

C17L Series Dual Band Repeater



Product overview

C17L, developed by Amplitec R&D team, is a mobile signal repeater with high intelligence and excellent technical index. It is empowered with EDA digital simulation and Amplitec unique 50Ω impedance matching wiring technology, and it's equipped with electronic devices and RF components originated from international famous brands, so its excellent technical index and performance are guaranteed from the circuit design.

In order to provide the coverage solutions for different countries and regions, C17L series offer multiple choices of dual band combination from the most common frequency bands such as B1, B2, B3, B5, B7, B8, B12, B20, B28, etc. Besides its elegant appearance, compact size and easiness to install and maintain, it has an output power of 17dBm and could cover an area of 500 m² with proper design and installation, which makes it an excellent option for solving signal weak zone in home, office, elevator, basement, etc.

Product features

- LCD display of operating figures.
- Real time isolation check and alarm.
- **Self oscillation elimination**, auto degrading of output power in case of insufficient isolation detected.
- **Auto turn-off** in case of excessive self oscillation or over input.
- **Idle turn-off**, auto turn-off of uplink while no active users in the coverage, lowering interference to BTS.
- **MGC**, Manual control of output gain with 1dB step in the range of 31dB.
- **ALC**, auto control of output power, ensuring stable coverage.
- Linkage between uplink and downlink gain, keeping uplink and downlink balanced.
- Compact size, low power consumption and easy to install.
- **MTBF**: up to 100,000 hours.

Model list :

Model	Uplink	Downlink
C17L-B3B8	880 ~ 915/1710 ~ 1785 MHz	925 ~ 960/1805 ~ 1880MHz
C17L-B1B8	880 ~ 915/1920 ~ 1980 MHz	925 ~ 960/2110 ~ 2170MHz
C17L-B1B3	1710 ~ 1785/1920 ~ 1980 MHz	1805 ~ 1880/2110 ~ 2170 MHz
C17L-B3B7	1710 ~ 1785/2500 ~ 2570 MHz	1805 ~ 1880/2620 ~ 2690 MHz
C17L-B8B20	880 ~ 915/830 ~ 862 MHz	925 ~ 960/791 ~ 821 MHz
C17L-B2B5	824~849/1850~1910MHz	869~894/1930~1990MHz

Technical specification :

Item	Uplink	Downlink
Output power	15±2 dBm	17±2 dBm
Gain	65±2 dB	70±2 dB
Ripple in band	≤6~15 dB	≤6~15 dB
VSWR	≤2.5	≤2.5
Max. input power without damage	-10 dBm	-10 dBm
Intermodulation products	≤-30dBm	≤-40 dBc
Spurious emission	9KHz~1GHz	≤-36 dBm
	1GHz~12.75GHz	≤-30 dBm
ATT Range	31 dB	31 dB
ALC active 10dB	Δ ≤2 dB	Δ ≤2 dB
LCD Indication	Band	Band name & frequency
	Gain	Uplink & downlink gain
	Pout	Downlink output power
	Work	Operating normally: display; Idle turn-off: no display
ISO		Operating normally: no display;
		Degraded output power: display; Self oscillation turn-off: flashing
Idle turn-off	While working at max. gain, if uplink input is <-80dBm (idle threshold value) for 5±1 continuous minutes, system will turn off uplink PA; whenever the uplink input is >-75dBm, it will turn on uplink PA instantly.	
Self oscillation elimination & turn off	Real time isolation check and alarm: if self oscillation (isolation<gain) is detected, system will degrade the output power; if excessive self oscillation(isolation<gain - 15) is detected, it will turn off the device.	
Over input turn-off	If input is out of ALC range, system will turn off both uplink and downlink PA in 5s, and reboot them in 30+-5s; If input is out of ALC range for 3 consecutive times, the system will permanently turn off the devices, until the system is turned on again.	
Noise figure	≤8 dB	≤8 dB
Group delay	≤1.5 μs	≤1.5 μs
I/O impedance	50Ω	
Power supply	DC: 5 V / 2 A	
RF connector	N-Female	
Environment conditions	IP40	
Operating temperature	-10°C ~ +55°C	
Size	220*140*37mm	
Weight	<1.2kg	