

COMMSCOPE BT100

STRECKENVERSTÄRKER

Ideal für Kabelnetz-Betreiber die ein Maximum an Abwärts-kompatibilität und Skalierbarkeit suchen. Der BT100 Verstärker ermöglicht Kabelnetz-Betreibern die Vorwärts-Kapazität zu steigern und dabei das Spacing von existierenden 750 und 870 MHz Systemen zu behalten.



- Vereinfacht Netz-Ugrades mit modularem HF-Design und 1,2 GHz tauglichem Gehäuse
- Verbessern Sie die Verstärker-Reichweite mit optionaler GaN-Technologie
- Erweitern Sie die Rückweg-Bandbreite mit Plug-In Filterunterstützung auf 85 MHz
- Minimalisieren Sie HF-Drift über die Temperatur mit optionalem Analog- oder QAM-ADU

SPECIFICATIONS E-GaAs	UNITS	FORWARD	RETURN
Frequency split ¹	MHz	K (54 – 1003) A (85 – 1003) N (104 – 1003) ¹⁹	K (5 – 42) A (5 – 65) N (5 – 85)
Flatness ^{2,19}	dB	± 0.7	± 0.75
Minimum Full Gain ³	dB	46	17.5
Operation Gain ⁴	dB	42	NA
Manual Bode Slope Control Range ⁵	dB	± 4	NA
Noise Figure ⁶	dB	10	8
Standard Slope Reference Frequency	MHz	1003/550/54	35 (flat)
Reference Output Level	dBmV	51/44/37	—
Operating Interstage Slope ⁷	dB	14 ± 1	NA
Standard Slope Distortion			
Channels, Number of NTSC ¹⁷		79	
Composite Triple Beat (CTB) ^{8,16}	dBc	75	80
Cross Modulation (XM) ^{9,16}	dBc	66	70
Composite Second Order (CSO) ^{8,10,16}	dBc	71	81
Carrier to Intermodulation Noise (CIN) ²¹	dB	65	-
Channels, Number of 256 QAM		154	-
Carrier to Intermodulation Noise (CIN) ^{20,21}	dB	65	-
Test Point ¹¹	dB	20 (± 1.0 dB)	20 (± 1.0 dB)
Return Loss ¹²	dB	15	15
Hum Modulation @ 12A	dBc	< 65	< 60
Hum Modulation @ 15A ¹²	dBc	< 60	< 60
DC Voltage	VDC	24	
Current DC Max. ¹⁸	mA	2475	
Power Consumption Max.	W	80	
AC Input Voltage Range	VAC	38–90	
AC Current Draw Max.			
@ 90 VAC	A	0.90	
@ 60 VAC		1.42	
@ 38 VAC		2.25	
AC Bypass Current (all ports) ¹⁴	A	15	
Group Delay ¹⁵			
K-split	nSec	52	NA
55.25 to 58.83 MHz			

Group Delay ¹⁵ A-split 86.25 to 90.68 MHz	nSec	28	NA
Group Delay ¹⁹ N-split 109.25 to 112.83 MHz 112.25 to 116.68 MHz	nSec nSec	14 12	NA NA
Operating Temperature Range	°C °F	-40 to +60 -40 to +140	
Housing Dimensions, L x W x D	inches mm	21.6 x 10.6 x 7.7 549 x 270 x 196	
Weight	lb kg	27 12.2	

