

PERFORMANCE SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

| Parameter | Symbol | Conditions | Min. | Typ. | Max | Unit |
|-------------------------------|------------------|----------------------|------|------|------|------|
| Supply voltage | V _{DD} | | -0.3 | | +3.6 | V |
| Storage temperature | T _S | | -40 | | +125 | °C |
| Overpressure | P _{max} | ISO6425 | | | 30 | bar |
| Maximum Soldering Temperature | T _{max} | 40 sec max | | | 250 | °C |
| ESD rating | | Human Body Model | -4 | | +4 | kV |
| Latch up | | JEDEC standard No 78 | -100 | | +100 | mA |

ELECTRICAL CHARACTERISTICS

| Parameter | Symbol | Conditions | Min. | Typ. | Max | Unit |
|------------------------------------|-----------------|---|------|----------------------------------|------|------|
| Operating Supply voltage | V _{DD} | | 1.8 | 3.0 | 3.6 | V |
| Operating Temperature | T | | -40 | +25 | +85 | °C |
| Supply current (1 sample per sec.) | I _{DD} | OSR 4096 2048 1024 512 256 | | 12.5 6.3 3.2 1.7 0.9 | | µA |
| Peak supply current | | during conversion | | 1.4 | | mA |
| Standby supply current | | at 25°C | | 0.02 | 0.14 | µA |
| VDD Capacitor | | From VDD to GND | 100 | | | nF |

ANALOG DIGITAL CONVERTER (ADC)

| Parameter | Symbol | Conditions | Min. | Typ. | Max | Unit |
|-----------------|----------------|---|--------------------------------------|--------------------------------------|--------------------------------------|------|
| Output Word | | | | 24 | | bit |
| Conversion time | t _c | OSR 4096 2048 1024 512 256 | 7.40 3.72 1.88 0.95 0.48 | 8.22 4.13 2.08 1.06 0.54 | 9.04 4.54 2.28 1.17 0.60 | ms |

PERFORMANCE SPECIFICATIONS (CONTINUED)

PRESSURE OUTPUT CHARACTERISTICS ($V_{DD} = 3\text{ V}$, $T = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

| Parameter | Conditions | Min. | Typ. | Max | Unit |
|--|---|-------|-------|-------|---------|
| Operating Pressure Range | P_{range} Full Accuracy | 0 | | 5 | bar |
| Absolute Accuracy, autozero at one pressure point 300...1100 mbar | at 20°C , 300..1100 mbar | -1.5 | | +1.5 | mbar |
| | at $0..50^\circ\text{C}$, 300..1100 mbar | -4.0 | | +4.0 | |
| | at $-40..85^\circ\text{C}$, 300..1100 mbar | -15.0 | | +15.0 | |
| Absolute Accuracy, autozero at one pressure point 0...5000 mbar | at 20°C , 0..5000 mbar | -80 | | +80 | mbar |
| | at $0..50^\circ\text{C}$, 0..5000 mbar | -100 | | +100 | |
| | at $-40..85^\circ\text{C}$, 0..5000 mbar | -120 | | +120 | |
| Maximum error with supply voltage (1) | $V_{DD} = 1.8\text{ V} \dots 3.6\text{ V}$ | | +/-5 | | mbar |
| Long-term stability | | | +/-1 | | mbar/yr |
| Resolution RMS | OSR | | 0.036 | | mbar |
| | 4096 | | 0.054 | | |
| | 2048 | | 0.081 | | |
| | 1024 | | 0.126 | | |
| | 512 | | 0.195 | | |
| | 256 | | | | |

(1) With autozero at 3V point

TEMPERATURE OUTPUT CHARACTERISTICS ($V_{DD} = 3\text{ V}$, $T = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

| Parameter | Conditions | Min. | Typ. | Max | Unit |
|---------------------------------------|--|--------------|--------|--------------|------------------|
| Absolute Accuracy | $0..85^\circ\text{C}$ $-40..85^\circ\text{C}$ | -2.5 -5.0 | | +2.5 +5.0 | $^\circ\text{C}$ |
| Maximum error with supply voltage (1) | $V_{DD} = 1.8\text{ V} \dots 3.6\text{ V}$ | | +/-0.5 | | $^\circ\text{C}$ |
| Resolution RMS | OSR | | 0.002 | | $^\circ\text{C}$ |
| | 4096 | | 0.003 | | |
| | 2048 | | 0.005 | | |
| | 1024 | | 0.008 | | |
| | 512 | | 0.012 | | |
| | 256 | | | | |

(1) With autozero at 3V point