

 Model Number 1051V4
 PERFORMANCE SPECIFICATION
 DOC NO PS1051V4

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



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

ENGLISH

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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 %		10	mV/lbf	2.25	1 mV/N	
Compression Range		500	lbf	2224.1	N	
Maximum Compression		10,000	lbf	44482	N	
Tension Range		500	lbf	2224.1	N	
Maximum Tension [1]		500	lbf	2224	N	
Resolution		0.007	lbf, RMS	0.03114	N	
Linearity [2]		±1	% Full Scale	±1	% Full Scale	
Resonant Frequency, Unloaded		>39	kHz	>39	kHz	
Stiffness, Force Sensor	• • •		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	
		1 7	+	1 7	4	
ELECTRICAL			_			
Output Voltage F.S		±5	V	±5	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		1000	Sec	1000	Sec	
			•		•	

This family a	This family also includes:							
	Sens.	Compression	Max.	Tension	Max.			
Model	Selis.	Donge	Compression	Donge	IVIAX.			

Model	Sens. (mV/lbf)	Range (lbf)	Max. Compression (lbf)	Range (lbf)	Max. Tension (lbf)	T.C. (sec)	Resolution RMS)	(lbf,
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	
1051V5	5	1,000	15000	500	500	>1200	0.014	
1051V6	1	5,000	15000	500	500	>2000	0.07	

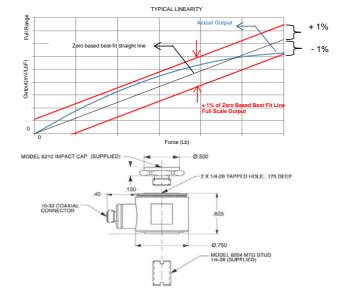
Refer to the performance specifications of the products in this family for detailed description.

## Supplied Accessories:

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

## otes:

- [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.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-1051V for more information.

