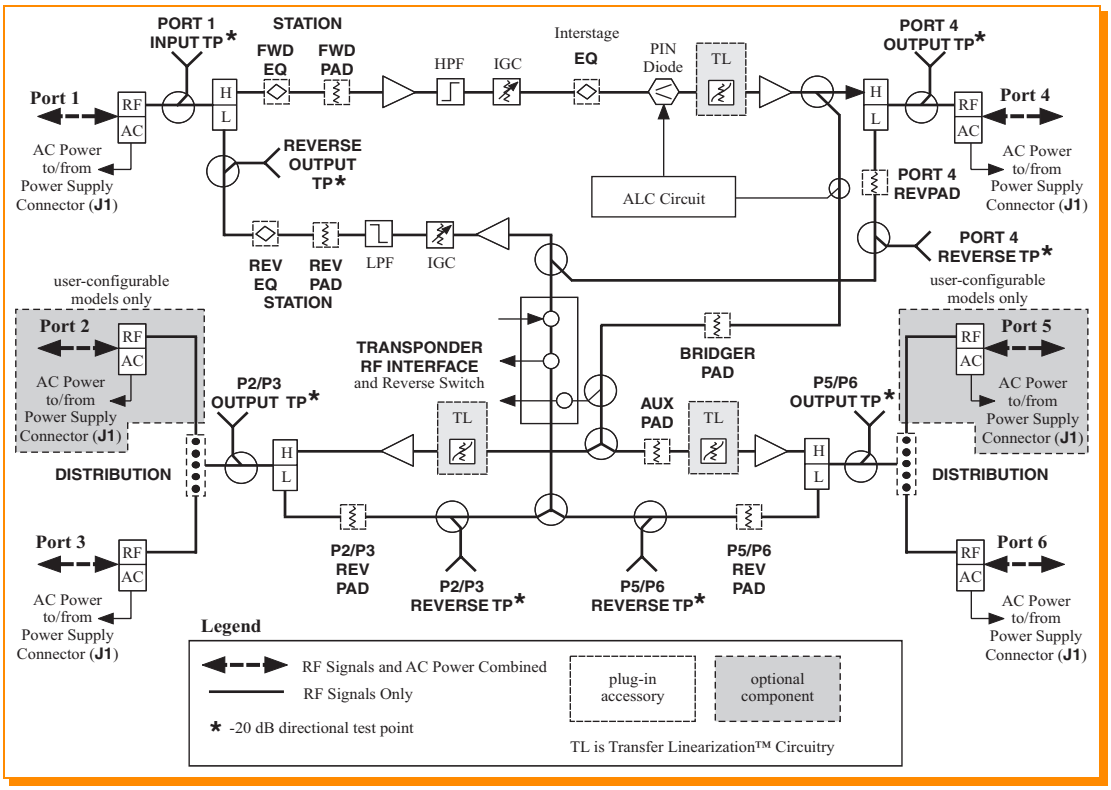
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FlexNet Trunk and Bridger Amplifier Options

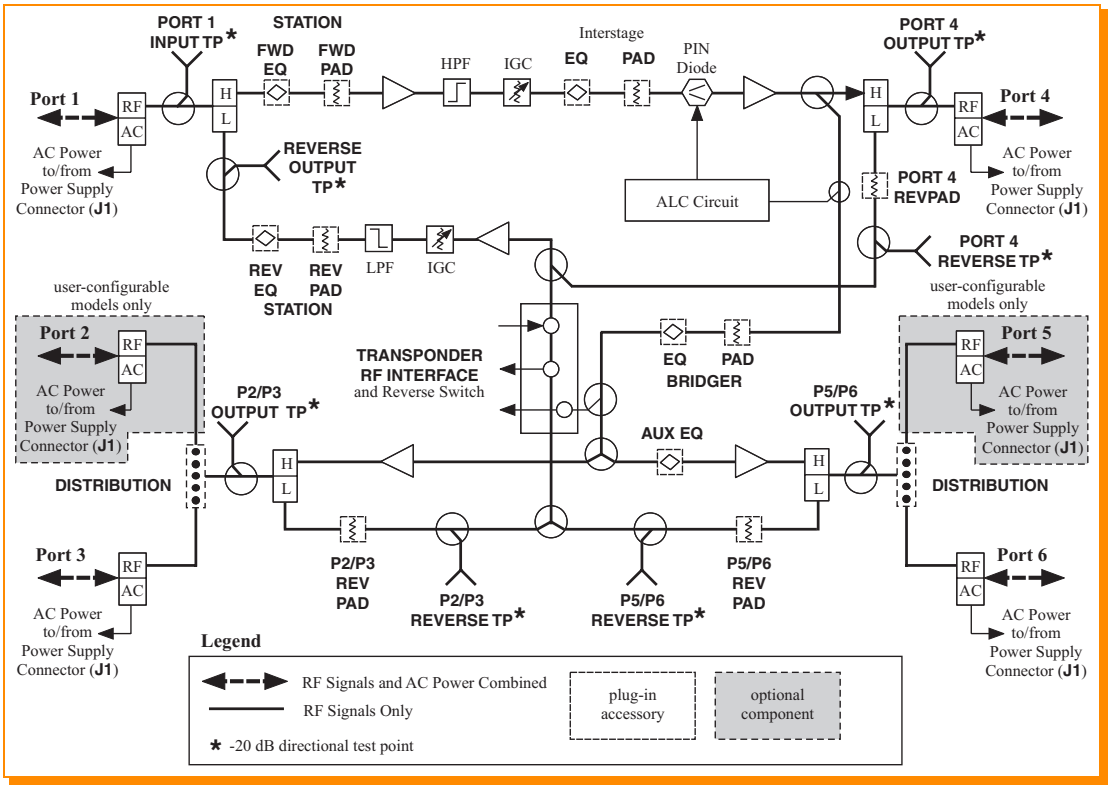
Model Numbers	***Trunks:***	***FNT95Dx(-/T)xx6(H/P)xxx Series (862MHz versions) FNT9xCx Series (750MHz versions)***	
	Bridgers:	***FNB9(A/7)Dx(-/T)xx6(G/N)xxx Series (862MHz versions) FNB9xCx Series (750MHz versions)***	
Series	*FlexNet Trunk Amplifiers with or without TL Technology* *FlexNet Bridger Amplifiers with or without TL Technology*		
Spacing	*FNT95Dx Series Trunk:*	*30dB PHD*	*a*
	FNT95Dx Series Bridger:	*39dB PHD*	*a*
	FNB9(A/7)Dx Series Bridger:	*40dB PHD*	*a*
	FNT97CJ Series Trunk:	*28dB PHD*	*b*
	FNT97CJ Series Bridger:	*37dB PHD*	*b*
	FNB98CJ Series Bridger:	*37dB PHD*	*b*
	FNT94CL Series Trunk:	*28dB PHD*	*c*
	FNT94CL Series Bridger:	*37dB PHD*	*c*
	FNT96CL Series Trunk:	*31dB PHD*	*c*
	FNT96CL Series Bridger:	*37dB PHD*	*c*
	FNB96CL Series Bridger:	*37dB PHD*	*c*
Notes:	*a) 18dB factory equalization.* *b) 11dB factory equalization.* *c) 17dB factory equalization.*		
Bandwidth	*862MHz or 750MHz*		
Frequency Splits	*40/54, 42/54MHz, 55/70MHz, 65/80MHz*		
Note:	*See Price List for detailed options.*		
Level Control	*439.25MHz TV* *451.25MHz TV* *495.25MHz TV* *499.25MHz TV*		
Note:	*See Price List for detailed options.*		
Reverse	*18 dB Active Gain*		*a*
Note:	*a) Includes internal reverse testpoints.*		
Output Configurations	*FNT95DJ Series:*	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,b*
	FNB9ADJ Series:	*Bridger with 2 Outputs, User-configurable to 4 Outputs*	*a,b*
	FNT95DQ Series:	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,b*
	FNB97DQ Series:	*Bridger with 2 Outputs, User-configurable to 4 Outputs*	*a,b*
	FNT95DN Series:	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,b*
	FNB97DN Series:	*Bridger with 2 Outputs, User-configurable to 4 Outputs*	*a,b*
	FNT94CL Series:	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,b*
	FNT97CJ Series:	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,b*
	FNB98CJ Series:	*Bridger with 2 Outputs, User-configurable to 4 Outputs*	*a,b*
	FNT96CL Series:	*Trunk with 2 Bridger Outputs, User-configurable to 4 Outputs*	*a,c*
	FNB96CL Series:	*Bridger with 2 Outputs, User-configurable to 4 Outputs*	*a,c*
Notes:	*a) Plug-in splitters and directional couplers must be ordered separately.* *b) –20 dB internal or external testpoints.* *c) –20 or –25dB testpoints.*		
Powering	*2.3A, 90V, 50/60Hz, H.E. Transformerless*		*a*
Note:	*a) 40-90 Volt operating range.*		
Housing	*6-Port FlexNet, 1GHz, with Internal Testpoints* *6-Port FlexNet, 1GHz, with External Testpoints*		
Housing Finish	*Standard* *Corrosion Protected*		

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Block Diagrams



FNT95DJT Series Trunk with TL Technology



FNT95DJT Series Trunk without TL Technology

Bridger amplifiers are similar to trunk amplifiers, with the exception of Port 4. Bridger amplifiers do not have Port 4 circuitry.

