

Model Number 7705A2

PERFORMANCE SPECIFICATIONS

DOC NO PS7705A2

DUAL ELEMENT ACCELEROMETER

REV B ECN 10971, 05/06/14



- DUAL ELEMENT TECHNOLOGY
- EXTENDED LOW FREQUENCY RESPONSE (0 Hz to 10kHz)
- HERMETICALLY SEALED

New type of accelerometer from Dytran Instruments Inc. combines the DC output of variable capacitance element with excellent high frequency response of piezoelectric sensor.

Both outputs are electrically summed up and seamlessly superimposed on each other to provide the broadest frequency response from a single output pin.

		ENGLISH		SI	
PHYSICAL					
Weight, Max.		0.53	0Z	15	grams
Mounting		10-32 Tapped Hole		10-32 Tapped Hole	
Connector	Type	4-pin, M4.5X0.35		4-pin, M4.5X0.35	
Housing	Material	Titanium]	Titanium]
PERFORMANCE					
Sensitivity, ±10% [1]		50	mV/g	5.1	mV/m/s ²
Acceleration Range		±40	Gpeak	±392	m/s² peak
Frequency Response, ±10%		0 to 10,000	Hz	0 to 10,000	Hz
Resonance Frequency		>38	kHz	>38	kHz
Transverse Sensitivity		<3	%	<3	%
Output Noise, Broadband, Max.		0.002	Grms	0.0196	m/s ² rms
Spectral Noise	1Hz	400	µGrms/sqr(Hz)	3,924	µm/s² rms/sqr(Hz
	10Hz	62	µGrms/sqr(Hz)	608	µm/s² rms/sqr(Hz
	100Hz	24	μGrms/sqr(Hz)	235	µm/s² rms/sqr(Hz
	1kHz	6	µGrms/sqr(Hz)	59	µm/s² rms/sqr(Hz
	10kHz	5	μGrms/sqr(Hz)	49	μm/s² rms/sqr(Hz
ENVIRONMENTAI	L				
Maximum Mechani	cal Shock	5,000	Gpeak	49,050	m/s ²
Bias Temperature	Shift, Max [3]	56	(ppm of span)/°F	101	(ppm of span)/°C
Bias Calibration En	ror	1.5	% of span	1.5	% of span
Operating Tempera	ature	-60 to +250	°F	-51 to 121	°C
Scale Factor Temp	erature Shift [3]	-83 to +83	ppm/°F	-150 to +150	ppm/°C
Seal		Hermetic]	Hermetic]
POWER					
Compliance Voltage		+5 to +28	VDC	+5 to +28	VDC
Current Range		5 to 10	mA DC	5 to 10	mA DC
Output Bias Voltage, Typical		2.45	VDC	2.45	VDC
Output Impedance, Nom.		1	Ω	1	Ω
Power Supply Reje		>65	dB	>65	dB

	Model	Sensitivity (mV/g)	Range (Gpeak)	Maximum Shock (Gpeak)	Noise Broadband (grms)
	7705A1	10	±200	5,000	0.008
	7705A3	100	±20	5,000	0.0008

Refer to the performance specifications of the products in this family for detailed description

Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) Model 6200 mounting stud (10-32 to 10-32) Qty. 1

lotes:

- [1] Measured at 100Hz, 1 Grms per ISA RP 37.2.
- [2] Measure using zero-based straight line method, % of F.S. or any lesser range.
- [3] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the IC charge amplifier.
- [4] In the interest of constant product improvement, we reserve the right to change specifications without notice.





