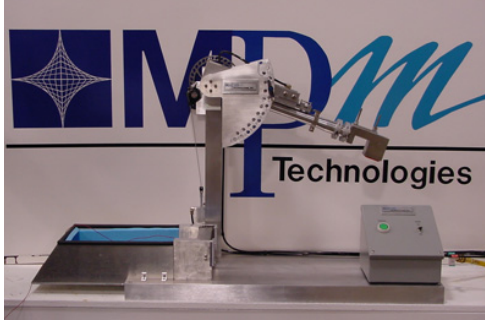


## Shock Testing

# INTRODUCTION



*MPM Shock Tester*

MPM manufactures shock test machines for component qualification to various MIL standards. The pictured table top shock test machine is equipped with a pneumatic hammer release and break to prevent multiple impacts. This system is capable of up to 3,000 g half-sine pulses and satisfies MIL standard MIL-STD-883E.

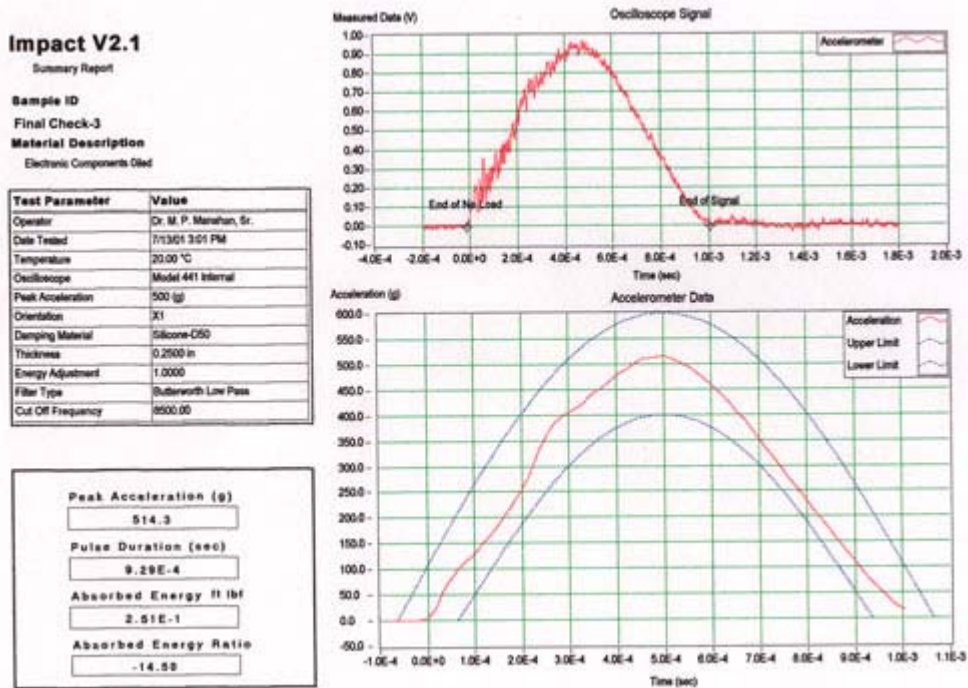
# SYSTEM FEATURES

The MPM shock test system can be configured to satisfy various shock test requirements. Some important features are listed below:

- Up to 60,000 data points per test
- Data acquisition time ranges from microseconds up to 20 seconds
- User friendly software controls acquisition and data analysis
- Software calculates peak g level, half-sine pulse width, and the total energy absorbed by the test piece throughout the duration of the shock event
- Full system includes:
  - Table top test machine
  - Computer
  - High speed, 12-bit acquisition board
  - Accelerometer Signal Conditioner
  - Accelerometer
  - Hardware/Software manual
  - Software

# EXAMPLE SHOCK DATA

The example shock data shown below is for a 500 g peak load test conducted in accordance with MIL-STD-883E. This standard is intended for determination of the suitability of devices for use in electronic equipment that may be subjected to moderately severe shocks as a result of sudden applied forces or abrupt changes in motion during field applications. The peak acceleration under Test Condition A must be  $500 \pm 100$  g, and the pulse duration must be within  $1 \pm 0.3$  ms. The measured data is well within the specification. The energy absorbed is also reported along with the absorbed energy ratio which indicates the percent difference between the measured data and the average half sine pulse specified in the standard.



*Example Shock Test Data*

## DATA ACQUISITION SYSTEM



The proposed price includes an accelerometer, accelerometer signal conditioner, computer, and software. If an instrumented striker system is ordered, the system will be provided with a strain gage amplifier in addition to the accelerometer conditioner. The software is easy to use and can provide printed reports or reports can be saved to file for inclusion in Word or other word processor reports.

*Data Acquisition System with Strain Gage Amplifier*

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## FOR MORE INFORMATION

If you would like a price quotation or additional information concerning MPM's services or products, please contact us at the below listed address:

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