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DJTxx6(H/P)6xx
862MHz, 42/54 Split

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*54-862*		*5-42*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (“H” and “P” options) (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, 4)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 5)	*112/96/79*	*112/96/79*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/750/650/550/54*	*862/750/650/550/54*	*42/5*	
Input, dBmV min. (Note 6)	*12.5/12/11.5/11/12*	*12.5/12/11.5/11/12*	*17/17*	
Output, dBmV (Note 7)	*42.5/40.5/39/37/28*	*51.5/49.5/48/46/37*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*71/76/80*	*62/70/75*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 9)	*66/72/75*	*60/66/71*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*64/68/72*	*56/60/65*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*82*	*65*		
Noise, 4MHz, 75Ohms	*62/62/61.5/61/61*	*62/62/61.5/61/61*	*66*	
Noise Figure, dB (without EQ) (Note 11)	*8.5/8/8/8/9*	*8.5/8/8/8/9*	*10*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB min., All Entry Ports	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*52/47.5*	*51.5/47*
AC Current, mA			*725/685*	*940/855*
DC Current, mA @ 24V ± 0.5V			*1895/1725*	*1895/1725*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-42-x*	

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DJTxx6(H/P)6xx
862MHz, 42/54 Split

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Chrominance/Luminance Delay, Maximum			
Channel 2, ns/3.58MHz		*25*	—
Channel 3, ns/3.58MHz		*11*	—
Channel 4, ns/3.58MHz		*6*	—
Channel 5, ns/3.58MHz		*3.6*	—
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*6*
35 - 36.5MHz, ns		—	*10*
38.5 - 40MHz, ns		—	*26*
Hum Modulation (Time Domain @ 15A)			
5 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

Specification Document Number 601153 Rev B

NOTES:

1. FNT95DJTxx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger Port operational gain is 9 ± 0.75dB as referenced to the Trunk.
5. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
6. Recommended minimum forward input level at 862MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5dB except the Port 1 forward input is ± 0.75dB.

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB9ADJTxx6(G/N)6xx
862MHz, 42/54 Split

	FORWARD	*REVERSE*	
	Bridger (ea)	*Bridger (ea)*	
General			
Passband, MHz	*54-862*	*5-42*	
Housing, MHz	*1000*	—	
AC Current Passing, A			
Ports 1, 3, 6	*15*	*15*	
Ports 2, 5 (Note 1)	*13*	*13*	
Typical Operating Conditions			
Operational Gain, dB (–0, +0.5) (Notes 2 and 3)	*40*	*18*	
Channels, Number of NTSC (Note 4)	*112/96/79*	*6*	
Operating Levels (Recommended)			
Frequency, MHz	*862/750/650/550/54*	*42/5*	
Input, dBmV min. (Note 5)	*11.5/11/10.5/10/11*	*17/17*	
Output, dBmV (Note 6)	*51.5/49.5/48/46/37*	*35/35*	
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*			
Carrier-to-Interference Ratio, dB (Note 7)			
Composite Triple Beat	*59/69/73*	*89*	
Second Order Beat (F1 ± F2)	—	—	
Cross Modulation (per NCTA std.) (Note 8)	*57/65/69*	*78*	
Third Order Beat (F1 ± F2 ± F3)	—	—	
Composite 2IM	*59/62/67*	*82*	
Composite Intermodulation Noise CIN (Note 9)	*65*	—	
Noise, 4MHz, 75Ohms (Note 3)	*61/60.5/60.5/60/60.5*	*67.5*	
Noise Figure, dB (without EQ) (Note 10)	*8.5/8.5/8/8/8.5*	*8.5*	
Full Gain, dB (without EQ and ALC)	*45*	*19*	
Factory Alignment (with ALC Reserve, without EQ)			
Cable Loss, dB @ 862MHz	*18*	—	
Flat Loss, dB	*23*	*19*	
Gain Slope, dB	*–1.0 to +1.0*	*±0.5*	
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*	
Return Loss, dB min., All Entry Ports	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 11)		**With Active Reverse**	
AC Voltage, 60Hz		*@ 90V*	*@ 60V*
AC Power, Watts		*48/44*	*47.5/43*
AC Current, mA		*690/650*	*870/790*
DC Current, mA @ 24V ± 0.5V		*1750/1585*	*1750/1585*
Level Control			
Range, dB @ 862MHz	*± 4.0dB*	—	
Accuracy (–40°C to 60°C)	*± 0.5dB*	—	
Output Level Range (from nominal)	*+2/–6dB*	—	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	—	
Gain Control			
Plug-in PAD	*SPB-xx*	*SPB-xx*	
Equalization to Compensate for Cable Loss			
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-42-x*	

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB9ADJTxx6(G/N)6xx
862MHz, 42/54 Split

	FORWARD *Bridger (ea)*	*REVERSE* *Bridger (ea)*
Chrominance/Luminance Delay, Maximum		
Channel 2, ns/3.58MHz	*25*	—
Channel 3, ns/3.58MHz	*11*	—
Channel 4, ns/3.58MHz	*6*	—
Channel 5, ns/3.58MHz	*3.6*	—
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*6*
35 - 36.5MHz, ns	—	*10*
38.5 - 40MHz, ns	—	*26*
Hum Modulation (Time Domain @ 15A)		
5 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Specification Document Number 601154 Rev C

NOTES:

1. FNB9ADJTxx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
5. Recommended minimum forward input level at 862MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DJ-xx6(H/P)6xx
862MHz, 42/54 Split

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*54-862*		*5-42*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, and 4)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 5)	*112/96/79*	*112/96/79*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/750/650/550/54*	*862/750/650/550/54*	*42/5*	
Input, dBmV Minimum (Note 6)	*10.5/10/9.5/9/10*	*10.5/10/9.5/9/10*	*17/17*	
Output, dBmV (Note 7)	*40.5/38.5/37/35/26*	*49.5/47.5/46/44/35*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*71/75/81*	*57/61/69*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 9)	*68/72/76*	*57/60/66*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*70/75/79*	*67/70/73*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*82*	*65*	*—*	
Noise, 4MHz, 75Ohms	*60/60/59.5/59/59*	*60/60/59.5/59/59*	*62*	
Noise Figure, dB (without EQ) (Note 11)	*8.5/8/8/8/9*	*8.5/8/8/8/9*	*14*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB Minimum, All Entry Ports	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*56.5/52*	*55.5/51*
AC Current, mA			*760/720*	*1015/935*
DC Current, mA @ 24V ± 0.5V			*2055/1885*	*2055/1885*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-42-x*	

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DJ-xx6(H/P)6xx
862MHz, 42/54 Split

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Chrominance/Luminance Delay, Maximum			
Channel 2, ns/3.58MHz		*25*	—
Channel 3, ns/3.58MHz		*11*	—
Channel 4, ns/3.58MHz		*6*	—
Channel 5, ns/3.58MHz		*3.6*	—
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*6*
35 - 36.5MHz, ns		—	*10*
38.5 - 40MHz, ns		—	*26*
Hum Modulation (Time Domain @ 15A)			
5 - 10MHz, –dBc		—	*55*
11 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

Specification Document Numbers 600967 Rev D and 600930 Rev E

NOTES:

1. FNT95DJTxx6(H/P)6 trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger port gain and flatness is 9 ± 0.75dB as referenced to the Trunk port.
5. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
6. Recommended minimum forward input level at 862MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Bridger Amplifier (RF Specifications)
FNB9ADJ-xx6(G/N)6xx
862MHz, 42/54 Split

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*54-862*	*5-42*
Housing, MHz	*1000*	*—*
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (–0, +0.5) (Notes 2 and 3)	*40*	*18*
Channels, Number of NTSC (Note 4)	*112/96/79*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*862/750/650/550/54*	*42/5*
Input, dBmV Minimum (Note 5)	*9.5/9/8.5/8/9*	*17/17*
Output, dBmV (Note 6)	*49.5/47.5/46/44/35*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB (Note 7)		
Composite Triple Beat	*58/63/70*	*89*
Second Order Beat (F1 ± F2)	*—*	*—*
Cross Modulation (per NCTA std.) (Note 8)	*58/62/69*	*78*
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*
Composite 2IM	*65/67/70*	*82*
Composite Intermodulation Noise CIN (Note 9)	*65*	*—*
Noise, 4MHz, 75Ohms (Note 3)	*58.5/59/58/58/58*	*64*
Noise Figure, dB (without EQ) (Note 10)	*9/8.5/8/8/9*	*12*
Full Gain, dB (without EQ and ALC)	*45*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*18*	*—*
Flat Loss, dB	*23*	*19*
Gain Slope, dB	*–1.0 to +1.0*	*—*
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*
Return Loss, dB Minimum, All Entry Ports	*16*	*16.5*

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	*@ 90V*	*@ 60V*
AC Power, Watts	*48/44*	*47.5/43*
AC Current, mA	*690/650*	*870/790*
DC Current, mA @ 24V ± 0.5V	*1750/1585*	*1750/1585*

Level Control		
Range, dB @ 862MHz	*± 4.0dB*	*—*
Accuracy (–40°C to 60°C)	*± 0.5dB*	*—*
Output Level Range (from nominal)	*+2/–6dB*	*—*
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	*—*
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-42-x*

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FlexNet Bridger Amplifier (RF Specifications)
FNB9ADJ-xx6(G/N)6xx
862MHz, 42/54 Split

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
Chrominance/Luminance Delay, Maximum		
Channel 2, ns/3.58MHz	*25*	—
Channel 3, ns/3.58MHz	*11*	—
Channel 4, ns/3.58MHz	*6*	—
Channel 5, ns/3.58MHz	*3.6*	—
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*6*
35 - 36.5MHz, ns	—	*10*
38.5 - 40MHz, ns	—	*26*
Hum Modulation (Time Domain @ 15A)		
5 - 10MHz, –dBc	—	*55*
11 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

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NOTES:

1. FNB9ADJ-xx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
5. Recommended minimum forward input level at 862MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. For the "E" output configuration option, –25dB external forward directional testpoints and –25dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DQTxx6(H/P)6xx
55/70 Split

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*70-862*		*5-55*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, and 4)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 5)	*109/93/76*	*109/93/76*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/750/650/550/70*	*862/750/650/550/70*	*55/5*	
Input, dBmV Minimum (Note 6)	*12.5/12/11.5/11/11.5*	*12.5/12/11.5/11/11.5*	*17/17*	
Output, dBmV (Note 7)	*42.5/40.5/39/37/28.5*	*51.5/49.5/48/46/37.5*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*71/76/80*	*62/70/75*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 9)	*66/72/75*	*60/66/71*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*64/68/72*	*56/60/65*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*82*	*65*	*—*	
Noise, 4MHz, 75Ohms (Note 3)	*62/62/61.5/61/60.5*	*62/62/61.5/61/60.5*	*66*	
Noise Figure, dB (without EQ) (Note 11)	*8.5/8/8/8/9*	*8.5/8/8/8/9*	*10*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB Minimum, All Entry Ports	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*52/47.5*	*51.5/47*
AC Current, mA			*725/685*	*940/855*
DC Current, mA @ 24V ± 0.5V			*1895/1725*	*1895/1725*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-55-x*	
Chrominance/Luminance Delay, Maximum				
Channel 5, ns/3.58MHz	*11*		*—*	
Channel 6, ns/3.58MHz	*6*		*—*	

