

 Model Number 1051V5
 PERFORMANCE SPECIFICATION
 DOC NO PS1051V5

 DYNAMIC FORCE SENSOR, IEPE
 REV E, ECN 16679, 03/24/22



- COMPRESSIVE & TENSILE LOADINGS
- EXCELLENT LINEARITY
- IEPE, VOLTAGE MODE

		ENGLISH		SI		
PHYSICAL		•	•			
Weight, Max.		1.0	oz	28	grams	
Connector		10-32		10-32		
Material		Stainless Steel		Stainless Steel]	
Sensing Element	Material	Quartz		Quartz		
	Mode	Compression		Compression		
PERFORMANCE						
Sensitivity, ± 10 %		5	mV/lbf	1.12	mV/N	
Compression Range		1,000	lbf	4448.2	N	
Maximum Compression		15,000	lbf	66723	N	
Tension Range		500	lbf	2224.1	N	
Maximum Tension [1]		500	lbf	2224	N	
Resolution		0.014	lbf, RMS	0.06228	N	
Linearity [2]		±1	% Full Scale	±1	% Full Scale	
Resonant Frequency, Unloaded		>39	kHz	>39	kHz	
Stiffness, Force Sensor		11.4	lbf/µin	2.0	kN/μm	
ENVIROMENTAL						
Maximum Shock, Unloaded		10,000	g pk	98100	m/s² pk	
Temperature Range		-100 to +250	°F	-73 to +121	°C	
Thermal Coefficient		0.03	%/°F	0.05	%/°C	
Seal		Ероху		Ероху		
ELECTRICAL						
Output Voltage F.S		±5	V	±5	1 v	
Output Impedance		<100	Ω	<100	Ω	
Bias Voltage		7.5 to 9.5	VDC	7.5 to 9.5	VDC	
Compliance Voltage Range		18 to 30	VDC	18 to 30	VDC	
Supply Current Range [4]		2 to 20	mA	2 to 20	mA	
Discharge Time Constant, Min		1200	Sec	1200	Sec	
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This family also includes:										
Model	Sens. (mV/lbf)	Compression Range (lbf)	Max. Compression (lbf)	Tension Range (lbf)	Max. Tension (lbf)	T.C. (sec)	Resolution (lbf, RMS)			
1051V1	500	10	200	10	200	>20	0.00014			
1051V2	100	50	1000	50	500	>50	0.0007			
1051V3	50	100	2000	100	500	>100	0.0014			
1051V4	10	500	10000	500	500	>1000	0.007			
1051V6	1	5,000	15000	500	500	>2000	0.07			

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

Supplied Accessories:

- 1) Accredited calibration certificate (ISO 17025)
- 2) MOD 6210 STEEL IMPACT CAP
- 3) MOD 6204 1/4-28 MOUNTING STUD

lotes:

- [1] Absolute maximum tension. Do not exceed in any case!
- [2] Measure using zero-based straight line method, % of F.S. or any lesser range.
- [3] All specifications are at room temperature unless otherwise specified.
- [4] Do not apply power to this system without current limiting, 20 mA MAX. To do so will destroy the IC charge amplifier.
- [5] In the interest of constant product improvement, we reserve the right to change specifications without notice. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.



