



Cable television repeater amplifiers receive power from ultra-reliable, high-efficiency power supplies designed by Orchid Technologies.



“When our old power supply vendors said NO, Orchid said YES. Orchid designed and delivered a high-reliability 100,000-hour 80% efficient power supply to us in under ten weeks. Simply fantastic.”

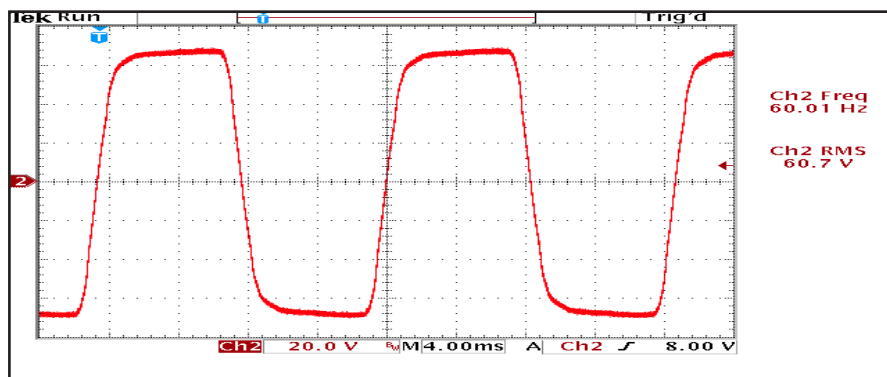
- Cable TV Networks
- Project Engineering

## Ultra-Reliable, High-Efficiency Power

Cable television repeaters take a beating. Vibration, extremes of heat and cold, line voltage variation and lightning exact a heavy toll. Cost effective field deployment demands flawless electronics performance—year after year. Orchid Technologies’ ultra-reliable, high-efficiency cable television repeater power supply provides the foundation for high-reliability operation. At 80% efficiency, this 100,000 hour mean time between failure, 150-watt power supply provides a firm infrastructure upon which repeater amplifier electronics may build. Operational from 40 below zero to over 80 degrees C, this power supply simply won’t quit.

## Unusual Input Waveform Requirements

Cable television repeaters are powered from old-style resonant transformer sources. Transmission line lengths vary, causing line input voltage variation from 35 to 90 Volts AC. Non-sinusoidal input wave shapes create additional demands on input conditioning circuitry. Low-voltage lockout, over current, over voltage, and lightning protection requirements make this supply unique in its class.



## Linear Technology Power Supply Components

Working closely with Linear Technology Corporation, Orchid Technologies crafted a high-efficiency forward converter which boasts 80% operating efficiency. Planar magnetics reduce the overall package size. Unique heat sinking techniques maintain temperatures within acceptable ranges. Careful design validation resulted in a robust, manufacturable design that passes all agency approvals.

## Orchid Technologies—Power Electronics

The development of custom Electronics Technology solutions for our OEM clients is Orchid’s entire business. High-performance Custom Power Supplies with rapid design cycles, demanding technical requirements and unforgiving schedules set us apart. Call Orchid Technologies today!