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DQTxx6(H/P)6xx
55/70 Split

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*6*
52 - 53.5MHz, ns		—	*16*
53.5 - 55MHz, ns		—	*33*
Hum Modulation (Time Domain @ 15A)			
5 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

Preliminary Specifications

NOTES:

1. FNT95DQTxx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-55-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger Port gain is 9 to 9.75 dB above the Trunk Port.
5. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
6. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 55 MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6 dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 70 to 550 MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DQTxx6(G/N)6xx
55/70 Split

	FORWARD Bridger (ea)	REVERSE Bridger (ea)
General		
Passband, MHz	70-862	5-55
Housing, MHz	1000	—
AC Current Passing, A		
Ports 1, 3, 6	15	15
Ports 2, 5 (Note 1)	13	13
Typical Operating Conditions		
Operational Gain, dB (Notes 2 and 3)	40	18
Channels, Number of NTSC (Note 4)	109/93/76	6
Operating Levels (Recommended)		
Frequency, MHz	862/750/650/550/70	55/5
Input, dBmV Minimum (Note 5)	11.5/11/10.5/10/10.5	17/17
Output, dBmV (Note 6)	51.5/49.5/48/46/37.5	35/35
Performance Specifications @ Recommended Levels Temperature Range: –40°C to +60°C		
Carrier-to-Interference Ratio, dB (Note 7)		
Composite Triple Beat	59/69/73	89
Second Order Beat (F1 ± F2)	—	—
Cross Modulation (per NCTA std.) (Note 8)	57/65/69	78
Third Order Beat (F1 ± F2 ± F3)	—	—
Composite 2IM	59/62/67	82
Composite Intermodulation Noise CIN (Note 9)	65	—
Noise, 4MHz, 75Ohms	61/60.5/60.5/60/60	67.5
Noise Figure, dB (without EQ) (Note 10)	8.5/8.5/8/8/8.5	8.5
Full Gain, dB (without EQ and ALC)	45	19
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	18	—
Flat Loss, dB	23	19
Gain Slope, dB	–1.0 to +1.0	—
Flatness (@ Gain Slope), ±dB	0.75	0.5
Return Loss, dB Minimum, All Entry Ports	16	16.5

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	@ 90V	@ 60V
AC Power, Watts	44/40	43/39
AC Current, mA	655/620	790/720
DC Current, mA @ 24V ± 0.5V	1590/1435	1590/1435

Level Control		
Range, dB @ 862MHz	± 4.0dB	—
Accuracy (–40°C to 60°C)	± 0.5dB	—
Output Level Range (from nominal)	+2/–6dB	—
Pilot Frequency Band (Recommended)	439.25MHz (Single Channel)	—
Gain Control		
Plug-in PAD	SPB-xx	SPB-xx
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	SEQ-862-xx	MEQ-55-x
Chrominance/Luminance Delay, Maximum		
Channel 5, ns/3.58MHz	11	—
Channel 6, ns/3.58MHz	6	—

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DQTxx6(G/N)6xx
55/70 Split

	FORWARD *Bridger (ea)*	*REVERSE* *Bridger (ea)*
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*6*
52 - 53.5MHz, ns	—	*16*
53.5 - 55MHz, ns	—	*33*
Hum Modulation (Time Domain @ 15A)		
5 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Preliminary Specifications

NOTES:

1. FNB97DQTxx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-55-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
5. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 55 MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6 dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 70 to 550 MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ±0.5 dB except the Port 1 forward input is ±0.75 dB.

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DQ-xx6(H/P)6xx
55/70 Split

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*70-862*		*5-55*	
Housing, MHz	*1000*		—	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, and 4)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 5)	*109/93/76*	*109/93/76*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/750/650/550/70*	*862/750/650/550/70*	*55/5*	
Input, dBmV Minimum (Note 6)	*10.5/10/9.5/9/9.5*	*10.5/10/9.5/9/9.5*	*17/17*	
Output, dBmV (Note 7)	*40.5/38.5/37/35/26.5*	*49.5/47.5/46/44/35.5*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*71/75/81*	*57/61/69*	*89*	
Second Order Beat (F1 ± F2)	—	—	—	
Cross Modulation (per NCTA std.) (Note 9)	*68/72/76*	*57/60/66*	*78*	
Third Order Beat (F1 ± F2 ± F3)	—	—	—	
Composite 2IM	*70/75/79*	*67/70/73*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*82*	*65*	—	
Noise, 4MHz, 75Ohms (Note 3)	*60/60/59.5/59/58.5*	*60/60/59.5/59/58.5*	*64*	
Noise Figure, dB (without EQ) (Note 11)	*8.5/8/8/8/9*	*8.5/8/8/8/9*	*12*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	—	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	—	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB Minimum, All Entry Ports	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*56.5/52*	*55.5/51*
AC Current, mA			*760/720*	*1015/935*
DC Current, mA @ 24V ± 0.5V			*2055/1885*	*2055/1885*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		—	
Accuracy (–40°C to 60°C)	*± 0.5dB*		—	
Output Level Range (from nominal)	*+2/–6dB*		—	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		—	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-55-x*	
Chrominance/Luminance Delay, Maximum				
Channel 5, ns/3.58MHz	*11*		—	
Channel 6, ns/3.58MHz	*6*		—	

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DQ-xx6(H/P)6xx
55/70 Split

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*6*
52 - 53.5MHz, ns		—	*16*
53.5 - 55MHz, ns		—	*33*
Hum Modulation (Time Domain @ 15A)			
5 - 10MHz, –dBc		—	*55*
11 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

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NOTES:

1. FNT95DQ-xx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-55-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger Port gain is 9 to 9.75 dB above the Trunk Port.
5. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
6. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 55 MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6 dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 70 to 550 MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.

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FlexNet Bridger Amplifier (RF Specifications)
FNB97DQ-xx6(G/N)6xx
55/70 Split

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*70-862*	*5-55*
Housing, MHz	*1000*	—
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (Notes 2 and 3)	*40*	*18*
Channels, Number of NTSC (Note 4)	*109/93/76*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*862/750/650/550/70*	*55/5*
Input, dBmV Minimum (Note 5)	*9.5/9/8.5/8/8.5*	*17/17*
Output, dBmV (Note 6)	*49.5/47.5/46/44/35.5*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB (Note 7)		
Composite Triple Beat	*58/63/70*	*89*
Second Order Beat (F1 ± F2)	—	—
Cross Modulation (per NCTA std.) (Note 8)	*58/62/69*	*78*
Third Order Beat (F1 ± F2 ± F3)	—	—
Composite 2IM	*65/67/70*	*82*
Composite Intermodulation Noise CIN (Note 9)	*65*	—
Noise, 4MHz, 75Ohms	*58.5/59/58/58/57*	*65.5*
Noise Figure, dB (without EQ) (Note 10)	*9/8.5/8/8/9.5*	*10.5*
Full Gain, dB (without EQ and ALC)	*45*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*18*	—
Flat Loss, dB	*23*	*19*
Gain Slope, dB	*–1.0 to +1.0*	—
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*
Return Loss, dB Minimum, All Entry Ports	*16*	*16.5*

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	*@ 90V*	*@ 60V*
AC Power, Watts	*48/44*	*47.5/43*
AC Current, mA	*690/650*	*870/790*
DC Current, mA @ 24V ± 0.5V	*1750/1585*	*1750/1585*

Level Control		
Range, dB @ 862MHz	*± 4.0dB*	—
Accuracy (–40°C to 60°C)	*± 0.5dB*	—
Output Level Range (from nominal)	*+2/–6dB*	—
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	—
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-55-x*
Chrominance/Luminance Delay, Maximum		
Channel 5, ns/3.58MHz	*11*	—
Channel 6, ns/3.58MHz	*6*	—

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FlexNet Bridger Amplifier (RF Specifications)
FNB97DQ-xx6(G/N)6xx
55/70 Split

	FORWARD *Bridger (ea)*	*REVERSE* *Bridger (ea)*
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*6*
52 - 53.5MHz, ns	—	*16*
53.5 - 55MHz, ns	—	*33*
Hum Modulation (Time Domain @ 15A)		
5 - 10MHz, –dBc	—	*55*
11 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Specification Document Number 601040 Rev B

NOTES:

1. FNB97DQ-xx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-55-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
5. Recommended minimum forward input level at 862MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 55MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 70 to 550MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DNTxx6(H/P)6xx
862MHz, 65/80 Split, NTSC Channel Loading

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*80-862*		*5-65*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, and 4)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 5)	*106/90/73*	*106/90/73*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/750/650/550/80*	*862/750/650/550/80*	*65/5*	
Input, dBmV min. (Note 6)	*12.5/12/11.5/11/11.5*	*12.5/12/11.5/11/11.5*	*17/17*	
Output, dBmV (Note 7)	*42.5/40.5/39/37/28.5*	*51.5/49.5/48/46/37.5*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*71/76/80*	*62/70/75*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 9)	*66/72/75*	*60/66/71*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*64/68/72*	*56/60/65*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*82*	*65*	*—*	
Noise, 4MHz, 75Ohms (Note 3)	*62/62/61.5/61/60*	*62/62/61.5/61/60*	*64*	
Noise Figure, dB (without EQ) (Note 11)	*8.5/8/8/8/9.5*	*8.5/8/8/8/9.5*	*10*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB min., All Entry Ports	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*53/49*	*52.5/48*
AC Current, mA			*730/700*	*960/880*
DC Current, mA @ 24V ± 0.5V			*1940/1780*	*1940/1780*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-65-x*	

