



TRANSDUCER ALERT

QUALIFICATION TESTS

All components under test must conform to the following environmental test program as detailed. Requirements are subject to verification at any time.

1-1 TEMPERATURE CHARACTERISTICS: All data initially taken at +25 C, then repeated at -40 °C and again at +85 C, components must be fully stabilized at temperature extremes before data is taken. Which may require up to 4 hours soak.

1-2 TEMPERATURE SHOCK: Each temperature cycle shall consist of 30 minutes at -40 C followed by 30 minutes at +85 C with a 20 second maximum transition time between temperature extremes. The test duration is for 32 cycles.

1-3 STATIC HUMIDITY: Precondition at +25 C for 1 hour. Then expose to +70 C with 90 to 95% relative humidity for 240 hours. Finally dry at room ambient for 4 hours before taking final measurements.

1-4 RANDOM VIBRATION: Secure samples. Vibrate randomly from 20 to 2000Hz using the following spectral profile. The vibration spectrum is a +3 dB/octave from 20Hz to 80Hz. Then 0.04g /√Hz power spectral density or at 6g's RMS level from 80 Hz to 350Hz, then a -3dB/octave from 350Hz to 2000Hz. The test duration is 15 minutes per plane.

1-5 MECHANICAL SHOCK: Secure samples as required. Then subject samples to three one-half sine shock pulses (3000g's for 0.3 milliseconds) in each direction (for six total) along each of the three mutually perpendicular axes for a total of 18 shocks.

1-6 OPERATING LIFE: Subject samples to +85 C for 1000 hours under full rated power.

1-7 LEAD PULL TEST: Subject test contacts to an increasing pull force (between the contact and the transducer) until destruction occurs. Record the point of destruction. The minimum pull strength is 1000 grams (2.2 pounds).