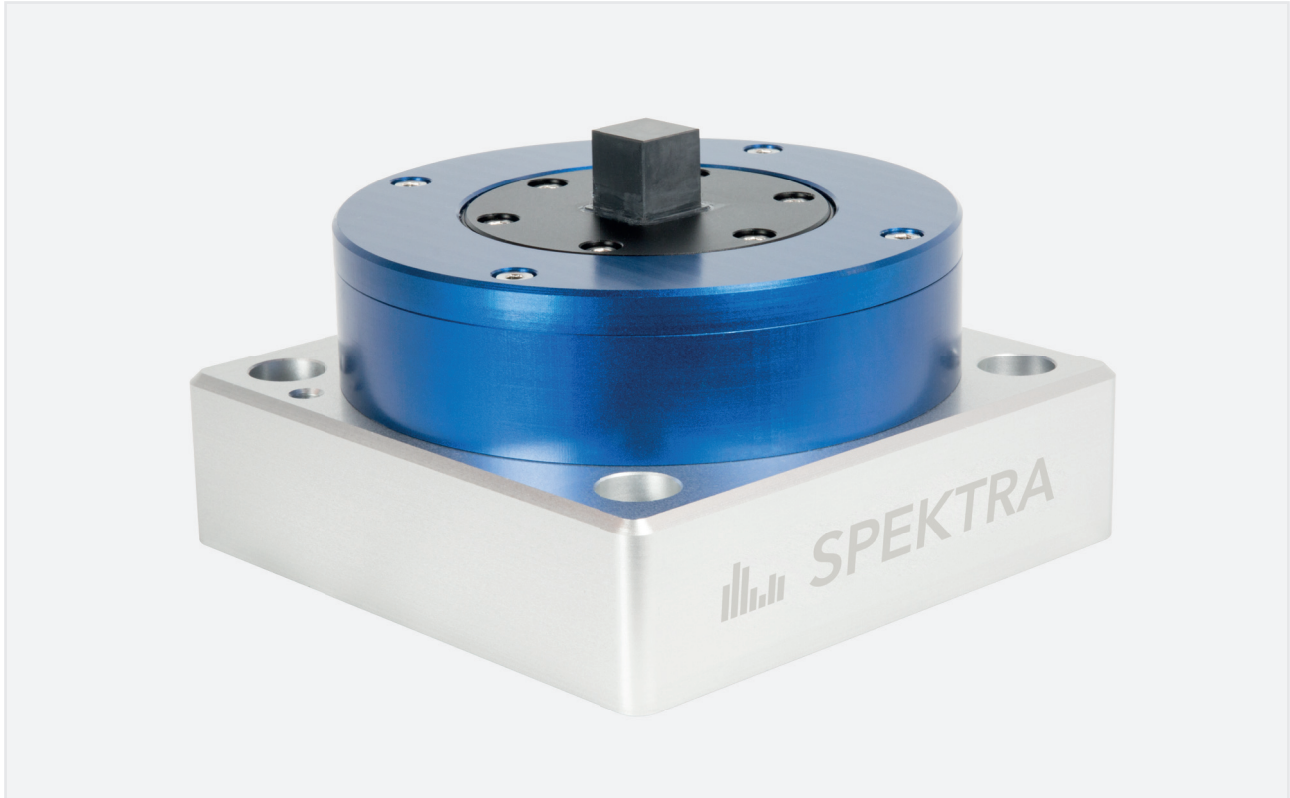


SE-16

High frequency vibration exciter



Applications

- ✓ testing of MEMS sensors regarding immunity against vibrations
- ✓ quality assurance in sensor manufacturing
- ✓ precise vibration excitation of devices at high frequencies

Selected data

- ✓ frequency range 5 kHz ... 140 kHz (200 kHz)¹⁾
- ✓ force 12 N (2.7 lbf) maximum
- ✓ acceleration up to 450 m/s² (46 g_n)
- ✓ 5 g maximum recommended payload

Features

- ✓ rugged ceramic armature 15 mm × 15 mm (0.6 in × 0.6 in)
- ✓ mounting surfaces on the top and sides
- ✓ very high first axial resonance frequency (> 140 kHz)
- ✓ high acceleration amplitude up to 450 m/s² (46 g_n)
- ✓ low transverse motion (typically < 10 %)

1) reduced performance above 140 kHz



Specification

Testing MEMS sensors for immunity to vibration requires precise excitation of the devices under test up to very high frequencies. The SE-16 was designed especially for such test tasks and allows the devices under test (DUT) to be mounted in any orientation to the vibration axis on top or on the sides of the vibration table. Up to 140 kHz vibration frequency, unwanted

lateral movements remain in a range of less than 10 % of the amplitude of the main vibration axis. For this purpose, the vibration table made of technical ceramics allows the gluing of the DUT at the mounting surfaces. Due to the good reflectivity of the vibration table a laser vibrometer can easily be used as a reference sensor.

Technical data

Force rating, max. ¹⁾	12 N (3 lbf)
Frequency range	5 kHz ... 140 kHz (200 kHz) ²⁾
Resonance frequency	> 140 kHz
Displacement ³⁾ , max.	0.9 µm (0.04 mils)
Acceleration ¹⁾ , max.	450 m/s ² (46 g _n)
Transverse motion (typical)	< 10 % in the range of 5 kHz ... 140 kHz
Rated current	8.5 A RMS
Voltage, max.	13 V RMS
Payload, max.	5 g (0.2 oz)
Dimensions (H × W × L)	82 mm × 130 mm × 130 mm (3 in × 5 in × 5 in)
Weight (total)	2.9 kg (6 lbs)

All specifications are at room temperature unless otherwise specified.

1) sine peak value

2) under certain conditions, the SE-16 can be operated up to 200 kHz

3) peak-peak

Accessories (optional)

- ✓ recommended power amplifier PA 500 DM
- ✓ laser vibrometer as reference sensor on request