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DNTxx6(H/P)6xx
862MHz, 65/80 Split, NTSC Channel Loading

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Group Delay, Maximum			
5.5 - 7MHz, ns		—	*35*
10 - 11.5MHz, ns		—	*6*
62 - 63.5MHz, ns		—	*18*
63.5 - 65MHz, ns		—	*30*
80 - 81.5MHz, ns		*25*	—
81.5 - 83MHz, ns		*15*	—
Hum Modulation (Time Domain @ 15A)			
5 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

Specification Document Number 601218 Rev B

NOTES:

1. FNT95DNTxx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger port gain and flatness is 9 ±0.75dB as referenced to the Trunk.
5. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
6. Recommended minimum forward input level at 862MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 65MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 550MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DNTxx6(G/N)6xx
862MHz, 65/80 Split, NTSC Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*80-862*	*5-65*
Housing, MHz	*1000*	*—*
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (–0, +0.5) (Notes 2 and 3)	*40*	*18*
Channels, Number of NTSC (Note 4)	*106/90/73*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*862/750/650/550/80*	*65/5*
Input, dBmV min. (Note 5)	*11.5/11/10.5/10/10.5*	*17/17*
Output, dBmV (Note 6)	*51.5/49.5/48/46/37.5*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB (Note 7)		
Composite Triple Beat	*59/69/73*	*89*
Second Order Beat (F1 ± F2)	*—*	*—*
Cross Modulation (per NCTA std.) (Note 8)	*57/65/69*	*78*
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*
Composite 2IM	*59/62/67*	*82*
Composite Intermodulation Noise CIN (Note 9)	*65*	*—*
Noise, 4MHz, 75Ohms (Note 3)	*60.5/60.5/60.5/60/59.5*	*67.5*
Noise Figure, dB (without EQ) (Note 10)	*9/8.5/8/8/9*	*8.5*
Full Gain, dB (without EQ and ALC)	*45*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*18*	*—*
Flat Loss, dB	*23*	*19*
Gain Slope, dB	*–1.0 to +1.0*	*–0.5 to +0.5*
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*
Return Loss, dB min., All Entry Ports	*16*	*16.5*

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	*@ 90V*	*@ 60V*
AC Power, Watts	*45/41*	*44/40.5*
AC Current, mA	*660/630*	*810/745*
DC Current, mA @ 24V ± 0.5V	*1630/1485*	*1630/1485*

Level Control		
Range, dB @ 862MHz	*± 4.0dB*	*—*
Accuracy (–40°C to 60°C)	*± 0.5dB*	*—*
Output Level Range (from nominal)	*+2/–6dB*	*—*
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	*—*
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-65-x*

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DNTxx6(G/N)6xx
862MHz, 65/80 Split, NTSC Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
Group Delay, Maximum		
5.5 - 7MHz, ns	—	*35*
10 - 11.5MHz, ns	—	*6*
62 - 63.5MHz, ns	—	*18*
63.5 - 65MHz, ns	—	*30*
80 - 81.5MHz, ns	*25*	—
81.5 - 83MHz, ns	*15*	—
Hum Modulation (Time Domain @ 15A)		
5 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Specification Document Number 601216 Rev B

NOTES:

1. FNB97DNTxx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the appropriate frequency spectrum per specified number of channels.
5. Recommended minimum forward input level at 862MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 65MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 550MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DNTxx6(H/P)6xx
862MHz, 65/80 Split, CENELEC/PAL Channel Loading

	FORWARD		REVERSE	
	Trunk	2 O/P Bridger	Trunk & 2 O/P Bridger	
General				
Passband, MHz	80-862		5-65	
Housing, MHz	1000		—	
AC Current Passing, A				
Ports 1, 3, 4, 6	15		15	
Ports 2, 5 (Note 1)	13		13	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, and 4)	30	39	18	
Channels, Number of CENELEC/PAL (Note 5)	41/60	41/60	6	
Operating Levels (Recommended)				
Frequency, MHz	862/600/80	862/600/80	65/5	
Input, dBmV min. (Note 6)	12.5/10.5/11.5	12.5/10.5/11.5	17/17	
Output, dBmV (Note 7)	42.5/38/28.5	51.5/47/37.5	35/35	
Performance Specifications @ Recommended Levels (Temperature Range: –40°C to +60°C)				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	77/81	67/73	89	
Second Order Beat (F1 ± F2)	—	—	—	
Cross Modulation (per NCTA std.) (Note 9)	—	—	—	
Third Order Beat (F1 ± F2 ± F3)	—	—	—	
Composite 2IM	71/76	66/72	82	
Composite Intermodulation Noise CIN (Note 10)	82	65	—	
Noise, 5MHz, 75Ohms (Note 3)	61/59.5/59	61/59.5/59	65	
Noise Figure, dB (without EQ) (Note 11)	8.5/8/9.5	8.5/8/9.5	10	
Full Gain, dB (without EQ and ALC)	35	44	19	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	18	18	—	
Flat Loss, dB	13	22	19	
Gain Slope, dB	–0.25 to 1.0	–1.0 to 1.0	—	
Flatness (@ Gain Slope), ±dB	0.5	0.75	0.5	
Return Loss, dB min., All Entry Ports	16	16	16.5	
Powering Requirements, Maximum/Typical (Note 12)			**With Active Reverse**	
AC Voltage, 60Hz			@ 90V	@ 60V
AC Power, Watts			53/49	52.5/48
AC Current, mA			730/700	960/880
DC Current, mA @ 24V ± 0.5V			1940/1780	1940/1780
Level Control				
Range, dB @ 862MHz	± 4.0dB		—	
Accuracy (–40°C to 60°C)	± 0.5dB		—	
Output Level Range (from nominal)	+2/–6dB		—	
Pilot Frequency Band (Recommended)	439.25MHz (Single Channel)		—	
Gain Control				
Plug-in PAD	SPB-xx		SPB-xx	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	SEQ-862-xx		MEQ-65-x	

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FlexNet Trunk Amplifier with TL Technology (RF Specifications)
FNT95DNTxx6(H/P)6xx
862MHz, 65/80 Split, CENELEC/PAL Channel Loading

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Group Delay, Maximum			
5.5 - 7MHz, ns		—	*35*
10 - 11.5MHz, ns		—	*6*
62 - 63.5MHz, ns		—	*18*
63.5 - 65MHz, ns		—	*30*
80 - 81.5MHz, ns		*25*	—
81.5 - 83MHz, ns		*15*	—
Hum Modulation (Time Domain @ 15A)			
5 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*55*	—

Specification Document Number 601217 Rev B

NOTES:

1. FNT95DNTxx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger Port gain and flatness is 9 ± 0.75dB as referenced to the Trunk.
5. CENELEC channel plan occupying the 80 to 862MHz frequency spectrum and PAL B/G video channels occupying the 80 to 600MHz (based on Spanish Law Channel Plan). Standard PAL B/G video channels in the reverse 5 to 65MHz frequency spectrum.
6. Recommended minimum forward input level at 862MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 65MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 600 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 600MHz frequency spectrum.
11. The Noise Figure and C/N specifications are "Typical" within specified passband.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "H" output configuration option, –20dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DNTxx6(G/N)6xx
862MHz, 65/80 Split, CENELEC/PAL Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*80-862*	*5-65*
Housing, MHz	*1000*	—
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (–0, +0.5) (Notes 2 and 3)	*40*	*18*
Channels, Number of CENELEC/PAL (Note 4)	*41/60*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*862/600/80*	*65/5*
Input, dBmV min. (Note 5)	*11.5/10.5/10.5*	*17/17*
Output, dBmV (Note 6)	*51.5/47/37.5*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB (Note 7)		
Composite Triple Beat	*68/74*	*89*
Second Order Beat (F1 ± F2)	—	—
Cross Modulation (per NCTA std.) (Note 8)	—	—
Third Order Beat (F1 ± F2 ± F3)	—	—
Composite 2IM	*59/66*	*82*
Composite Intermodulation Noise CIN (Note 9)	*65*	—
Noise, 5MHz, 75Ohms (Note 3)	*59.5/59.5/58.5*	*64.5*
Noise Figure, dB (without EQ) (Note 10)	*9/8/9*	*8.5*
Full Gain, dB (without EQ and ALC)	*45*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*18*	—
Flat Loss, dB	*23*	*19*
Gain Slope, dB	*–1.0 to +1.0*	*–0.5 to +0.5*
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*
Return Loss, dB min., All Entry Ports	*16*	*16.5*
Powering Requirements, Maximum/Typical (*Note 11*)		**With Active Reverse**
AC Voltage, 60Hz		*@ 90V* / *@ 60V*
AC Power, Watts		*45/41* / *44/40.5*
AC Current, mA		*660/630* / *810/745*
DC Current, mA @ 24V ± 0.5V		*1630/1485* / *1630/1485*
Level Control		
Range, dB @ 862MHz	*± 4.0dB*	—
Accuracy (–40°C to 60°C)	*± 0.5dB*	—
Output Level Range (from nominal)	*+2/–6dB*	—
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	—
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-65-x*

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FlexNet Bridger Amplifier with TL Technology (RF Specifications)
FNB97DNTxx6(G/N)6xx
862MHz, 65/80 Split, CENELEC/PAL Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
Group Delay, Maximum		
5.5 - 7MHz, ns	—	*35*
10 - 11.5MHz, ns	—	*6*
62 - 63.5MHz, ns	—	*18*
63.5 - 65MHz, ns	—	*30*
80 - 81.5MHz, ns	*25*	—
81.5 - 83MHz, ns	*15*	—
Hum Modulation (Time Domain @ 15A)		
5 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Specification Document Number 601215 Rev B

NOTES:

1. FNB97DNTxx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. CENELEC channel plan occupying the 80 to 862MHz frequency spectrum and PAL B/G video channels occupying the 80 to 600MHz (based on Spanish Law Channel Plan). Standard PAL B/G video channels in the reverse 5 to 65MHz frequency spectrum.
5. Recommended minimum forward input level at 862MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 65MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 600 to 862MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 600MHz frequency spectrum.
10. The Noise Figure and C/N specifications are "Typical" within specified passband.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB except the Port 1 forward input is ±0.75dB.

