1.0 Scope  This procedure establishes the performance and test guidelines for the break-off torque of adhesives used by placement equipment to attach surface mounted devices to printed wiring boards.

2.0 Applicable Documents  None

3.0 Test Specimen

- Apply a 1.25 mm [0.05 in] diameter circle of adhesive 0.1 mm [0.004 in] thick to a FR-4 substrate.
- Place a type 1206 resistor firmly onto the circle of adhesive.
- Cure adhesive according to manufacturers directions.

4.0 Equipment

4.1 Torque Tester  A Waters Manufacturing torque watch (or equivalent) with a 0 to 140 or 0 to 280 Nmm scale is to be used. The torque gauge must have a separate indicator needle to register maximum torque.

4.1.1 Torque Fixture  Use torque fixture modified per sample being tested.

5.0 Procedure

5.1 Sample Placement  Place the samples board in the test fixture.

5.1.1 Zeroing the Gauge  Rotate the face knob of the tester per until the maximum torque indicator needle is zeroed.

5.1.2 Testing Sample  Using the thumb and forefinger, and middle finger of the right hand slowly rotate the torque gauge in a clockwise direction until the component breaks off.

5.1.3 Torquing Techniques  Components to be torqued should be centered inside the probe. The component should not protrude from the probe when testing is begun.

5.1.4 Taking Reading  After the component has been torqued off, a reading of break-off torque shall be taken from the face of the torque tester. This reading is shown by the maximum torque indicator needle.

5.1.5 Completion of Torquing  Repeat until 5 components of the same type have been torqued off.

6.0 Notes  Do not raise or lower the gauge while turning. If the gauge is lowered the increased friction against the board will yield inaccurate readings. If the gauge is lifted it will lose contact with the component and yield an inaccurate reading as well.