ETL Systems
Excelling in RF Engineering

Model Number:
26128-ATT100-XXXX

L-band variable Attenuator with variable slope

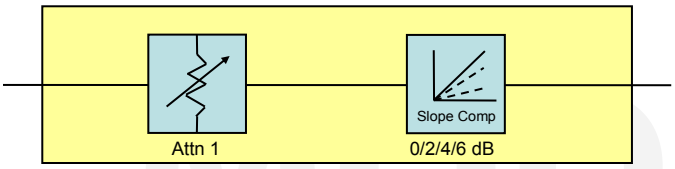
for 26128 modular system chassis

ETL's model 26128 Modular System offers total flexibility in managing L-band signals.
The modular design comprises a chassis with 16 RF slots, two hot swap dual redundant PSUs, and one CPU. Each chassis can hold up to 16 RF modules (some modules require 2 slots so can only hold 8), which can be hot swapped or hot expanded. This provides excellent resilience and scaleability.

Typical applications:

- Applications where it is necessary to continuously vary the level of a signal.
- Where signal level reduction is required between satellite dishes & teleport.

Attenuator Modules



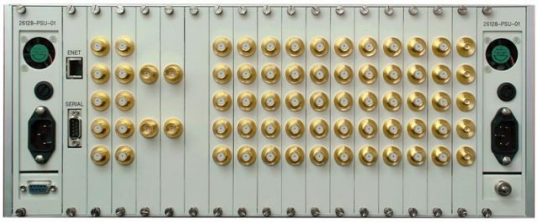
950 - 1950 MHz
operating frequency range

Variable attenuator
with variable slope compensation

Chassis

Compact chassis which can house up to 16 variable attenuator modules

Resilience from dual redundant hot -swap power supplies, hot-swap amplifier modules & hot-swap CPU



Remote control & monitoring
via RJ45 Ethernet port with SNMP & web browser interface

Local control & monitoring
via LEDs on modules

Dry contact alarm port & serial communications
for power supply status

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Technical specifications and operating parameters

Attenuator Module			
Capacity		Variable Attenuator Single channel, with variable slope compensation.	
Module Slots Used		1	
RF Connectors & Impedances		BNC 50/75Ω, SMA 50Ω, N-type 50Ω, F-type 75Ω	
Frequency Range		950-1950 MHz	100 MHz min instantaneous bandwidth
Attenuation		0 dB to 15.5 dB	Switchable in 0.5dB steps above baseline loss
Switchable Slope		0dB to +6 dB on 2 dB steps	Selectable slope at both gain settings
Gain Slope Accuracy	2 dB	±0.35 dB	
	4 dB	±0.5 dB	
	6dB	±0.8 dB	
Insertion Loss at 0 dB attenuation setting	Typical	10 ± 0.5 dB	Maximum attenuation at 0 dB attenuation setting
	Maximum	10 ± 0.75 dB	
Slope variation at 0 dB attenuation setting	Typical	± 0.5 dB	Insertion loss 10 dB max at 1450 MHz, and shall not deviate from linear variation by more than ± 0.75 dB
	Maximum	± 0.75 dB	
Insertion Loss at 10 dB attenuation setting	Typical	X+10 ± 0.5 dB	X is the insertion loss at 0 dB attenuation setting
	Maximum	X+10 ± 0.75 dB	
Insertion Loss at 10 dB attenuation setting	Typical	X+10 ± 0.5 dB	At zero slope setting
	Maximum	X+10 ± 0.75 dB	
Slope variation at 10 dB attenuation setting	Typical	± 0.5 dB	Positive slopes at +10 dB attenuation settings shall NOT deviate from linear variation by more than ±075 dB. Insertion loss at 1450 MHz to be within X+10±0.75 dB max.
	Maximum	± 0.75 dB	
Gain variation within any 60 MHz	Typical	± 0.3 dB	0 dB slope setting
	Maximum	± 0.5 dB	2, 4 or 6 dB slope setting
Ripple in 1 MHz	Typical	± 0.01 dB / MHz	0 dB slope setting
	Maximum	± 0.015 dB / MHz	2, 4 or 6 dB slope setting
Gain vs Frequency Variation		0.02 dB / °C	At any spot frequency within specified frequency band.
Group Delay	Across any 60 MHz	300ps max	Within operational frequency range
	Across the band	500ps max	
Input Level Range		0 to -43 dBm	
Input to Input Isolation		60 dB	
Input to Output Isolation		60 dB	
Output to Input Isolation		60 dB	
Output to Output Isolation		60 dB	
RF Ports		50 ohm SMA	All RF ports
Input RL		14 dB minimum	
Output RL		14 dB minimum	
RF Ports		All RF ports are DC blocked	

System Control	
LNB Power	None
Power Supply	24 Vdc nominal internal from chassis. See chassis spec for input power.
Local Control & Monitor	Push button & display. Accessible via front door.
Remote Control & Monitor	Via CPU fitted (optional)

Environmental	
Input RF Power	+20 dBm Total RF power, at any RF port.
Max DC voltage on RF Ports	24 V All RF ports are DC blocked.
Operation Temperature	0° to 45°C (indoor use only)
Storage Temperature	-20° to 75°C
Humidity	85% non-condensing

Chassis Specifications	
Capacity	16 attenuator modules
Dimensions	4U high x 450mm deep x 19" wide
Weight	20 kg (fully populated)
Colour	RAL9003 - White (Semi-Matte) (Front & Rear panels)
AC Power	85-264V AC (50/60Hz)
PSU	Dual redundant, hot-swap
Remote Control & Monitor	Via CPU as fitted, see chassis specifications

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.
Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.

Please see separate datasheet for full 26128 chassis specifications.

ESATCOM INC
Esatcom Inc.
www.esatcom.com
Tel: 718.276.0800
Email: sales@esatcom.com

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