SPECIFICATIONS E-GaN	UNITS	FORWARD	RETURN
Frequency split ¹	MHz	K (54 – 1003) A (85 – 1003) N (104 – 1003) ¹⁹	K (5 – 42) A (5 – 65) N (5 – 85)
Flatness ^{2,19}	dB	± 0.7	± 0.75
Minimum Full Gain ³	dB	46	NA
Operation Gain ⁴	dB	42	17.5
Manual Bode Slope Control Range ⁵	dB	± 4	NA
Noise Figure ⁶	dB	10	8
Ultra Slope Reference Frequency ⁷	MHz	1003/550/54	35 (flat)
Reference Output Level	dBmV	57/48/39	—
Operating Interstage Slope	dB	18 ± 1	NA
Ultra Slope Distortion Channels, Number of NTSC		79	
Composite Triple Beat (CTB) ^{8,16}	-dBc	70	80
Cross Modulation (XM) ^{9,16}	-dBc	58	70
Composite Second Order (CSO) ^{8,10,16}	-dBc	69	81
Carrier to Intermodulation Noise (CIN) ²¹	dB	58	-
Channels, Number of 256 QAM		154	-
Carrier to Intermodulation Noise (CIN) ^{20,21}	dB	58	-
Standard Slope Reference Frequency ⁷	MHz	1003/550/54	35 (flat)
Reference Output Level	dBmV	51/44/37	-
Operating Interstage Slope ⁶	dB	14 ± 1	NA
Standard Slope Distortion Channels, Number of NTSC ¹⁷		79	
Composite Triple Beat (CTB) ^{8,16}	-dBc	75	80
Cross Modulation (XM) ^{9,16}	-dBc	66	70
Composite Second Order (CSO) ^{8,10,16}	-dBc	71	81
Carrier to Intermodulation Noise (CIN) ²¹	dB	66	-
Channels, Number of 256 QAM		154	-
Carrier to Intermodulation Noise (CIN) ^{20,21}	dB	66	-
Test Point ¹¹	dB	20 (± 1.0 dB)	
Return Loss ¹²	dB	15	15
Hum Modulation @ 12A	dBc	< 65	< 60
Hum Modulation @ 15A ¹⁸	dBc	< 60	< 60
DC Voltage	VDC	24	
Current DC Max. ¹³	mA	2475	
Power Consumption Max.	W	80	
AC Input Voltage Range	VAC	38–90	
AC Current Draw Max. @ 90 VAC @ 60 VAC @ 38 VAC	A	0.90 1.42 2.25	
AC Bypass Current (all ports) ¹⁴	A	15	
Group Delay ¹⁵ K-split 55.25 to 58.83 MHz	nSec	52	NA
Group Delay ¹⁵ A-split 86.25 to 90.68 MHz	nSec	28	NA
Group Delay ^{15,19}			

N-split 109.25 to 112.83 MHz 112.25 to 116.68 MHz	nSec nSec	14 12	NA NA
Operating temperature range	°C °F	-40 to +60 -40 to +140	
Housing dimensions, L x W x D	inches mm	21.6 x 10.6 W x 7.7 D 549 L x 270 W x 196 D	
Weight	lb kg	27 12.2	

Notes:

1. Operating passband of station. Diplex filters are plugged into the electronic chassis.
 2. Referenced to the average gain across the passband.
 3. Minimum full gain at 1003 MHz includes loss of equalizer but Bode slope reserves have not been set. Return gain includes loss of SRE-*4 return equalizer. Measured at Fmax return.
 4. Includes loss of gain reserves as well as equalizer.
 5. From midpoint (typical setting is -4 dB at 1003 MHz @ 25 °C). This control should not be used for gain reduction.
 6. Specified at the housing cable entry facility over temperature and includes the loss of 1 dB for the pre-stage equalizer. The return noise figure includes the station loss preceding the RF hybrid.
 7. Amount of slope created and cable equivalence of fixed, plug-in interstage equalizer.
 8. Measured with CW carriers and spectrum analyzer over specified temperature range. References the worst-case channel.*
 9. Measured with wave analyzer and synchronous, 100% depth modulated channels. References the worst-case channels over specified temperature range. *
 10. Refers only to beat clusters that fall 0.75 MHz and 1.25 MHz above the subject picture carrier.
 11. Test points should be used with GFAL adapter.
 12. Match measurement at the station input and output, cable- entry facilities, at the specified passbands for operational gain.
 13. Current draw at 24 VDC.
 14. Stated in RMS continuous.
 15. Specified for standard NTSC video, where delay is the delta from picture carrier to 3.58 MHz color subcarrier. Reverse delay is in a 1.5 MHz bandwidth.
 16. Worst-case over temperature in a cascade.
 17. NTSC 79 Channel forward, 75 QAM carriers -6dB relative to analog CW carriers. 6 Channel return.
 18. Specification is 55 from 5 to 10MHz at 15A.
 19. For N-split (5-85/104-1003MHz) roll-off from 105 MHz to 102 MHz < 1.0 dB. Group delay from 103.25 MHz to 105.25 MHz is < 22 ns.
 20. 154 QAM carriers 54-1002 MHz. Carriers are -6dB relative to virtual analog levels.
 21. Room temperature performance.
- * Specifications are compliant with the test methods as stated in NCTA Recommended Practices for Measurements on Cable Television