



Model Number: 2551B-B7B7

RF Engineering
and Custom Build

4 Channel L-band AGC Amplifier

With Current and Power Monitoring



Front View of Model 2551B-B7B7

This 4-channel L-band AGC Amplifier benefits from an Automatic Gain Control (AGC) circuit to allow for changing levels on the input of each amplifier. It is housed in a 1U high, 19" shelf and is designed to amplify up to four L-band (850-2150MHz) signals.

An RS232/RS485 serial port is provided on the rear for remote current and power monitoring. The front panel is equipped with 4 tri-colour LEDs which show one of four different states and provide simplified monitoring of the operation of the AGC amplifier status.



Rear View of Model 2551B-B7B7

This unit is supplied with 75 ohm BNC connectors, but other impedances and connector types are available (model numbers will vary).





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Technical specifications and operating parameters

RF Parameters		
Capacity	4 channels	
Input Frequency	950-2150 MHz (L-band)	
Input Level Range	-10 to -50 dBm	
Output Frequency	950-2150 MHz (L-band)	
Output Power Level	-5 dBm \pm 2 dB at 1550 MHz (at	
Output Frequency Response	Mono carrier, full band: AGC only	+ 6.5 \pm 1.5 dB
	Multicarrier, full band: System	\pm 3 dB (output to stay within \pm 3 dB window for all operational input levels across the full band)
	Any 40MHz segment within L-band	\pm 0.5 dB
Inter-modulation Distortion, OIP ₃	+ 24 dBm, worst case + 23 dBm	
Noise Figure	+ 30 dB (max)	
Gain Stability	\pm 0.2 dB at constant temperature	
Input Return Loss	> 14 dB typical	
Output Return Loss	> 12 dB typical	
Spurious Products	< -60 dBc (in-band)	
Isolation	I/P – I/P	> 50 dB
	O/P – O/P	> 50 dB
	I/P – O/P	> 50 dB

System Control	
Display	Front Panel LED's for monitoring amplifier status
Alarm monitoring Circuitry	Closed Contact
Remote Control	Via Serial port RS232
High Input Alarm Front	Visible Alarm (for each channel)
High Input Alarm Rear	Closed Contact RS232 (for each channel)
High Input Alarm Trigger Level	\geq 0 dBm

Power	
Voltage	Auto-sensing 100-240Vac
Frequency	50/60 Hz
PSU	Single
Hot-swap PSU	No

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	85% non-condensing

Physical	
Input Connector	BNC
Input Impedance	75 Ω
Output Connector	BNC
Output Impedance	75 Ω
Vent Holes	On rear or side panels where viable
Dimensions	1U high x 19" wide
Colour	White 00-E-55 semi-gloss

Key Features	
Automatic Gain Control Amplifier	
Current and power monitoring	
Single power supply	
Dry Contact Alarm port for PSU failure	

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com

