HIRSCHMANN
MULTIMEDIA

Provider Products
DATASHEET

BA1218 TE3

POWER PASSING REMOTE POWERED CATV ACCESS NETWORK AMPLIFIER 695005049

The BA1218 TE3 is a "line or trunk CATV access network amplifier" specially designed for interactive DOCSIS 3.1 enabled cable television access networks. Designed in GaN technology it offers unrivalled RF performance, high energy efficiency, small formfactor and "one time right installation".

The modular design offers multiple bandwidth options within its 85 - 1218 MHz downstream and 10 - 204 MHz upstream range. With the option to easily replace the diplex filters, depending on the provider bandwidth you choose. All adjustments and settings are realized by the built-in microprocessor. These settings can be changed via a smartphone or tablet through a separate Bluetooth dongle.

Power settings can be adjusted to optimize power consumption in conjunction with the required performance, allowing for energy cost savings. The unique direct heatsink design, combined with high power efficiency, has been proven to significantly improve the MTBF factor resulting in a low TCO.

This type of housing guarantees optimal heat dissipation and perfect protection of the electronic components. In the standard product, auto level control, auto alignment and one-way FSK management is available. This results in a cost saving feature during installation and during the complete lifespan of the product.

Why BA1218 TE3?

- ✓ Lowest TCO
- ✓ One time right installation
- ✓ Unrivalled performance

Features	
Ultra-efficient and reliable Power Supply	No-Rush avoids inrush current
Configurable as line or final amplifier	Utility pad for JXP cable simulator
Power passing functionality	Modular plug-in diplex filters to realize migration, field exchangeable
Loop-trough port	DOCSIS 3.1 phase 1 compatible 1218 MHz
Power profiles can be set for optimal power versus performance settings	Data collection for inventory management
Unique switch mode power supply topology significantly improving lifetime, reliability and EMI	Remote controllable ingress switch
Configuration via smartphone and Bluetooth adapter.	Spectrum Analyzer Function for ALSC
Built in FSK NMS receiver	Glitch free equalizer and attenuators

RF Specifications	Downstream	Upstream
Frequency range (MHz)	85-1218	10-204

RF Specifications (including 2 x DPF)	Downstream	Upstream
Pass band depending on DPF (MHz)	85-1218, 105-1218 or 258-1218	10-65, 10-85 or 10-204
Gain (dB)	1x 46.5 (2x 43)	1x 26 (2x 23)
Step size gain and slope control (dB)	0.5	0.5
Input gain control (dB)	0 -30, by CPU	N/A
Interstage gain control (dB)	0 -30, by CPU	0 -30, by CPU
Input slope control (dB)	0 -20, by CPU	N/A
Interstage slope control (dB)	0 -20, by CPU	0 -20, by CPU
Test socket MP DS (dB)	-20 ± 1.50, unidirectional	
Test socket MP US (dB)	-20 ± 1.50, bidirectional	
Test socket MP Out -1 (dB)	-20 ± 0.75, bidirectional	

Electrical Specifications	
Impedance (Ω)	75
Overvoltage protection acc. EN 61000 4-5	2 kV, 1.2 µs / 50 µs surge to RF ports, every port
Transient AC power port protection	1 kV, EN 50083-2 4-7, EN 61000 4-4
ESD	4 kV, EN 50083-2 4-6, EN61000 4-2 ESD
EMC	EN 50083-2
Surge protection	6 kV, EN 50083-2 lightning protection, every RF port

Power Specifications	
Type of PSU	Internal
Power consumption (W)	12-19
Operating voltage (VAC sine)	28-65
Power passing current at RF-input, 2x RF-output and AUX (A)	7
Supply Frequency (Hz)	48-62
Transient AC power port protection	1 kV, EN 50083-2 4-7, EN 61000 4-4

Environmental Specifications	
Nominal temperature range (°C)	-40 ... +65
Protection class enclosure	IP67

Mechanical Specifications	
Housing material	Coated Zamak alloy
Dimensions h x w x d (mm)	180 x 180 x 85
Weight (kg)	2.12 including packaging 2.40
Number of ports	1 x input, 1 x aux, 2 x output
Auxiliar connector	1x for cascading or external test point
Type of connectors input	5/8" thread supporting 3.5/12, IECM14, F type coaxial adapters or jumper cables
Type of connectors output	5/8" thread supporting 3.5/12, IECM14, F type coaxial adapters or jumper cables
Test sockets	F-male (other on request)
Grounding connection	AMP 6.3 mm

Monitoring and Control Specifications	
Amplifier summary	location, type, serial number, software version, hardware version, last time configured, GPS location, in- and output-diplexer type, splitter configuration, voltage ok, temperature ok.
Configuration	attenuation, equalization for up and downstream, ingress switch ALSC setpoints (2), status and measured values of the setpoints. FSK receiver carrier frequency, FSK baud rate, FSK enable / disable

Ordering Information

Article number	Type	Description
695005049	BA1218 TE3	Power passing CATV Access Network Amplifier
695005376	BA1218 TE3F	Power passing CATV Access Network Amplifier – DOCSIS 3.0 MHz optimized
695004905	BA1218 BT DONGLE	Bluetooth dongle for 1218 series
695005280	BA1218 BT CABLE	Spare Bluetooth dongle connection cable
695005254	BA1218 DPF 65 85	Diplex filter for 1218 series
695005255	BA1218 DPF 85 105	Diplex filter for 1218 series
695005256	BA1218 DPF 204 258	Diplex filter for 1218 series
695005051	BA1218 DPF 65 85 PASSIVE	Diplex filter set 65-85 MHz for EoC
695004918	5/8 - IEC14M female 12 mm	Adapter 5/8 - IEC14 female 12 mm pin
695004914	5/8 - F - female 12 mm	Adapter 5/8 - F-female 12 mm pin
695004994	BA1218 SPLITTER	4/4 dB Output Splitter
695005253	BLINDSTOP 58	Blindstop 5/8
695004940	FUSE 2A	Mini fuse
695004944	FUSE 5A	Mini fuse
695004945	FUSE 7.5A	Mini fuse
695004941	FUSE 10A	Mini fuse
695004995	INPUT UTILTY PAD	Utility module with 1/4 inch JXP pad position
695004990	PIM 4 CS	4 dB 85-1218 MHz cable simulator (1/4 inch JXP model)
695004991	PIM 6 CS	6 dB 85-1218 MHz cable simulator (1/4 inch JXP model)
695004992	PIM 10 CS	10.0 dB 85-1218 MHz cable simulator (1/4 inch JXP model)
695005314	SPL 2_6	2/6 dB in or output tap for 1218 series
695005315	SPL 1_10	1/10 dB in or output tap for 1218 series