

PERFORMANCE – SYSTEM

Expanded Measurement Uncertainty			
0.5 to 1.0 Hz	%	Unspecified	[7]
1.0 to 2.0 Hz	%	1.75	[1]
2.0 to 10 Hz	%	1.5	[1]

PRECISION AIR-BEARING SHAKER

Manufacturer/Model	The Modal Shop	K394B30 or K394B31	[2][3]
Maximum Acceleration			
0.5 to 1.0 Hz	g _{pk}	0.005 to 0.02	[4]
1.0 to 2.0 Hz	g _{pk}	0.02 to 0.08	[4]
2.0 to 10 Hz	g _{pk}	0.08 to 2.0	[4]
Maximum Displacement	mm _{pk-pk}	10	[5]

REFERENCE OPTICAL ENCODER

Scale Tape Pitch	µm	20	
Measurement Resolution	nm	10	
Scale Linearity	µm/m	+/- 3	
Scale Thermal Sensitivity	ppm/K	10	

REFERENCE DATA ACQUISITION

Manufacturer/Model	National Instruments	PCI-6251	[2]
Voltage Range	V	+/- 10	
Sample Rate	MS/s	1.25	
Resolution	bits	16	

ICP® VERIFICATION ACCELEROMETER

Manufacturer/Model	PCB Piezotronics	Q353B51	[2][6]
Sensitivity (+/- 5%)	mV/g	500	
Frequency Range (-5%)	Hz	0.1	
Sensing Element Material		Quartz	
Discharge Time Constant	sec	>10	
Settling Time	sec	>300	
Broadband Resolution	mg rms	0.4	
Spectral Noise (1 Hz)	µg/√Hz	200	
Electrical Connector		10-32 jack	
Mounting Thread		10-32 female	

MISCELLANEOUS

9155D-778 available as option to 9155D system integrated with 9155D-830 or 9155D-831 required exciter options.
9155D software provide seamless integration of low frequency data acquired with -778 option hardware with mid- to high frequency data acquired with -83x option hardware.
Calibration data results and measurement uncertainty are subject to the resolution specifications of the Sensor Under Test (SUT) given the limited displacement available with the K394B3x shaker systems.

NOTES:

- [1] Per ISO with k=2 coverage factor using Q353B51
- [2] See manufacturer data for full specifications
- [3] Supplied with 9155D-830 or -831 option
- [4] At max displacement 10 mm_{pk-pk}
- [5] with K394B3x air-bearing shaker system
- [6] Q prefix for extended discharge time constant
- [7] Uncertainty depends on noise floor and sensitivity of test sensor

SUPPLIED ACCESSORIES:

- PCI Data Acquisition Card
- Shielded Connector Block
- Optical Encoder Readhead
- Readhead mount for K394B3x
- Scale Tape with Mounting Fixture
- Verification Accelerometer

All specifications are at room temperature unless otherwise specified.

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In the interest of constant product improvement, specifications may change without notice.

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