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DN-xx6(H/P)6xx
65/80 Split, NTSC Channel Loading

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*80-862*		*5-65*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2 and 3)	*30*	*39*	*18*	
Channels, Number of NTSC (Note 4)	*73*	*73*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/550/80*	*862/550/80*	*65/5*	
Input, dBmV Minimum (Note 5)	*11.5/10/10.5*	*11.5/10/10.5*	*17/17*	
Output, dBmV (Note 6)	*41.5/36/27.5*	*50.5/45/36.5*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB				
Composite Triple Beat	*79*	*67*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 7)	*78*	*66*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*74*	*67*	*82*	
Composite Intermodulation Noise CIN (Note 8)	*70.5*	*58*	*—*	
Noise, 4MHz, 75Ohms (Note 3)	*61.5/60/60.5*	*61.5/60/60.5*	*63*	
Noise Figure, dB (without EQ) (Note 9)	*8/8/8*	*8/8/8*	*13*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), P/V dB	*1.0*	*1.5*	*1.0*	
Return Loss, dB Minimum, All Entry Ports (Note 10)	*17*	*17*	*17*	
Powering Requirements, Maximum/Typical (Note 11)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*56.5/50*	*55.5/49.5*
AC Current, mA			*760/710*	*1015/900*
DC Current, mA @ 24V ± 0.5V			*2055/1825*	*2055/1825*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-65-x*	

Specification Document Number 600863 Rev C

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NOTES:

1. FNT95DN-xx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 80 to 550 MHz frequency spectrum.
5. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 65 MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 550 MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16 dB min and forward output return loss is 16 dB from 750 to 862 MHz.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "H" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.
13. The Chrominance/Luminance delay per amplifier at channel 6 (NTSC) is typically 28 ns and Group Delay at 65 MHz is typically 28 ns/1.5 MHz.

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FlexNet Bridger Amplifier (RF Specifications)
FNB97DN-xx6(G/N)6xx
65/80 Split, NTSC Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*80-862*	*5-65*
Housing, MHz	*1000*	—
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (Notes 2, 3)	*40*	*18*
Channels, Number of NTSC (Note 4)	*73*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*862/550/80*	*65/5*
Input, dBmV Minimum (Note 5)	*10.5/9/9.5*	*17/17*
Output, dBmV (Note 6)	*50.5/45/36.5*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB		
Composite Triple Beat	*68*	*89*
Second Order Beat (F1 ± F2)	—	—
Cross Modulation (per NCTA std.) (Note 7)	*67*	*78*
Third Order Beat (F1 ± F2 ± F3)	—	—
Composite 2IM	*67*	*82*
Composite Intermodulation Noise CIN (Note 8)	*57*	—
Noise, 4MHz, 75Ohms (Note 3)	*58/56.5/57*	*64.5*
Noise Figure, dB (without EQ) (Note 9)	*10.5/10.5/10.5*	*11.5*
Full Gain, dB (without EQ and ALC)	*45*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*18*	—
Flat Loss, dB	*23*	*19*
Gain Slope, dB	*–1.0 to 1.0*	—
Flatness (@ Gain Slope), P/V dB	*1.5*	*1*
Return Loss, dB Minimum, All Entry Ports (Note 10)	*17*	*17*

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	*@ 90V*	*@ 60V*
AC Power, Watts	*48/43.5*	*47.5/43*
AC Current, mA	*700/650*	*870/785*
DC Current, mA @ 24V ± 0.5V	*1750/1575*	*1750/1575*

Level Control		
Range, dB @ 862MHz	*± 4.0dB*	—
Accuracy (–40°C to 60°C)	*± 0.5dB*	—
Output Level Range (from nominal)	*+2/–6dB*	—
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	—
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-65-x*

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NOTES:

1. FNB97DN-xx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 80 to 550 MHz frequency spectrum.
5. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 65 MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 550 MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16 dB min. and forward output return loss is 16 dB from 750 to 862 MHz.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.
13. The Chrominance/Luminance delay per amplifier at channel 6 (NTSC) is typically 28 ns and Group Delay at 65 MHz is typically 28 ns/1.5 MHz.

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DN-xx6(H/P)6xx
65/80 Split, CENELEC/PAL Channel Loading

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*80-862*		*5-65*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3, 4)	*30*	*39*	*18*	
Channels, Number of CENELEC/PAL (Note 5)	*41/60*	*41/60*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*862/600/80*	*862/600/80*	*65/5*	
Input, dBmV Minimum (Note 6)	*10.5/9.5/9.5*	*10.5/9.5/9.5*	*17/17*	
Output, dBmV (Note 7)	*40.5/36/26.5*	*49.5/45/35.5*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB (Note 8)				
Composite Triple Beat	*74/80*	*58/68*	*89*	
Second Order Beat (F1 ± F2)	*—*	*—*	*—*	
Cross Modulation (per NCTA std.) (Note 9)	*74/77*	*62/67*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*—*	
Composite 2IM	*73/78*	*68/74*	*82*	
Composite Intermodulation Noise CIN (Note 10)	*70.5*	*58*	*—*	
Noise, 5MHz, 75Ohms (Note 2)	*59.5/58.5/58.5*	*59.5/58.5/58.5*	*62*	
Noise Figure, dB (without EQ) (Note 11)	*8/8/8*	*8/8/8*	*13*	
Full Gain, dB (without EQ and ALC)	*35*	*44*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*18*	*18*	*—*	
Flat Loss, dB	*13*	*22*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB Minimum, All Entry Ports (Note 12)	*16*	*16*	*16.5*	
Powering Requirements, Maximum/Typical (Note 13)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*56.5/50*	*55.5/49.5*
AC Current, mA			*760/710*	*1015/900*
DC Current, mA @ 24V ± 0.5V			*2055/1825*	*2055/1825*
Level Control				
Range, dB @ 862MHz	*± 4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*		*MEQ-65-x*	

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FlexNet Trunk Amplifier (RF Specifications)
FNT95DN-xx6(H/P)6xx
65/80 Split, CENELEC/PAL Channel Loading

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*8*
62 - 63.5MHz, ns		—	*20*
63.5 - 65MHz, ns		—	*33*
80 - 81.5MHz, ns		*25*	—
81.5 - 83MHz, ns		*15*	—
Hum Modulation (Time Domain @ 15A)			
5 - 10MHz, –dBc		—	*55*
11 - 750MHz, –dBc		*60*	*60*
751 - 862MHz, –dBc		*50*	—

Specification Document Number 601046 Rev C

NOTES:

1. FNT95DN-xx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs that are user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. Bridger Port gain and flatness is 9 ± 0.75 dB as referenced to the Trunk Port.
5. CENELEC channel plan occupying the 80 to 862 MHz frequency spectrum and PAL B/G video channels occupying the 80 to 600 MHz forward spectrum (based on the Spanish Law channel plan). Standard PAL B/G video channels in the 5 to 65 MHz frequency spectrum.
6. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
7. Recommended maximum reverse output level at 65 MHz including loss due to equalizer.
8. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6 dB below equivalent video channels.
9. Cross modulation specification number indicates typical cascade performance.
10. Systems operating with digitally compressed channels or equivalent broadband noise from 600 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 600 MHz frequency spectrum.
11. The Noise Figure and C/N specifications are “Typical” within specified passband.
12. Forward input return loss is 16 dB min. and forward output return loss is 16 dB from 750 to 862 MHz.
13. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
14. For the "H" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.

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FlexNet Bridger Amplifier (RF Specifications)
FNB97DN-xx6(G/N)6xx
65/80 Split, CENELEC/PAL Channel Loading

	FORWARD	*REVERSE*	
	Bridger (ea)	*Bridger (ea)*	
General			
Passband, MHz	*80-862*	*5-65*	
Housing, MHz	*1000*	—	
AC Current Passing, A			
Ports 1, 3, 6	*15*	*15*	
Ports 2, 5 (Note 1)	*13*	*13*	
Typical Operating Conditions			
Operational Gain, dB (Notes 2, 3)	*40*	*18*	
Channels, Number of CENELEC/PAL (Note 4)	*41/60*	*6*	
Operating Levels (Recommended)			
Frequency, MHz	*862/600/80*	*65/5*	
Input, dBmV Minimum (Note 5)	*9.5/8.5/8.5*	*17/17*	
Output, dBmV (Note 6)	*49.5/45/35.5*	*35/35*	
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*			
Carrier-to-Interference Ratio, dB (Note 7)			
Composite Triple Beat	*59/69*	*89*	
Second Order Beat (F1 ± F2)	—	—	
Cross Modulation (per NCTA std.) (Note 8)	*65/68*	*78*	
Third Order Beat (F1 ± F2 ± F3)	—	—	
Composite 2IM	*69/74*	*82*	
Composite Intermodulation Noise CIN (Note 9)	*57*	—	
Noise, 5MHz, 75Ohms (Note 3)	*56/55/55*	*63.5*	
Noise Figure, dB (without EQ) (Note 10)	*10.5/10.5/10.5*	*11.5*	
Full Gain, dB (without EQ and ALC)	*45*	*19*	
Factory Alignment (with ALC Reserve, without EQ)			
Cable Loss, dB @ 862MHz	*18*	—	
Flat Loss, dB	*23*	*19*	
Gain Slope, dB	*–1.0 to 1.0*	—	
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*	
Return Loss, dB Minimum, All Entry Ports (Note 11)	*17*	*17*	
Powering Requirements, Maximum/Typical (Note 12)		**With Active Reverse**	
AC Voltage, 60Hz		*@ 90V*	*@ 60V*
AC Power, Watts		*48/43.5*	*47.5/43*
AC Current, mA		*700/650*	*870/785*
DC Current, mA @ 24V ± 0.5V		*1750/1575*	*1750/1575*
Level Control			
Range, dB @ 862MHz	*± 4.0dB*	—	
Accuracy (–40°C to 60°C)	*± 0.5dB*	—	
Output Level Range (from nominal)	*+2/–6dB*	—	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	—	
Gain Control			
Plug-in PAD	*SPB-xx*	*SPB-xx*	
Equalization to Compensate for Cable Loss			
Plug-in Equalizers for Additional Equalization	*SEQ-862-xx*	*MEQ-65-x*	

