

Model Number

422E38

IN-LINE CHARGE CONVERTER

Revision: E

ECN #: 34173

	ENGLISH	SI	
Performance			
Sensitivity($\pm 2\%$)(Charge Conversion)	0.1 mV/pC	0.1 mV/pC	
Input Range	$\pm 25,000$ pC	$\pm 25,000$ pC	
Low Frequency Response(-5 %)	5 Hz	5 Hz	[2]
High Frequency Response(2.2 mA)	4 kHz	4 kHz	[3]
(4 mA)	15 kHz	15 kHz	[3]
(20 mA)	100 kHz	100 kHz	[3]
Non-Linearity	$\leq 1.0\%$ FS	$\leq 1.0\%$ FS	
Environmental			
Temperature Range(Operating)	-65 to +250 °F	-54 to +121 °C	
Temperature Response(Sensitivity Deviation)	<2 %	<2 %	
Maximum Shock	1000 g pk	9810 m/s ² pk	
Humidity Range	100 %	100 %	
Electrical			
Excitation Voltage	+18 to 28 VDC	+18 to 28 VDC	
Constant Current Excitation	2.2 to 20 mA	2.2 to 20 mA	
Settling Time	<6 min	<6 min	
Output Voltage(at specified measurement range)	± 2.5 V	± 2.5 V	
Output Impedance	<10 ohm	<10 ohm	
Output Bias Voltage	+12.00 to 15.00 VDC	+12.00 to 15.00 VDC	
Output Polarity	Inverted	Inverted	
Maximum Input Voltage	30 V	30 V	
Broadband Electrical Noise(1 to 10,000 Hz)	14.0 μ V	-97 dB	[1]
Spectral Noise(1 Hz)	8.90 μ V/ \sqrt Hz	-101 dB	[1]
(10 Hz)	0.85 μ V/ \sqrt Hz	-121 dB	[1]
(100 Hz)	0.31 μ V/ \sqrt Hz	-130 dB	[1]
(1 kHz)	0.17 μ V/ \sqrt Hz	-135 dB	[1]
(10 kHz)	0.07 μ V/ \sqrt Hz	-143 dB	[1]
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	
(Output)	BNC Jack	BNC Jack	
Size (Diameter x Length)	0.52 in x 3.4 in	13 mm x 86 mm	
Weight	1.1 oz	31 gm	

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.

T - TEDS Capable of Digital Memory and Communication Compliant with IEEE P1451.4
 Temperature Range(Operating) -40 to +185 °F -40 to +85 °C

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 $\pm 10\%$ of the specified frequency.
 [3] Above stated frequency, the amplifier becomes slew rate limited.
 [4] See PCB Declaration of Conformance PS024 for details.



[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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