BROADCOM®

C o n n e c t i n g
e v e r y t h i n g ™

BCM96012

PRODUCT
Brief

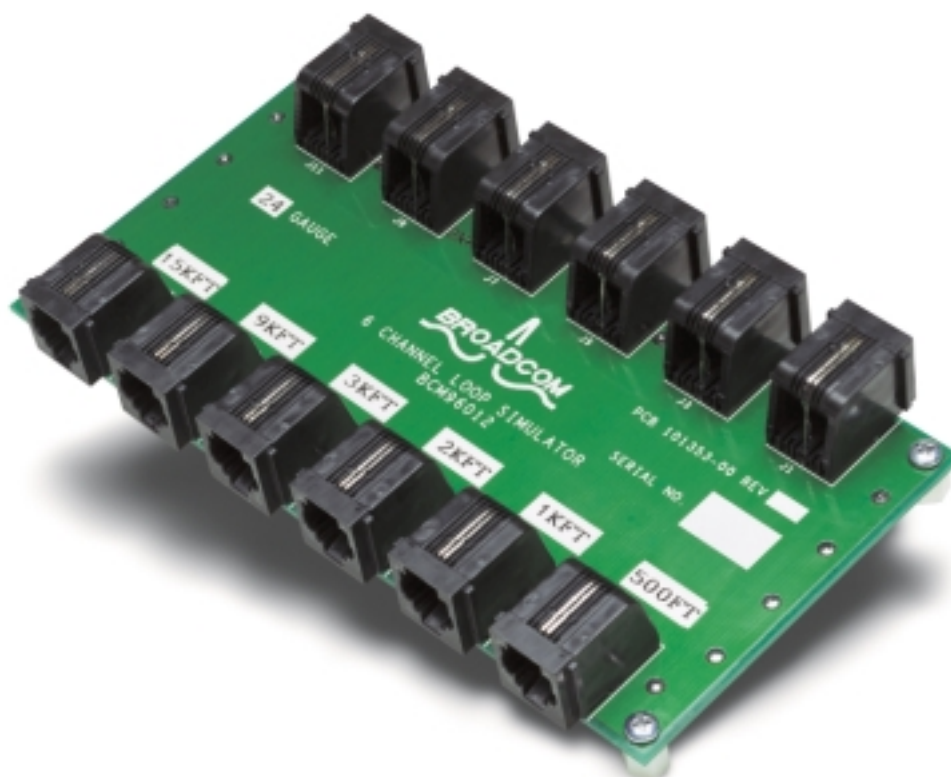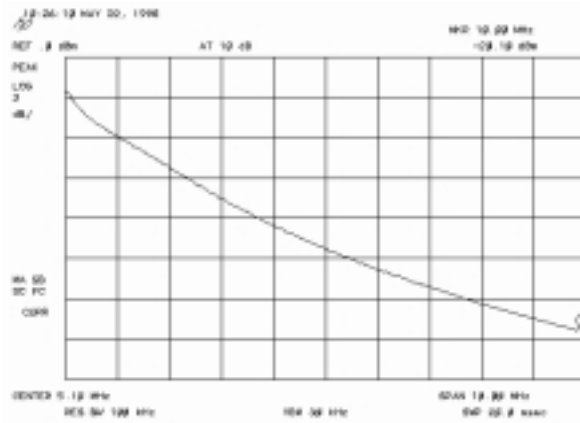# BCM96012 ADSL/VDSL LOOP EMULATOR

