



the Facts >

- > modularity replaces cost-intensive custom designed machinery
- > standard handler plus MEMS test module
- > increased reliability, quicker availability, cost-effectiveness, reduced floor space, worldwide support
- > tri-temp solution
- > special contacting solutions for MEMS testing

Handling Solution for

- > SO and MLF devices
- > quad site testing
- > tri-temp from -40°C to +140°C
- > OCR and dot matrix code reading

Realized Applications >

- > Single axis: x, y, z
- > Dual axis: y(x)
- > Twin axis: 45 degree (xy), 45 degree (xz)



1 Base System

- 1.1 MEMS Test Cart (base unit) equipped with two independent MEMS test modules (Shakers)
 - stand alone for manual loading / unloading
 - with MT9928 test handler for automatic loading / unloading
- 1.2 Options
 - device tracking by means of an OCR / Dot matrix code reader
 - tester intergration into MEMS test cart
 - DC - contacting unit to allow electrical testing using shaker CCs
 - tester docking means
 - dummy tracks for service purposes
 - adapter plate for external heating / cooling
- 1.3 Temperature Handling
 - stand-alone: External heating / cooling
 - with MT9928 tri-temp handler: -40° C to +140° C

2 Conversion

- 2.1 Package Style Conversion:
 - package style conversion kits for shaker test modules only
 - shaker test modules may be attached to different MT9928 systems prepared for MEMS docking
- 2.2 Conversion Time:
 - typ. 5 to 10 min, 1 or 2 persons recommended
- 2.3 Adjustment/ Calibration after Conversion:
 - minor adjustments, does not require experienced people
 - necessary alignment tools provided

3 Packages

- 3.1 Package Styles:
 - leaded devices 150 mil to 300 mil
 - leadless devices 3 mm to 11 mm
 - other packages on request

4 Contacting/Shaker Positions

- 4.1 4.1 Number of Contact Sites
 - quad site parallel operation
- 4.2 4.2 Contact Sockets:
 - true Kelvin, pseudo Kelvin
 - device is always contacted while accelerated
- 4.3 4.3 Multiple Shaker Modules:
 - two independent shaker applications possible in one MEMS test cart e.g. one x-module and one y-module in one MEMS test cart

5 Performance

- 5.1 Throughput:
 - max. 6,500 devices/ h
- 5.2 Index time:
 - 2.2 s index time for any package
- 5.3 Acceleration Directions and Performance:
 - operating range: 20 to 500 Hz, typical 1 to 50 g, depending on test frequency
 - in X,Y,Z or 45° direction, depending on the installed shaker module
 - accuracy: THD typical <1.5 %, depending on test frequency and g-level

6 Facility Requirements

- 6.1 Power Supply:
 - 100/120/230 V, single phase
- 6.2 Power Consumption:
 - max. 2.4 kW depending on configuration
- 6.3 Compressed Air:
 - required, supply from MT9928, same pressure requirements
- 6.4 Mobility:
 - system on casters
- 6.5 Weight:
 - 450 kg

7 Compliance and Standards

- Compliant to CE



MEMS Test Cart (Base Unit)

All performance figures such as MTBF, MTBA, Uptime, Yield, Jam Rate, Life Span, Cleaning Cycles etc. can vary with specific package type, test program and / or specific application environment. They assume that only original Multitest spare and consumable parts are used, recommended maintenance intervals and procedures are respected, operators/maintenance technicians have successfully participated in formal equipment training by Multitest to the appropriate level, and only Multitest approved software is used on the systems. Multitest assumes no warranty or liability if any of these requirements is not met. All listed data are for information only. For binding specification please contact your sales person