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FlexNet Bridger Amplifier (RF Specifications)
FNB97DN-xx6(G/N)6xx
65/80 Split, CENELEC/PAL Channel Loading

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*8*
62 - 63.5MHz, ns	—	*20*
63.5 - 65MHz, ns	—	*33*
80 - 81.5MHz, ns	*25*	—
81.5 - 83MHz, ns	*15*	—
Hum Modulation (Time Domain @ 15A)		
5 - 10MHz, –dBc	—	*55*
11 - 750MHz, –dBc	*60*	*60*
751 - 862MHz, –dBc	*55*	—

Specification Document Number 601047 Rev B

NOTES:

1. FNB97DN-xx6(G/N)6xx bridger amplifiers provide two bridger outputs that are user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs, and if used, have reduced AC current passing capability.
2. Spacing is at highest frequency with SEQ-862-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-65-xx.
3. The specifications are based on the node configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. CENELEC channel plan occupying the 80 to 862 MHz frequency spectrum and PAL B/G video channels occupying the 80 to 600 MHz forward spectrum (based on the Spanish Law channel plan). Standard PAL B/G video channels in the 5 to 65 MHz frequency spectrum.
5. Recommended minimum forward input level at 862 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 65 MHz including loss due to equalizer.
7. Distortion performance is derated accordingly to take into account the influence of the digitally compressed channels operating at levels 6 dB below equivalent video channels.
8. Cross modulation specification number indicates typical cascade performance.
9. Systems operating with digitally compressed channels or equivalent broadband noise from 600 to 862 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 80 to 600 MHz frequency spectrum.
10. The Noise Figure and C/N specifications are “Typical” within specified passband.
11. Forward input return loss is 16 dB min. and forward output return loss is 16 dB from 750 to 862 MHz.
12. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
13. For the "G" output configuration option, –20 dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ± 0.75 dB.

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FlexNet Trunk Amplifier
FNT97CJ-xx6(H/P)6xx
750MHz, 42/54 Split

	FORWARD		*REVERSE*	
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*	
General				
Passband, MHz	*54-750*		*5-42*	
Housing, MHz	*1000*		*—*	
AC Current Passing, A				
Ports 1, 3, 4, 6	*15*		*15*	
Ports 2, 5 (Note 1)	*13*		*13*	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3)	*28*	*37*	*18*	
Channels, Number of NTSC (Note 4)	*79*	*79*	*6*	
Operating Levels (Recommended)				
Frequency, MHz	*750/550/54*	*750/550/54*	*42/5*	
Input, dBmV min. (Note 5)	*10.5/9/6.5*	*10.5/9/6.5*	*17/17*	
Output, dBmV (Note 6)	*38.5/35/26*	*47.5/44/35*	*35/35*	
Performance Specifications @ Recommended Levels *(Temperature Range: –40°C to +60°C)*				
Carrier-to-Interference Ratio, dB				
Composite Triple Beat	*83*	*70*	*—*	
Second Order Beat (F1 ± F2)	*—*	*—*	*82*	
Cross Modulation (per NCTA std.) (Note 7)	*79*	*67*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*—*	*89*	
Composite 2IM	*73*	*71*	*—*	
Composite Intermodulation Noise CIN (Note 8)	*85*	*68*	*—*	
Noise, 4MHz, 75Ohms (Note 3)	*60.5/59/57*	*60.5/59/57*	*63*	
Noise Figure, dB (without EQ) (Note 9)	*8/8/7.5*	*8/8/7.5*	*13*	
Full Gain, dB (without EQ and ALC)	*33*	*42*	*19*	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	*11*	*11*	*—*	
Flat Loss, dB	*18*	*27*	*19*	
Gain Slope, dB	*–0.25 to 1.0*	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*0.5*	*0.75*	*0.5*	
Return Loss, dB min., All Entry Ports (Note 10)	*17*	*17*	*16.5*	
Powering Requirements, Maximum/Typical (Note 11)			**With Active Reverse**	
AC Voltage, 60Hz			*@ 90V*	*@ 60V*
AC Power, Watts			*54/49*	*53/48*
AC Current, mA			*740/680*	*985/890*
DC Current, mA @ 24V ±0.5V			*1960/1785*	*1960/1785*
Level Control				
Range, dB @ 862MHz	*±4.0dB*		*—*	
Accuracy (–40°C to 60°C)	*±0.5dB*		*—*	
Output Level Range (from nominal)	*+2/–6dB*		*—*	
Pilot Frequency Band (Recommended)	*499.25MHz (Single Channel)*		*—*	
Gain Control				
Plug-in PAD	*SPB-xx*		*SPB-xx*	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	*SEQ-750-xx*		*MEQ-42-x*	

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FlexNet Trunk Amplifier
FNT97CJ-xx6(H/P)6xx
750MHz, 42/54 Split

	FORWARD		*REVERSE*
	Trunk	*2 O/P Bridger*	*Trunk & 2 O/P Bridger*
Chrominance/Luminance Delay, Maximum			
Channel 2, ns/3.58MHz		*32*	—
Channel 3, ns/3.58MHz		*15*	—
Channel 4, ns/3.58MHz		*8*	—
Channel 5, ns/3.58MHz		*5*	—
Reverse Group Delay, Maximum			
5.5 - 7MHz, ns		—	*45*
10 - 11.5MHz, ns		—	*6*
35 - 36.5MHz, ns		—	*9*
38.5 - 40MHz, ns		—	*28*
Hum Modulation (Time Domain @ 15A)			
5 - 10MHz, –dBc		—	*55*
11 - 750MHz, –dBc		*60*	*60*

Specification Document Number 600947 Rev A

NOTES:

1. FNT97CJ-xx6(H/P)6xx trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-750-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 54 to 550MHz frequency spectrum.
5. Recommended minimum forward input level at 750MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 750 MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550 MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16dB min.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "H" output configuration option, –20dB internal forward and reverse directional testpoints. For the "P" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ±0.5dB for all testpoints except the Port 1 forward input testpoint which is ± 0.75dB.

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FlexNet Bridger Amplifier
FNB98CJ-xx6(G/N)6xx
750MHz, 42/54 Split

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
General		
Passband, MHz	*54-750*	*5-42*
Housing, MHz	*1000*	*—*
AC Current Passing, A		
Ports 1, 3, 6	*15*	*15*
Ports 2, 5 (Note 1)	*13*	*13*
Typical Operating Conditions		
Operational Gain, dB (Notes 2, 3)	*37*	*18*
Channels, Number of NTSC (Note 4)	*79*	*6*
Operating Levels (Recommended)		
Frequency, MHz	*750/550/54*	*42/5*
Input, dBmV min. (Note 5)	*10.5/9/6.5*	*17/17*
Output, dBmV (Note 6)	*47.5/44/35*	*35/35*
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*		
Carrier-to-Interference Ratio, dB		
Composite Triple Beat	*70*	*—*
Second Order Beat (F1 ± F2)	*—*	*82*
Cross Modulation (per NCTA std.) (Note 7)	*67*	*78*
Third Order Beat (F1 ± F2 ± F3)	*—*	*89*
Composite 2IM	*71*	*—*
Composite Intermodulation Noise CIN (Note 8)	*68*	*—*
Noise, 4MHz, 75Ohms (Note 3)	*60/60/56*	*64.5*
Noise Figure, dB (without EQ) (Note 9)	*8.5/8/8.5*	*11.5*
Full Gain, dB (without EQ and ALC)	*42*	*19*
Factory Alignment (with ALC Reserve, without EQ)		
Cable Loss, dB @ 862MHz	*11*	*—*
Flat Loss, dB	*27*	*19*
Gain Slope, dB	*–1.0 to 1.0*	*—*
Flatness (@ Gain Slope), ±dB	*0.75*	*0.5*
Return Loss, dB min., All Entry Ports (Note 10)	*17*	*16.5*

Powering Requirements, Maximum/Typical (Note 11)	**With Active Reverse**	
AC Voltage, 60Hz	*@ 90V*	*@ 60V*
AC Power, Watts	*48.5/44*	*47.5/43*
AC Current, mA	*690/660*	*870/785*
DC Current, mA @ 24V ±0.5V	*1760/1585*	*1760/1585*

Level Control		
Range, dB @ 862MHz	*±4.0dB*	*—*
Accuracy (–40°C to 60°C)	*±0.5dB*	*—*
Output Level Range (from nominal)	*+2/–6dB*	*—*
Pilot Frequency Band (Recommended)	*499.25MHz (Single Channel)*	*—*
Gain Control		
Plug-in PAD	*SPB-xx*	*SPB-xx*
Equalization to Compensate for Cable Loss		
Plug-in Equalizers for Additional Equalization	*SEQ-750-xx*	*MEQ-42-x*

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FlexNet Bridger Amplifier
FNB98CJ-xx6(G/N)6xx
750MHz, 42/54 Split

	FORWARD	*REVERSE*
	Bridger (ea)	*Bridger (ea)*
Chrominance/Luminance Delay, Maximum		
Channel 2, ns/3.58MHz	*32*	—
Channel 3, ns/3.58MHz	*15*	—
Channel 4, ns/3.58MHz	*8*	—
Channel 5, ns/3.58MHz	*5*	—
Reverse Group Delay, Maximum		
5.5 - 7MHz, ns	—	*45*
10 - 11.5MHz, ns	—	*5*
35 - 36.5MHz, ns	—	*9*
38.5 - 40MHz, ns	—	*28*
Hum Modulation (Time Domain @ 15A)		
5 - 10MHz, –dBc	—	*55*
11 - 750MHz, –dBc	*60*	*60*

Specification Document Number 600948 Rev A

NOTES:

1. FNB98CJ-xx6(G/N)6xx bridger amplifiers provide two bridger outputs user-configurable to four outputs. Ports 2 and 5 provide the additional bridger outputs.
2. Spacing is at highest frequency with SEQ-750-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 54 to 550MHz frequency spectrum.
5. Recommended minimum forward input level at 750MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 42MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 750MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16dB min.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "G" output configuration option, –20dB internal forward and reverse directional testpoints. For the "N" output configuration option, –20dB external forward directional testpoints and –20dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5dB for all testpoints except the Port 1 forward input testpoint which is ± 0.75dB.

