



Performance Specifications

SFQ 600 Fine Position Sensor (± 50 mil range) P/N 900031

Unless otherwise specified, tests were performed at lab ambient temperature with an input voltage to the unit of $\pm 15.00V$ and a 2.07 MHz TTL level clock.

Parameter	Conditions/Notes	Min	Typ	Max	Units
Target Material			Al		
Gap at Null			2.286 (90)		mm (mils)
Range			± 1.27 (± 50)		mm (mils)
Output Voltage			± 10		Volts
Maximum Nonlinearity Error	Tested over ± 50 mil (1.27mm) range.		12.7 (0.5)		μm (mils)
Noise	Tested at null over 0.1Hz to 100kHz. (See Note 1)		0.66 25		nm/ \sqrt{Hz} , RMS (nano-in/ \sqrt{Hz} , RMS)
Scale Factor	Tested over ± 50 mil (1.27mm) range.	7.72 (196)	7.87 (200)	8.03 (204)	V/mm (V/in)
Null Drift at Constant Temp.	Over 24 hours. Tested at 22.5°C.		± 0.4	± 2	mV
Null Drift Over Temperature	Tested over -20° to +25°C.		± 0.3	± 1	mV/°C
Scale Factor Stability	Tested over ± 50 mil (1.27mm) range.		-0.020	-0.04	%/°C
Electronics Operating Temp.	Range tested in vacuum.	-34		+65	°C
Bandwidth	By analysis.		32		kHz
Input Voltage		± 14.25	± 15	± 15.75	V
Input Clock Frequency			2.07		MHz
Output Impedance			600		Ω
Power Consumption	For temperatures in the range -20°C to +25°C.			0.7	W
Survivable Vibration Levels	20Hz to 2kHz.	10			g^2/\sqrt{Hz}
Mean Time Between Failure	Average temperature of 20°C.	33.24			10^6 Hours
Radiation Hardness, Ionizing Total Dose	By analysis. See Note 2.	65			Krad(Si)
System Mass/Weight			0.394 (13.9)		Kg (Ounces)

Notes:

1. We believe this noise value will be reduced by several times upon implementation of a minor change to the system to be made on the next revision.
2. All components used are guaranteed radiation hardened to $>100Krad(Si)$.

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