



Model Number: 2544-S5

RF Engineering
and Custom Build

L-band Dual Redundant Amplifier

With dual redundant hot-swap amplifiers, power supplies and variable gain



Front View of Model 2544-S5

This amplifier shelf contains a Main and a Standby L-band amplifier module operating over the 950-2400 MHz frequency range, with automatic changeover from the Main to the Standby in the event of amplifier failure. The changeover is based on current monitoring of both amplifiers.

The amplifiers are hot-swappable via the front panel without disturbing the on-line path. The gain is adjustable from +0 dB to +40 dB in 1 dB steps via a front panel mounted attenuator. This unit also benefits from dual redundant power supplies which are hot swappable from the rear panel.

Front panel LED's indicate which amplifier is in use and offer a visual status of the power supplies, and illuminated pushbuttons are provided to switch between auto and local control. The front panel also contains two -20dB monitor ports to allow easy monitoring of the input and output signals.



Rear View of Model 2544-S5

A dry contact alarm port and an RS232 serial communications port are located on the rear panel for amplifier or PSU failure alarm reporting. A pair of test connectors allow testing of the offline (standby) amplifier. This unit has 50 ohm SMA connectors, but other impedances and connector types are available (model numbers will vary).





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Technical specifications and operating parameters

RF Parameters	
Frequency Range	950-2400 MHz (L-band)
Max. Gain	40 dB
Dynamic Range	40 dB Gain Control Range (0-40 dB)
Gain Control Step Size	1 ± 0.15 dB
Gain vs. Frequency Variation	≤ ± 3.25 dB
Noise Figure	8 dB at 20°C
IP3	25 dBm typical
1 dB Compression	+ 10 dBm Output power at max gain setting, reducing 1 dB for each dB increase in attenuator setting.
Input Return Loss	10 dB typical
Output Return Loss	10 dB typical
Amp Redundancy	1-to-1 Auto-switchover from main to standby is based on current sensing

Power	
AC Power	90-264Vac 50/60Hz
LNB Power	None
PSU	Dual redundant
Hot-swap PSU	Yes

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

System Control	
Display	Front Panel LED's for monitoring PSU's and amplifier in use
Local Control	Adjustable gain via front panel attenuator
Remote Control	Via RS232 Serial Port
Operational Modes	Local or Remote Select and Manual or Auto select
Offline test ports	0 dB ± 1 dB 2 SMA test ports on the rear panel give the ability to monitor the Offline amplifier. These should be terminated when not in use
Online -20 dB monitor ports	-20 dB ± 3 dB 2 SMA connectors on the front panel. These should be terminated when not in use
Alarms	Dry contact alarm port and RS232 serial Communications port on rear panel

Physical	
Connectors	SMA
Impedance	50Ω
Dimensions	2U high x 450mm deep x 19" wide
Colour	White 00-E-55 semi-gloss

Key Features	
Dual redundant hot-swap amplifiers	
Dual redundant hot-swap power supplies	
Adjustable Gain	
Local & Remote Control	

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