

Testing of High Power Semiconductors

All Westcode devices are 100% tested at our UK plant, using test equipment specifically designed to accurately perform the tests required for the various parameters in the catalogue.

It should not be necessary for a customer to perform these tests again. In the event of tests being required, either at 'Goods In' or as part of a maintenance programme, they should only be carried out by trained personnel using equipment designed for the purpose. Otherwise, at best, misleading results could be obtained, at worst, devices could be damaged or destroyed. If capsule type semiconductors are to be tested, they should be in a 'compressed' condition in order that contact is made with the silicon element. Pressures in the order of 100s of kilograms are required. Testing uncompressed devices can result in an apparent 'open circuit' effect, or risk internal arcing which could cause irreparable damage.

The use of electronic multimeters, on the resistance scale, can only confuse. A power semiconductor is a non-linear resistor. At the low voltages common to these instruments, such tests will produce false results. The 'resistance' indicated on an instrument can vary with battery voltage, even variances in that particular instrument, let alone from type to type. Consequently, resistance measurements as a check of device characteristics is totally irrelevant. There is a case, however, for using multimeters, if a device is thought to be Short Circuit. In such cases the 'resistance' will show as very low.

High voltage Insulation/Continuity testers should not be used as damage to the semiconductor device could occur.