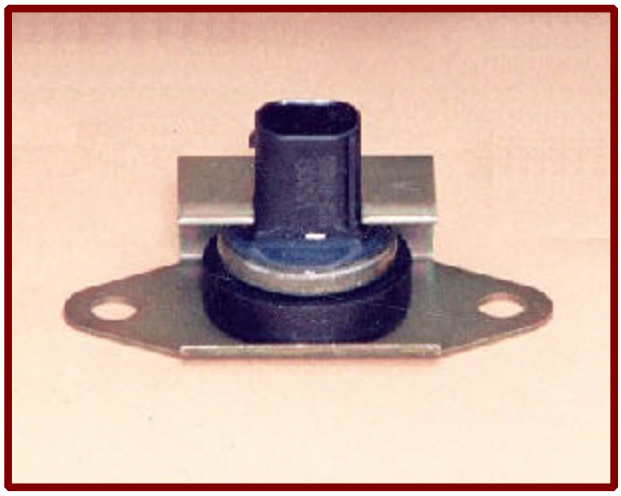
Texas Instruments
Automotive Sensors and Controls

LOW-G CAPACITIVE ACCELEROMETER

TI's Capacitive Acceleration Sensor (CAS) is a workhorse, at the heart of numerous automotive chassis control applications worldwide. Our low-g acceleration sensing solutions serve applications including Anti-Roll Control, Semi-Active Suspension, Vehicle Dynamics Control, 4WD ABS, and OBDII/Rough Road Detection.

CAS meets the demanding expectations of the automotive industry:

- 1g, 2g, and 10g full scale options available
- Sensitivity up to 2 V/g; Output ratiometric with supply
- Operating range -40° to 125°C
- Flat response DC to 50 Hz (-3dB)
- Total error band ±5% Full Scale [includes calibration, linearity, thermal offset, and drift over life]
- EMC - radiated susceptibility 200V/m up to 500MHz
- Automotive fluid compatible
- We are QS9000 certified, delivering <50 ppm AIQ



A proven automotive performer, versions of CAS have been in mass production since 1992. TI has been supplying the automotive industry for over 30 years. Our portfolio includes Coolant Level Sensors, Transmission Range Sensors, and Pressure Switches and Transducers. CAS is an extension of our recognized worldwide leadership in Automotive Pressure Transducers, sharing much of the proven packaging technology with that highly successful product.

A word on our technology:

CAS employs the combined expertise accumulated from several highly regarded TI products -

- Thick film ceramic based sensing element from TI Automotive Pressure Transducer
- Alloy 42 metal beam from TI Leadframes
- Application Specific IC from TI Semiconductor
- Controlled expansion alloy (for minimal thermal offset error) from TI Thermostat Metals
- High reliability packaging from TI Automotive Pressure Transducer

The CAS team is excited to serve you! Contact us:

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or visit us on the world wide web at:
http://www.ti.com/mc/docs/indsol1b.htm

TEXAS INSTRUMENTS
Automotive Sensors and Controls

LOW-G CAPACITIVE ACCELEROMETER

TYPICAL SPECIFICATIONS *

ATTRIBUTE	UNITS	MIN	MAX
INPUT RANGE	±g	1	10
SENSITIVITY	V/g	0.200	2.000
CALIBRATION OFFSET ERROR	V	-0.050	0.050
LINEARITY (0g OFFSET FROM ENDPOINT LINE)	% F.S.	-1.0	1.0
SUPPLY VOLTAGE	V	4.5	5.5
SUPPLY CURRENT	mA	-	10
OUTPUT CURRENT	mA	-	1 typical
SUPPLY VOLTAGE WITHOUT DAMAGE	V	-14	16
NOISE (1g FS device)	g (rms)	-	0.001
EMC- RADIATED SUSCEPTIBILITY TO 500 MHz	V/m	200	-
CROSS AXIS SENSITIVITY ERROR	% nominal sensitivity	-3	3
FREQUENCY RESPONSE (-3dB point)	Hz	25	100
OPERATING TEMP RANGE	°C	-40	125
STORAGE TEMP RANGE	°C	-40	150
THERMAL SENSITIVITY ERROR (-40 to 85°C)	% room temp sensitivity	-4	4
OFFSET ERROR (25° to -40°C)	V	-0.100	0.100
OFFSET ERROR (25° to 85°C)	V	-0.100	0.100
OFFSET ERROR (25° to 125°C)	V	-0.150	0.150

TYPICAL DURABILITY QUALIFICATION TESTS:

- THERMAL CYCLING
- HIGH TEMPERATURE ENDURANCE
- LOW TEMPERATURE ENDURANCE
- VIBRATION
- HUMIDITY
- CORROSION / SALT FOG

*** Custom specifications available upon request.**