

TECHNICAL INFORMATION

Selecting Chip Inductor Test Fixtures

VANGUARD ELECTRONICS has designed a range of test fixtures specifically to measure the electrical characteristics of chip inductors. These fixtures are made as accessories to the Hewlett Packard 4191 and 4192 Impedance Analyzers. The fixtures can also be used with many other HP instruments, such as the HP 4195 Spectrum/Network Analyzer. A key feature common to the test fixtures is that they provide rapid, easy, accurate and consistent measurements.

The fixtures can be ordered from Vanguard either through your local sales representative or by contacting factory sales directly. The correct part number to order can be determined from the information below.

TEST EQUIPMENT

The test equipment to use for measurement of Inductance and Q is governed by the specified test frequency:

- For test frequencies from 0.25 MHz through 0.79 MHz use:
Hewlett Packard 4192A Impedance Analyzer with Vanguard Test Fixture TF 4192
- For test frequencies from 2.5 MHz through 150 MHz use:
Hewlett Packard 4191A Impedance Analyzer with Vanguard Test Fixture TF 4191

TEST FIXTURES

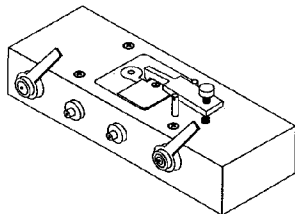
The correct Vanguard test fixture part number to order is determined by which test equipment is to be used and by the size (or series) of the part to be tested. There is a different test fixture type for each test instrument (HP4191, HP4192) and there are four different size part groups.

The test fixture part number consists of the letters "TF" followed by four digits designating the test equipment followed by five digits describing the part series group. For example, TF-4191-30000 attaches to the Hewlett Packard 4191 Impedance Analyzer and the contacts are spaced for parts which have 30,000 series lead spacing (0.110 inches).

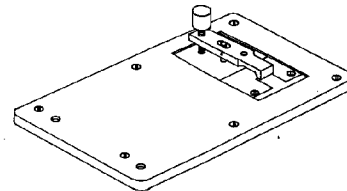
The following illustrates the part numbering system and also defines the four size groups.

| | | | | |
|-----------|---|--------------------------|---|------------------------------------|
| TF | - | 4191 | - | 30000 |
| | | <u>TEST INSTRUMENT</u> | | <u>CHIP SIZE SERIES</u> |
| | | Fixture No. Fits meter | | Fixture No. Measures these parts |
| | | 4192 HP 4192 | | 50000 50,000 |
| | | 4191 HP 4191 | | 30000 30,000; 26,000; 27,000 |
| | | | | 33000 33,000; 34,000 |
| | | | | 31000 31,000 variable inductors |

ILLUSTRATIONS OF TEST FIXTURE TYPES



TEST FIXTURE TF



TEST FIXTURE TF