Model Number 422E39	CHARGE AMPLIFIER	Revision: NR ECN #: 50015

Performance	ENGLISH	SI	
Sensitivity(± 2 %)(Charge Conversion)	1 mV/pC	1 mV/pC	
Input Range	± 2,500 pC	± 2,500 pC	
Low Frequency Response(- 5 %)	5 Hz	5 Hz	[1]
High Frequency Response(2.2 mA)	30 kHz	30 kHz	[2]
High Frequency Response(4 mA)	60 kHz	60 kHz	[2]
High Frequency Response(20 mA)	100 kHz	100 kHz	[2]
Non-Linearity	≤ 1.0 % FS	≤ 1.0 % FS	
Environmental			
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 °C	
Temperature Response(Sensitivity Deviation)	< 2 %	< 2 %	
Maximum Shock	1,000 g pk	9,810 m/s² pk	
Humidity Range	100 %	100 %	
Electrical			
Excitation Voltage	+ 18 to 28 VDC	+ 18 to 28 VDC	
Output Bias Voltage	+ 12.00 to 15.00 VDC	+ 12.00 to 15.00 VDC	
Output Voltage(at specified measurement range)	± 2.5 V	± 2.5 V	
Constant Current Excitation	2.2 to 20 mA	2.2 to 20 mA	
Output Impedance	< 10 Ohm	< 10 Ohm	
Settling Time	< 6 min	< 6 min	
Output Polarity	Inverted	Inverted	
Maximum Input Voltage	30 V	30 V	
Broadband Electrical Noise(1 to 10,000 Hz)	14.0 µV	-97 dB	[3]
Spectral Noise(1 Hz)	8.90 µV/√Hz	-101 dB	[3]
Spectral Noise(10 Hz)	0.85 µV/√Hz	-121 dB	[3]
Spectral Noise(100 Hz)	0.31 µV/√Hz	-130 dB	[3]
Spectral Noise(1 kHz)	0.17 µV/√Hz	-135 dB	[3]
Spectral Noise(10 kHz)	0.07 µV/√Hz	-143 dB	[3]
Capacitance(Maximum allowable at input)	20,000 pF	20,000 pF	
Resistance(Minimum required at input)	10,000 Ohm	10,000 Ohm	
Source Capacitance Loading	< 0.0005 %/pF	< 0.0005 %/pF	
Physical			
Housing Material	Stainless Steel	Stainless Steel	
Sealing	Welded	Welded	
Electrical Connector(Input)	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connector(Output)	BNC Jack	BNC Jack	
Size - Diameter	0.52 in	13 mm	
Size - Length	3.4 in	86 mm	
Weight	1.1 oz	31 gm	

CE[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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OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

NOTES:

[1]The low frequency tolerance is accurate within ±10% of the specified frequency.
[2]Above stated frequency, the amplifier becomes slew rate limited.
[3]Tested using voltage source and input capacitor equal to the feedback capacitor, to simulate a charge output sensor.
[4]See PCB Declaration of Conformance PS024 for details.

Entered: LK	Engineer: gs	Sales: KK	Approved: BAM	Spec Number:
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