BCM96012 FEATURES

- Multisection twisted-pair emulation
- 24 American Wire Gauge (AWG) modeling
- Frequency response to over 10 MHz
- Cascaded sections for fast-loop configuration
- Loop sections from 500 feet to 15,000 feet supported
- Completely passive design
- Shielded enclosure for controlled noise tests
- Impedance matched for minimum return loss
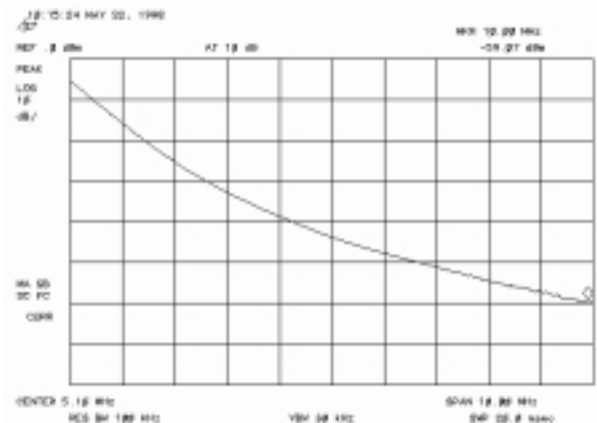- Compact size

SUMMARY OF BENEFITS

- The BCM96012 eliminates the need for storing bulky reels of telephony grade cable in space-constrained lab environments.
- Accurate loop modeling and filter design has ensured a very close match between telephony grade 24 AWG cable and the BCM96012.
- The BCM96012 may be used in conjunction with ADSL line emulators to extend the reach beyond the 18,000 feet maximum, or may be used in conjunction with real cable to provide a simple way of adjusting the loop total reach.
- When used with Broadcom VDSL development systems, the BCM96012 provides a complete, end-to-end VDSL test and development platform.

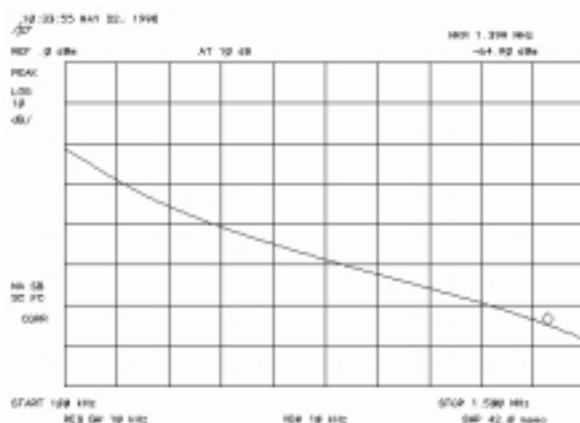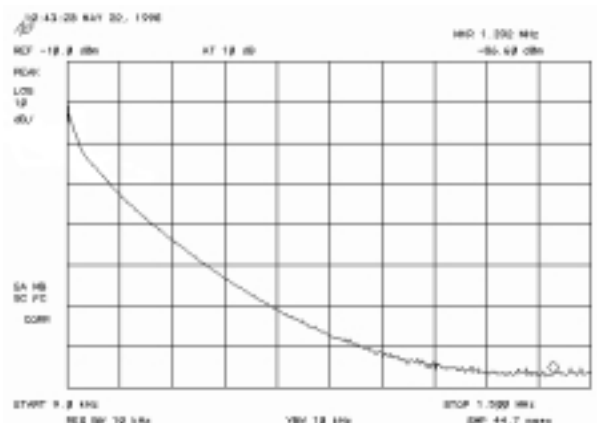**BCM96012 ADSL/VDSL Telephony Cable Loop Emulator**

1,000 Feet

3,000 Feet

9,000 Feet

15,000 Feet

Channel responses for a selection of the **BCM96012** sections are shown above.

The **BCM96012** is a cascaded series of passive elements designed to emulate the channel response of 24 AWG telephony twisted-pair wires. Designed as a series of slope equalizer sections, the frequency response of the **BCM96012** closely matches the actual response of twisted-pair wires. It has a broad frequency response and can be used for ADSL, VDSL or FTTC systems where data rates can exceed 50 Mbps. The **BCM96012** is supplied with an EMI shield to protect against spurious noise ingress. The sectioned nature of the design enables loop reach to be modified easily. Bridged taps may also be inserted at various points to evaluate link performance.

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