S-Series

Linearizer Technology
Product Brief
Rev 1

The **S-Series** linearizer is a frontend mini-system used in conjunction with a TWTA, MPM, or SSPA amplifier to provide superior HPA linearity performance. It provides RF gain, predistortion, input and output level control, and RF output power to drive an amplifier to saturation. It typically provides a 4x power increase with multicarrier traffic and advanced digital modulation. The **S-Series** is available but not limited to all Satcom uplink bands L– through Q-band.

S-Series (Models BAFL or BLFE)
3.95" L x 2.75" W x 0.79" H
(cm) 10.0 L x 6.99 W x 2.00 H

Typical Uplink Frequency Bands

Frequency Range:	5.850 to 6.725 GHz (C)
	7.900 to 8.400 GHz (X)
	13.75 to 14.50 GHz (Ku)
	17.30 to 18.40 GHz (K)
	27.00 to 31.00 GHz (Ka)
	43.50 to 46.00 GHz (Q)

General Performance

Input Power Level for HPA Rated Power:	-30 to -5 dBm
Output Power for HPA Saturation:	up to +30 dBm
Gain:	> 40 dB (typ.)
Gain Flatness:	< ± 0.5 dB over any 500 MHz
Gain Slope:	< 0.02 dB/MHz
Gain Stability:	< ± 0.75 dB, -20 to +85ºC
User Gain Attenuator Range:	32 dB (typ.)
Control:	0 to X Volts or 8/9 Bit Digital (.25/.15 dB step)
Static Phase Shift to HPA Rated Power:	< ± 5 degrees
AM/PM Conversion to HPA Rated Power:	< 2 degrees/dB
Spurious/Noise:	< -135 dBw/4 KHz (max Gain)
Input and Output VSWR:	1.5:1
RF Interface Connectors:	SMA, 2.92, 2.4 mm Female
DC Interface:	15 or 25 Pin Male D-Sub
Controller Interface:	Analog, I²C, RS232, RS485
DC Power:	+12 Volts, 600 mA (typ.)
Typical Performance w/ TWTA	
Intermodulation (C/I):	>25 dBc @ 3 dB OPBO
	>30 dBc @ ≥4 dB OPBO

FEATURES/OPTIONS

Compact Package

Multiple Interface Options
Analog, I²C, RS232, RS485

Temperature Compensation
Extended Range -55 to +85ºC

Analog or Digital User Attenuator
32 dB, 0-X Volts, 8/9 bit digital

TTL MUTE Function

O/P Power Detector

Contact us for additional custom features.

Any Frequency—Any Power