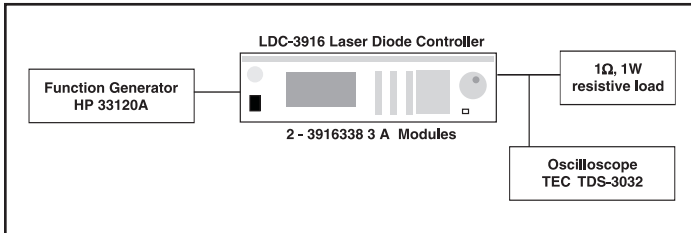


## Large-Signal Frequency Response of the 3916338 Current Source Module

### PURPOSE

This ILX Lightwave Technical Note presents the bandwidth performance of the LDC-3916338 Module when applying large-signal modulation.

### MEASUREMENT SETUP



### PROCEDURE

The test set-up measured the modulation response of two separate modules at three different output levels - 1.0 A p-p, 2.0 A p-p, and 3.0 A p-p. The equipment was connected as shown in Fig. 1 with the LDC-3916338 modules operating in High-Bandwidth mode. For each output level the DC output current from the LDC-3916338 were set to 50% of the peak current level. The modulation input voltage on the function generator was adjusted to achieve 100% modulation depth.

The resistive load was connected via a standard CC305S Unterminated Interconnect Cable. Output voltage measurements were made across the 1Ω resistor using the oscilloscope.

### SUMMARY

The test procedure above was repeated for each module in each range. Figures 1 - 3 show the large-signal frequency response of the LDC-3916338 modules. In all test conditions the 3 dB point is no lower than the specified 600 kHz.

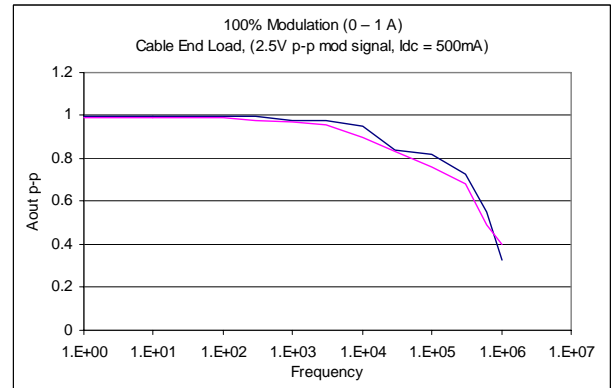


Figure 1. 1.0 A p-p Modulation

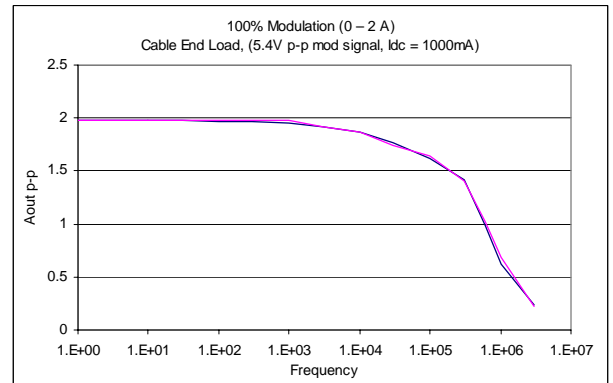


Figure 2. 2.0 A p-p Modulation

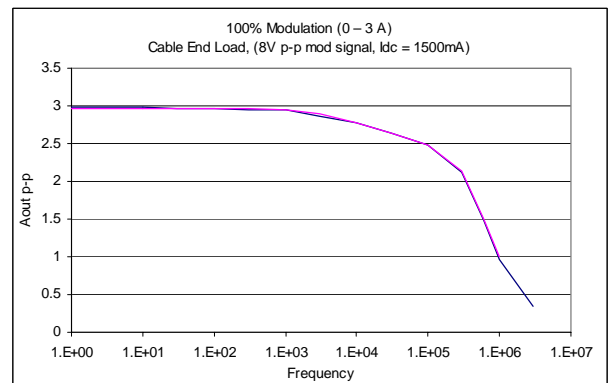


Figure 3. 3.0 A p-p Modulation