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FlexNet Trunk Amplifier
FNT94CL-xx6x6xx
750MHz, 40/54 Split

	FORWARD		REVERSE	
	Trunk	2 O/P Bridger	Trunk & 2 O/P Bridger	
General				
Passband, MHz	54-750		5-40	
Housing, MHz	1000		—	
AC Current Passing, A				
Ports 1, 3, 4, 6	15		15	
Ports 2, 5 ("H" and "P" output options only) (Note 1)	13		13	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3)	28	37	18	
Channels, Number of NTSC (Note 4)	77	77	6	
Operating Levels (Recommended)				
Frequency, MHz	750/550/54	750/550/54	40/5	
Input, dBmV min. (Note 5)	10.5/9.5/10.5	10.5/9.5/10.5	17/17	
Output, dBmV (Note 6)	38.5/35/26	47.5/44/35	35/35	
Performance Specifications @ Recommended Levels (Temperature Range: –40°C to +60°C)				
Carrier-to-Interference Ratio, dB				
Composite Triple Beat	82	70	—	
Second Order Beat (F1 ± F2)	—	—	82	
Cross Modulation (per NCTA std.) (Note 7)	79	67	78	
Third Order Beat (F1 ± F2 ± F3)	—	—	89	
Composite 2IM	73	66	—	
Composite Intermodulation Noise CIN (Note 8)	85	68	—	
Noise, 4MHz, 75Ohms (Note 3)	60.5/59.5/60	60.5/59.5/60	63	
Noise Figure, dB (without EQ) (Note 9)	8/8/8.5	8/8/8.5	13	
Full Gain, dB (without EQ and ALC)	33	42	19	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	17	17	—	
Flat Loss, dB	12	21	19	
Gain Slope, dB	-0.25 to 1.0	–1.0 to 1.0	—	
Flatness (@ Gain Slope), ±dB	1.0	1.5	1.0	
Return Loss, dB min., All Entry Ports (Note 10)	17	17	16.5	
Powering Requirements, Maximum/Typical (Note 11)			**With Active Reverse**	
AC Voltage, 60Hz			@ 90V	@ 60V
AC Power, Watts			54/49	53/48
AC Current, mA			740/680	985/890
DC Current, mA @ 24V ± 0.5V			1960/1785	1960/1785
Level Control				
Range, dB @ 862MHz	± 4.0dB		—	
Accuracy (–40°C to 60°C)	± 0.5dB		—	
Output Level Range (from nominal)	+2/–6dB		—	
Pilot Frequency Band (Recommended)	439.25MHz (Single Channel)		—	
Gain Control				
Plug-in PAD	SPB-xx		SPB-xx	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	SEQ-862-xx		MEQ-42-x	

Specification Document Numbers 600845 Rev D and 600846 Rev C

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NOTES:

1. FNT94CL-xx6(K/M)6xx ("K" and "M" option) trunk amplifiers provide one trunk output and two bridger outputs. Ports 2 and 5 are not available. FNT94CL-xx6(H/P)6xx ("H" and "P" options) trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs.
2. Spacing is at highest frequency with SEQ-750-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 54 to 550 MHz frequency spectrum.
5. Recommended minimum forward input level at 750 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 40MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 750 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550 MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16 dB min.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. For the "K" and "H" output configuration options, –20 dB internal forward and reverse directional testpoints. For the "P" and "M" output configuration options, –20 dB external forward directional testpoints and –20 dB internal reverse directional testpoints. Testpoint accuracy is ± 0.5 dB except the Port 1 forward input is ±0.75 dB.
13. The Chrominance/Luminance delay per amplifier at channel 2 (NTSC) is typically 28 ns and Group delay at 40 MHz is typically 28 ns/1.5 MHz.

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FlexNet Trunk Amplifier
FNT96CL-xx6x6xx
750MHz, 40/54 Split

	FORWARD		REVERSE	
	Trunk	2 O/P Bridger	Trunk & 2 O/P Bridger	
General				
Passband, MHz	54-750		5-40	
Housing, MHz	1000		—	
AC Current Passing, A				
Ports 1, 3, 4, 6	15		15	
Ports 2, 5 ("H", "P", "S", and "F" output options only) (Note 1)	13		13	
Typical Operating Conditions				
Operational Gain, dB (Notes 2, 3)	31	37	18	
Channels, Number of NTSC (Note 4)	77	77	6	
Operating Levels (Recommended)				
Frequency, MHz	750/550/54	750/550/54	40/5	
Input, dBmV min. (Note 5)	10.5/9.5/10.5	10.5/9.5/10.5	17/17	
Output, dBmV (Note 6)	41.5/38/29	47.5/44/35	35/35	
Performance Specifications @ Recommended Levels (Temperature Range: –40°C to +60°C)				
Carrier-to-Interference Ratio, dB				
Composite Triple Beat	77	68	—	
Second Order Beat (F1 ± F2)	—	—	82	
Cross Modulation (per NCTA std.) (Note 7)	75	66	78	
Third Order Beat (F1 ± F2 ± F3)	—	—	89	
Composite 2IM	74	69	—	
Composite Intermodulation Noise CIN (Note 8)	79	66	—	
Noise, 4MHz, 75Ohms (Note 3)	60.5/59.5/60	60.5/59.5/60	63	
Noise Figure, dB (without EQ) (Note 9; for "K" or "M" option Note 3)	8/8/8.5	8/8/8.5	13	
Full Gain, dB (without EQ and ALC)	36	42	19	
Factory Alignment (with ALC Reserve, without EQ)				
Cable Loss, dB @ 862MHz	17	17	—	
Flat Loss, dB	15	21	19	
Gain Slope, dB	–0.25 to 1.0	–1.0 to 1.0	—	
Flatness (@ Gain Slope), ±dB	1.0	1.5	1.0	
Return Loss, dB min., All Entry Ports (Note 10)	17	17	16.5	
Powering Requirements, Maximum/Typical (Note 11)			**With Active Reverse**	
AC Voltage, 60Hz			@ 90V	@ 60V
AC Power, Watts			56.5/52	55.5/51
AC Current, mA			760/720	1015/935
DC Current, mA @ 24V ± 0.5V			2055/1885	2055/1885
Level Control				
Range, dB @ 862MHz	± 4.0dB		—	
Accuracy (–40°C to 60°C)	± 0.5dB		—	
Output Level Range (from nominal)	+2/–6dB		—	
Pilot Frequency Band (Recommended)	439.25MHz (Single Channel)		—	
Gain Control				
Plug-in PAD	SPB-xx		SPB-xx	
Equalization to Compensate for Cable Loss				
Plug-in Equalizers for Additional Equalization	SEQ-862-xx		MEQ-42-x	

Specification Document Numbers 600912 Rev A, 600928 Rev B, and 600957 Rev A

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NOTES:

1. FNT96CL-xx6(K/M)6xx ("K" and "M" output options) trunk amplifiers provide one trunk output and two bridger outputs. Ports 2 and 5 are not available. FNT96CL-xx6(H/P/S/F)6xx ("H", "P", "S", and "F" output options) trunk amplifiers provide one trunk output and two bridger outputs user-configurable to four outputs.
2. Spacing is at highest frequency with SEQ-750-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications for the models configurable to four outputs (FNT96CL-xx6(H/P/S/F)6xx) are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 54 to 550 MHz frequency spectrum.
5. Recommended minimum forward input level at 750 MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 40 MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 750 MHz at levels 6 dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550 MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16 dB min.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. Internal forward and reverse directional testpoints are –20 dB for the "H" and "K" output configuration options and –25 dB for the "S" option. External forward directional testpoint and internal reverse directional testpoints are –20 dB for the "P" and "M" output configuration options, and –25 dB for the "F" output option. For all options, testpoint accuracy is ±0.5 dB except the Port 1 forward input accuracy is ±0.75 dB.
13. The Chrominance/Luminance delay per amplifier at channel 2 (NTSC) is typically 28 ns and Group delay at 40 MHz is typically 28 ns/1.5 MHz.

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FlexNet Bridger Amplifier
FNB96CL-xx6x6xx
750MHz, 40/54 Split

	FORWARD	*REVERSE*	
	Bridger (ea)	*Bridger (ea)*	
General			
Passband, MHz	*54-750*	*5-40*	
Housing, MHz	*1000*	*—*	
AC Current Passing, A			
Ports 1, 3, 6	*15*	*15*	
Ports 2, 5 (except "J" output option) (Note 1)	*13*	*13*	
Typical Operating Conditions			
Operational Gain, dB (Notes 2, 3)	*37*	*18*	
Channels, Number of NTSC (Note 4)	*77*	*6*	
Operating Levels (Recommended)			
Frequency, MHz	*750/550/54*	*40/5*	
Input, dBmV min. (Note 5)	*10.5/9.5/10.5*	*17/17*	
Output, dBmV (Note 6)	*47.5/44/35*	*35/35*	
Performance Specifications @ Recommended Levels *Temperature Range: –40°C to +60°C*			
Carrier-to-Interference Ratio, dB			
Composite Triple Beat	*70*	*—*	
Second Order Beat (F1 ± F2)	*—*	*82*	
Cross Modulation (per NCTA std.) (Note 7)	*67*	*78*	
Third Order Beat (F1 ± F2 ± F3)	*—*	*89*	
Composite 2IM	*66*	*—*	
Composite Intermodulation Noise CIN (Note 8)	*68*	*—*	
Noise, 4MHz, 75Ohms (Note 3, except Note 9 for "J" option)	*60/60/58*	*64.5*	
Noise Figure, dB (without EQ) (Note 9)	*8.5/7.5/10.5*	*11.5*	
Full Gain, dB (without EQ and ALC)	*42*	*19*	
Factory Alignment (with ALC Reserve, without EQ)			
Cable Loss, dB @ 862MHz	*17*	*—*	
Flat Loss, dB	*21*	*19*	
Gain Slope, dB	*–1.0 to 1.0*	*—*	
Flatness (@ Gain Slope), ±dB	*1.5*	*1.0*	
Return Loss, dB min., All Entry Ports (Note 10)	*17*	*16.5*	
Powering Requirements, Maximum/Typical (Note 11)		**With Active Reverse**	
AC Voltage, 60Hz		*@ 90V*	*@ 60V*
AC Power, Watts		*48.5/44*	*47.5/43*
AC Current, mA		*690/660*	*870/785*
DC Current, mA @ 24V ± 0.5V		*1760/1585*	*1760/1585*
Level Control			
Range, dB @ 862MHz	*± 4.0dB*	*—*	
Accuracy (–40°C to 60°C)	*± 0.5dB*	*—*	
Output Level Range (from nominal)	*+2/–6dB*	*—*	
Pilot Frequency Band (Recommended)	*439.25MHz (Single Channel)*	*—*	
Gain Control			
Plug-in PAD	*SPB-xx*	*SPB-xx*	
Equalization to Compensate for Cable Loss			
Plug-in Equalizers for Additional Equalization	*SEQ-750-xx*	*MEQ-42-x*	

