Performance Metric	Broadband			Short Period	Accelerometer		Strong-Motion Velocity
	Class A+	Class A	Class A-	Class A	Class A	Class B	
Number of components/axes	3			3/1	3		
Clip-level (Peak)	≥±0.013 m/s for a sensitivity of 1500 Vs/m			≥±1.5 mm displ. or ≥±0.01 m/s at 1 Hz	≥±3.5 g	≥±3.5 g (at ANSS option, ≥±2 g)	≥±3.5 m/s and ≥±3.5 g
Sensor Dynamic Range (ratio of rms of largest sine to rms self noise — root of PSD *via* Walsh method)	155 dB, 0.01 – 0.05 Hz 150 dB, 1 – 10 Hz 140 dB, 10 – 15 Hz	143 dB, 0.01 – 0.05 Hz 138 dB, 1 – 10 Hz 128 dB, 10 – 15 Hz	131 dB, 0.01 – 0.05 Hz 126 dB, 1 – 10 Hz 116 dB, 10 – 15 Hz	138 dB, 1 – 10 Hz 128 dB, 10 – 15 Hz	145 dB, 0.02 – 2 Hz 130 dB, 2 – 50 Hz	87.3 dB, 0.1 – 35 Hz	140 dB, 0.02 – 50 Hz; or 87.3 dB, 0.1 - 35 Hz
Corner Frequency (force feedback) or Natural Frequency (open loop)	≤0.0033 Hz	≤0.01 Hz	≤0.033 Hz	0.5 – 2.0 Hz	≥100 Hz	≥100 Hz	≥100 Hz
Flat Response (–3 dB Points) Bandwidth required	Velocity 0.01 – 35 Hz	Velocity 0.01 – 50 Hz	Velocity 0.033 – 50 Hz	Velocity 1.0 – 35 Hz	Acceleration 0.02 – 50 Hz	Acceleration 0.1 – 35 Hz	Velocity 0.1 – 35 Hz
Bandwidth desired	Velocity 0.00278 – 50 Hz	Velocity 0.0083 – 50 Hz	Velocity 0.01 – 50 Hz	Velocity 0.2 – 50 Hz	Acceleration 0 – 100+ Hz	Acceleration 0.02 – 100+ Hz	Velocity 0.02 – 100+ Hz
Generator Constant at Output	1000 – 2400 Vs/m at 1 Hz			100 - 2000 Vs/m at 1 Hz	0.583 or 0.291 Vs^2/m at 1 Hz		5 or 2.5 V/(m/s)
Max. non-coherent noise: Bandwidth required	3 dBa below NLNM 0.01 – 35 Hz	13 dBa above NLNM 0.01 – 50 Hz	21.6 dBa above NLNM 0.033 – 50 Hz	13 dBa above NLNM 1 – 35 Hz	Average –95 dBa, over 0.02 – 50 Hz	Average –52 dBa, over 0.1 – 35 Hz	As either, dependent on Class
Bandwidth desired	3 dBa below NLNM 0.00278 – 50 Hz	13 dBa above NLNM 0.0083 – 50 Hz	21.6 dBa above NLNM 0.01 – 50 Hz	13 dBa above NLNM 0.2 – 50 Hz	Average –101 dBa, over 0 – 100+ Hz	Average –58 dBa, over 0.02 – 100+ Hz	
Sensitivity Accuracy (relative to vendor-specified)	1 % <1 Hz; 1.5 % <10 Hz; 5 % <50 Hz			1 % at 20 °C and <10 Hz	1 % and <10 Hz		
Total Harmonic Distortion	≤–70 dB in on-axis sinusoidal excitation (THD = ratio of power in the fundamental to the sum of power in observed harmonics)						
Cross axis coupling	≤–70 dB for inherent cross-axis; ≤–40 dB for cross-axis due to misalignment of active axis relative to case reference						
Linearity	≤–70 dB of ANSS full-scale guidance (deviation from best fit in static tilt calibration)						
Hysteresis	≤–70 dB of ANSS full-scale guidance (rapid-flip test between ±1 g on dead-level surface or equivalent)						
Temperature-Induced Output Offsets and Sensitivity Errors	Stays on scale over ±10 °C without mass recentering			Offset <2 %FS over –20 to +40 °C. Offset <1 %FS over 0 to +40 °C. Sensitivity stable and accurate to 0.5% over 0 to 40 °C,			As for Broadband
Operational Temperature Range	–30 to +45 °C						
RFI Susceptibility	RFI performance of the sensor shall be tested per IEC61326:2002, including EN55022 for emissions, EN61000-4-3 for immunity, and Annexes A, C, E, and F, which detail equipment types and usage circumstances.						
Clip recovery	<5 minutes			<10 s			<5 minutes
Expected Lifetimes	Five Years					Ten Years	Ten years
Output Seismic Signal	±20 V, differential			See Generator Constant; differential	±20 V (±10 V allowed), differential		
Retrievable sensor parameters	Upon request, sensor provides manufacturer name, model number, serial number, and factory calibration parameters including sensitivity and nominal transfer function.						
Calibration Input	Calibration enable: Either active high (+5V) or active low (ground). Calibrator input sensitivity: sufficient to drive the seismometer output to at least 1/2 of full scale at 0.1 Hz with a current of 0.4 mA at 5 V or less						
Sensor Compensation	All sensor compensation, whether in sensor hardware, sensor firmware, DAU firmware, or laboratory software, shall be seamless and transparent with uncompensated data inaccessible to casual users. Compensation process shall be ANSS auditable.						