



PRODUCT DATASHEET

Bi-directional Amplifier (BDA)

TETRA Band

Model No: FRD33K



380–380.5 MHz
Uplink frequency

33 dBm
Downlink RF output power

85 dB
Typical gain

8 CH
Channels, 25 kHz each

Bi-directional Amplifier (BDA)

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Model No: FRD33K

An 8-channel, narrowband bi-directional amplifier operating on **380–380.5 MHz** uplink and **390–390.5 MHz** downlink, with **85 dB** typical gain and **33 dBm** downlink output power. Built for wall mounting, it suits indoor and outdoor installations.



Bi-directional Amplifier (BDA)

TETRA Band | Model: FRD33K | Wall mount | Indoor & outdoor

380–380.5 MHz

Uplink frequency

33 dBm

Downlink RF output power

85 dB

Typical gain

8 CH

Channels, 25 kHz each

Key Features

- 8 channels with 25 kHz channel bandwidth
- Uplink 380–380.5 MHz and downlink 390–390.5 MHz
- High typical gain of 85 dB, adjustable 0–31 dB in 1 dB steps
- ALC range greater than 30 dB
- Low noise figure of less than 6 dB (uplink)
- Low system delay of less than 50 μ s
- AC 100–240 V supply; local control via RJ45
- Wall mounting; suitable for indoor and outdoor use

Technical Specifications

Specification	Uplink	Downlink
Frequency Range	380–380.5 MHz	390–390.5 MHz
Channel Number	8	8
Channel Bandwidth	25 kHz	25 kHz
Typical Gain	85 ± 2 dB	85 ± 2 dB
RF Output Power	23 ± 2 dBm	33 ± 2 dBm
Gain Adjustment Range	0–31 dB @ 1 dB step	0–31 dB @ 1 dB step
Passband Ripple	< 3 dB	< 3 dB
ALC Range	>30 dB	>30 dB
IMD	>45 dBc	>45 dBc
Spurious Emission	Complies with 3GPP	Complies with 3GPP
Noise Figure	<6 dB	–
System Delay	< 50 μ s	< 50 μ s
RF Connector	2 × N(f)	
Power Supply	AC 100–240 V, IEC 62368-1	
Power Consumption	<120 W	
Temperature	–20 to +55 °C	
Relative Humidity	5% to 95%	
Local Control	RJ45	
Remote Control (Optional)	LTE modem or RJ45	
Dimensions	385 × 307 × 204 mm	
Approx. Weight	16 kg	
Installation	Wall	
Application	Indoor & outdoor	