Specification Document Numbers 600843 Rev C, 600844 Rev D, and 600958 Rev A

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NOTES:

1. FNB96CL-xx6J6xx ("J" option) bridger amplifiers provide two bridger outputs. Ports 2 and 5 are not available.
   FNB96CL-xx6(G/N/R/E)6xx ("G", "N", "R", and "E" options) bridger amplifiers provide two bridger outputs user-configurable to four outputs.
2. Spacing is at highest frequency with SEQ-750-xx installed. Reverse spacing includes losses due to housing, diplex filters, and MEQ-42-xx.
3. The specifications for the "G", "N", "R", and "E" output configuration options are based on the amplifier configured (with two SPB-0s) as a 2-Output Bridger with distribution outputs on Ports 3 and 6. When using distribution plug-ins, SS-1000-2, SDC-1000-8, or SDC-1000-12, levels should be derated accordingly based on the accessory specification.
4. NTSC video channels occupying the 54 to 550MHz frequency spectrum. 79 channels for "R" and "E" output options.
5. Recommended minimum forward input level at 750MHz including loss due to equalizer.
6. Recommended maximum reverse output level at 40MHz including loss due to equalizer.
7. Cross modulation specification number indicates typical cascade performance.
8. Systems operating with digitally compressed channels or equivalent broadband noise from 550 to 750MHz at levels 6dB below equivalent video channels will experience a composite distortion (CIN) appearing as noise in the 54 to 550MHz frequency spectrum.
9. The Noise Figure and C/N specifications are "Typical" within specified passband.
10. Forward input return loss is 16dB.
11. Powering requirements indicated are with the power supply 122027-05. See Power Curves 333995-17 for typical performance under various operating conditions.
12. Internal forward and reverse directional testpoints are –20dB for the "G" and "J" output configuration options and –25dB for the "R" option. External forward directional testpoint and internal reverse directional testpoints are –20dB for the "N" output configuration option, and –25dB for the "E" output option. For all options, testpoint accuracy is ±0.5dB except the Port 1 forward input accuracy is ±0.75dB.
13. The Chrominance/Luminance delay per amplifier at channel 2 (NTSC) is typically 28ns and Group delay at 40MHz is typically 28ns/1.5MHz.

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122027-05 90V, 2.3A Power Supply

Input Voltage Range	*40 to 90VAC (Quasi-Squarewave)*
Input Frequency	*50/60Hz*
Output Voltage	*24.0VDC ± 0.5V*
Output Voltage Ripple	*15mV rms (max)*
Output Current	*2.3ADC (max)*
Efficiency	*87% (typ)*
Short Circuit Current	*4.0ADC (max)*
Output Voltage Protection	*31.5VDC*
Switching Frequency	*25kHz*
Operating Temperature (Note 1)	*–40°C to +60°C*
Hold-up Time @ max DC loading @ nominal DC loading	
40V	*20ms (typ)*
60V	*45ms (typ)*
Cutoff Voltage	*27Vrms (typ)*
Current Passing Capability (Note 2)	*Ports 2 and 5: 13A, continuous* *Ports 1, 3, 4, 6: 15A, continuous*
Time Delay @ Startup	*0.25 to 1.00 sec*
Transponder Capable	*Yes*

Specification Document Number 601226 Rev A

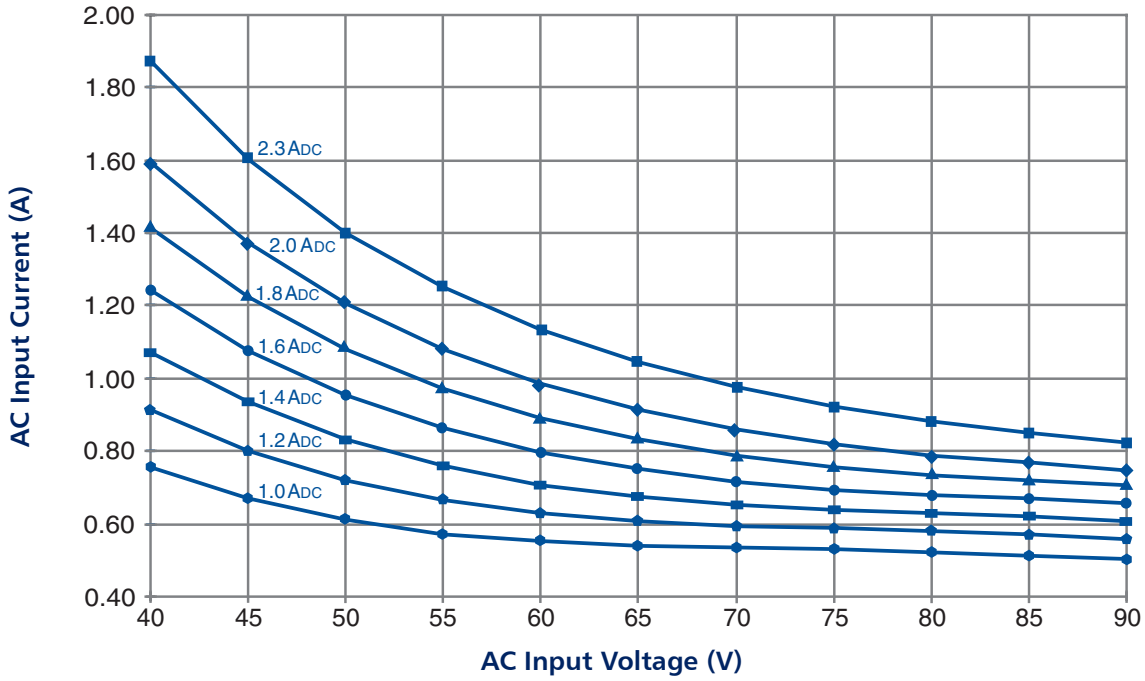
NOTES:

1. The operating temperature represents the outside ambient temperature of the die-cast housing in which power supply is installed (Housing Ambient Temp.).
2. Requires 12-pin to 12-pin power harness (P/N 174355-02) for 15A continuous, maximum current passing capability through ports 1, 3, 4, and 6.
3. See Power Curves 333995-17 for typical performance under various operating conditions.

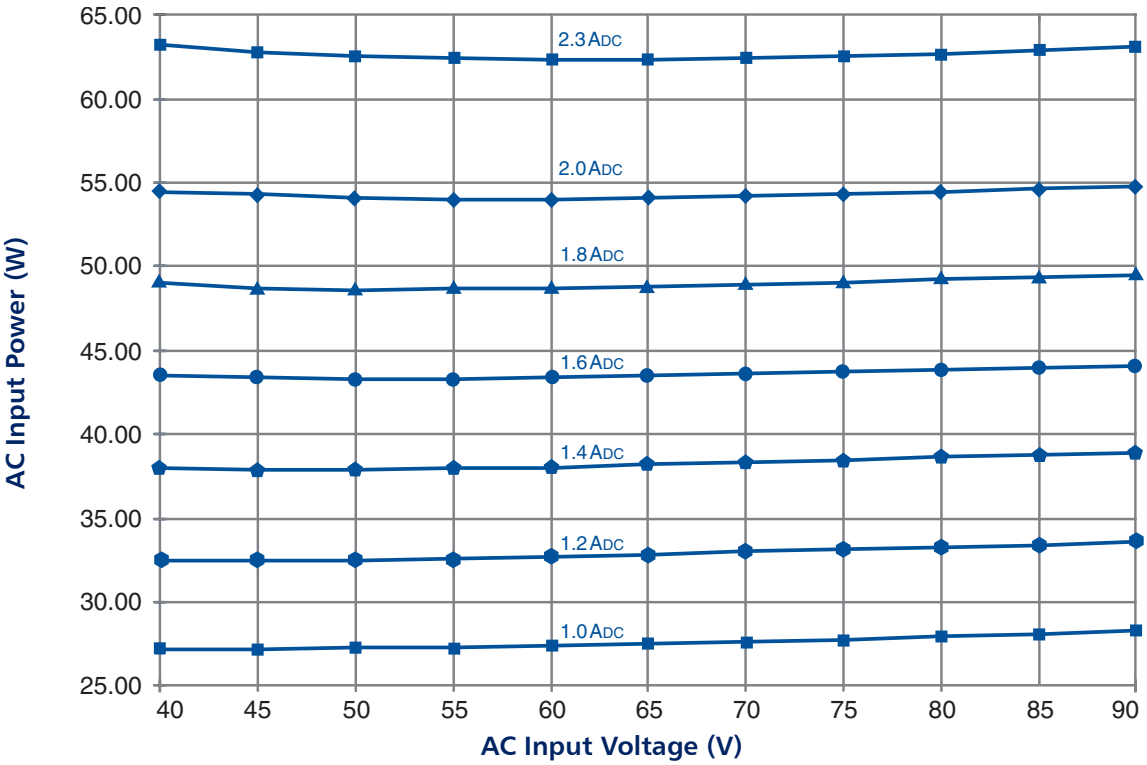
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