

BLE87 870 MHz Line Extender

STARLINE® Series



Motorola's STARLINE® series line extender, model BLE87*/*, leads the industry in features and performance and is designed to meet the needs of today's expanding broadband communication networks. This two-way capable single output amplifier offers high gain, high output levels, ergonomics, superior distortion performance, four diplex filter options, 16 dB return loss, and Bode equalization. The BLE87*/* also allows optional advanced features such as ingress control switching and status monitoring.

The BLE87 two-way line extender offers 870 MHz bandwidth capability, high gain, high output level, ergonomics, and superior distortion performance.

ENHANCED GALLIUM ARSENIDE

Enhanced Gallium Arsenide (E-GaAs) hybrids are standard in the STARLINE BLE87. This second generation technology provides superior distortion performance in CTB and CSO over the standard GaAs technology. Compared to silicon and competing GaAs technology, E-GaAs distortion performance remains linear at significantly higher output levels. This higher output level allows the customer to maximize system performance and reduce system costs. We encourage our customers to contact their Motorola Account Representative to determine the optimal levels for their systems.

HIGH GAIN

The BLE87 also offers high gain. This allows the operator to hold existing amplifier locations during system upgrades thereby reducing system costs.

BENEFITS INCLUDE:

- 870 MHz Enhanced Gallium Arsenide (E-GaAs) power doubling technology
- High gain
- High output level
- Four diplex filter options
- Ease-of-use ergonomics
- 16 dB return loss
- 60/90 V powering
- Meets Telcordia GR-1098-Core voltage surge requirements using surge waveforms as described in IEEE C62.41
- FCC, CENELEC and CCC approved
- Bode equalization (thermal or auto controlled)
- 15 ampere AC capability
- Optional return path ingress control and status monitor
- Directional coupler –20 dB test points



Motorola, Inc.
Connected Home Solutions
101 Tournament Drive
Horsham, PA 19044
1.800.523.6678
www.motorola.com/broadband



MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. All other product or service names are the property of their respective owners.
© Motorola, Inc. 2003

Rev. 1.0
09.01.05

Specifications are subject to change without notice.

BLE87 Specifications

STARLINE®

Single Output Line Extender

Enhanced Gallium Arsenide

BLE87S/H* SPECIFICATIONS

Broadband Line Extender

PARAMETER	UNITS	NOTE	FORWARD	RETURN RA-KIT/L
Passband	MHz	1	52-870	5 - 40
Flatness	dB	2	± 0.70	± 0.50
Minimum Full Gain	dB	3	36	NA
Operational Gain	dB	4	32	19
Manual Bode Slope Control Range	dB	5	± 4.0	NA
Interstage Equalizer Slope	dB	6	8 ± 1	NA
Noise Figure 40 / 52 / 870 MHz	dB	7	NA / 9 / 9	6 / NA / NA
Reference Frequency	MHz	8	870 / 550 / 52	40
Output Level	dBmV		43 / 44 / 37	41 Flat
Channel Loading	NTSC		79	4
Compressed data loading	MHz	22	320	NA
Distortion	CTB	9,21,23	74	NA
	XM	10,21	63	74
	CSO	9,11,21	74	NA
	CCN (-6)	12	58 (50 dBmV at 550 MHz)	NA
	STB	9	NA	82
	SSO	9	NA	77
Test Point (all)	dB	13	20 ± 0.7	20 ± 0.5
Return Loss	dB	14	16	
Hum Modulation	dBc	15,20	65	60
DC Voltage	VDC	16	+ 24.0 ± 0.25	
Current DC	mA	17	800	925
DC Ripple	mV		15 P-P	
Power Consumption	W		22.6	26.6
AC Input Voltage Range	VAC		38 - 90	
AC Current Draw	@90 VAC	A	0.48	0.56
	@75 VAC	A	0.50	0.59
	@60 VAC	A	0.56	0.65
	@53 VAC	A	0.60	0.70
	@45 VAC	A	0.67	0.78
	@38 VAC	A	0.75	0.88
AC Bypass Current	A	18	15	
Group Delay	55.25 to 58.83 MHz	nSec	28	NA
	5.0 to 6.5 MHz	nSec	NA	45
	10.0 to 11.5 MHz	nSec	NA	10
	33.5 to 35.0 MHz	nSec	NA	12
	38.5 to 40.0 MHz	nSec	NA	35
Housing Dimensions			10.6" L x 8.0" W x 4.7" D	26.9cm x 20.3cm x 11.9 cm
Weight			7.2 Pounds	3.2 kg
Ambient Operating Temperature			-40° to +140° F	-40° to +60° C



STARLINE®

Single Output Line Extender

Enhanced Gallium Arsenide
Broadband Line Extender

BLE87S/G* SPECIFICATIONS

PARAMETER	UNITS	NOTE	FORWARD	RETURN RA-KIT/L	
Passband	MHz	1	52-870	5 - 40	
Flatness	dB	2	± 0.70	± 0.50	
Minimum Full Gain	dB	3	32	NA	
Operational Gain	dB	4	28	19	
Manual Bode Slope Control Range	dB	5	± 4.0	NA	
Interstage Equalizer Slope	dB	6	8 ± 1	NA	
Noise Figure 40 / 52 / 870 MHz	dB	7	NA / 9 / 9	6 / NA / NA	
Reference Frequency	MHz	8	870 / 550 / 52	40	
Output Level	dBmV		43 / 44 / 37	41 Flat	
Channel Loading	NTSC		79	4	
Compressed data loading	MHz	22	200	NA	
Distortion	CTB	dBc	9,21,23	74	NA
	XM	dBc	10,21	63	74
	CSO	dBc	9,11,21	74	NA
	CCN (-6)	dBc	12	58 (50 dBmV at 550 MHz)	NA
	STB	dBc	9	NA	82
SSO	dBc	9	NA	77	
Test Point (all)	dB	13	20 ± 0.7	20 ± 0.5	
Return Loss	dB	14	16		
Hum Modulation	dBc	15,20	65	60	
DC Voltage	VDC	16	+ 24.0 ± 0.25		
Current DC	mA	17	800	925	
DC Ripple	mV		15 P-P		
Power Consumption	W		22.6	26.6	
AC Input Voltage Range	VAC		38 - 90		
AC Current Draw	@90 VAC	A	18	0.48	0.56
	@75 VAC	A		0.50	0.59
	@60 VAC	A		0.56	0.65
	@53 VAC	A		0.60	0.70
	@45 VAC	A		0.67	0.78
	@38 VAC	A		0.75	0.88
AC Bypass Current	A	18	15		
Group Delay			19		
	55.25 to 58.83 MHz	nSec		28	NA
	5.0 to 6.5 MHz	nSec		NA	45
	10.0 to 11.5 MHz	nSec		NA	10
	33.5 to 35.0 MHz	nSec		NA	12
38.5 to 40.0 MHz	nSec		NA	35	
Housing Dimensions			10.6" L x 8.0" W x 4.7" D	26.9cm x 20.3cm x 11.9 cm	
Weight			7.2 Pounds	3.2 kg	
Ambient Operating Temperature			-40° to +140° F	-40° to +60° C	

