

Model Number 422M182	DIFFERENTIAL INPUT IN-LINE CHARGE AMPLIFIER				Revision: B ECN #: 39690
Performance		ENGLISH	SI	OPTIONAL VERSIONS	
Sensitivity(± 5 %)(Charge Conversion)		4 mV/pC	4 mV/pC	Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.	
Low Frequency Response(-5 %)		2 Hz	2 Hz		
High Frequency Response(2.2 mA)		30 kHz	30 kHz		
High Frequency Response(4 mA)		45 kHz	45 kHz		
High Frequency Response(20 mA)		55 kHz	55 kHz		
Non-Linearity		≤ 1.0 % FS	≤ 1.0 % FS		
Environmental					
Temperature Range(Operating)		-60 to +185 °F	-51 to +85 °C		
Temperature Response(Sensitivity Deviation)		<1 %	<1 %		
Electrical				NOTES: [1] Tested using voltage source and input capacitor equal to the feedback capacitor, to simulate a charge output sensor. [2] The low frequency tolerance is accurate within ±20% of the specified frequency. [3] Above stated frequency, the amplifier becomes slew rate limited. [4] See PCB Declaration of Conformance PS024 for details. A low impedance connection from case to earth ground is required to maintain CE compliance.	
Excitation Voltage		22 to 28 VDC	22 to 28 VDC		
Constant Current Excitation		2.2 to 20 mA	2.2 to 20 mA		
Output Voltage(at specified measurement range)		± 5 Vpk	± 5 Vpk		
Output Impedance		<250 Ohm	<250 Ohm		
Output Bias Voltage		12 to 16 VDC	12 to 16 VDC		
Broadband Electrical Noise(1 to 10,000 Hz)		28 µV	-91 dB		
Spectral Noise(1 Hz)		10.0 µV/√Hz	-100 dB		
Spectral Noise(10 Hz)		3.2 µV/√Hz	-110 dB		
Spectral Noise(100 Hz)		1.0 µV/√Hz	-120 dB		
Spectral Noise(1 kHz)		0.56 µV/√Hz	-125 dB		
Spectral Noise(10 kHz)		0.56 µV/√Hz	-125 dB		
Discharge Time Constant		0.25 sec	0.25 sec		
Resistance(Minimum required at input)		50,000 Ohm	50,000 Ohm		
Source Capacitance Loading		0.0009 %/pF	0.0009 %/pF		
Physical					
Housing Material		Aluminum	Aluminum		
Electrical Connector(Input)		2-Pin	2-Pin		
Electrical Connector(Output)		BNC Jack	BNC Jack		
Weight		3.5 oz	109 gm		
 [4]					
All specifications are at room temperature unless otherwise specified. In the interest of constant product improvement, we reserve the right to change specifications without notice.					
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