



CPA 602

Piezoresistive Monolithic Ceramic Pressure Sensor

- Digital calibrated
- Ratiometric output signal (0.5 to 4.5 V)
- Excellent chemical resistance
- Easy mounting
- Pressure ranges 30 to 6000 psi gauge

Standard Pressure Ranges

| PSI ¹⁾ | bar | Proof pressure | | Admissible negative pressure [PSI ¹⁾ /bar] | Burst pressure | | Output signal (FSO) 0.5 to 4.5 V (@ V _s = 5V _{DC}) |
|--|-----|--|-----|--|--------------------------|-------|---|
| | | [PSI ¹⁾ /bar] | | | [PSI ¹⁾ /bar] | | |
| 30 | 2 | 60 | 4 | vacuum resistant | 120 | ≥ 8 | |
| 75 | 5 | 150 | 10 | | 300 | ≥ 20 | |
| 150 | 10 | 300 | 20 | | 525 | ≥ 35 | |
| 300 | 20 | 600 | 40 | | 900 | ≥ 60 | |
| 750 | 50 | 1500 | 100 | | 2100 | ≥ 140 | |
| 1500 | 100 | 2250 | 150 | | 4500 | ≥ 300 | |
| 3000 | 200 | 4500 | 300 | | 6000 | ≥ 400 | |
| 6000 | 400 | 7500 | 500 | | 9750 | ≥ 650 | |
| other on request | | | | | | | |
| Reference Conditions | | | | | | | |
| Supply voltage | | 4.5 to 5.5 V _{DC} | | | | | |
| Output signal / Supply | | 3-wire ratiometric: 10 to 90% of V _s (V ₀ = 0.5 to 4.5 V _{DC} @ V _s = 5.0 V) | | | | | |
| Reference temperature | | 25 °C | | | | | |
| Measuring supply voltage | | 5 V _{DC} | | | | | |
| Performance Characteristics | | | | | | | |
| Supply current | | ≤ 2.5 mA | | | | | |
| Offset | | 0.5 V @ V _s = 5 V | | | | | |
| Span | | 4.0 V @ V _s = 5 V | | | | | |
| Output load resistance | | ≥ 5 kΩ | | | | | |
| Total error (non-linearity, hysteresis, non-repeatability) | | Pressure ranges: ≤ 750 psi: ≤ ± 0.4 % FS (terminal based) Pressure ranges: > 750 psi: ≤ ± 0.8 % FS typ. (1.5 % FS max.) (terminal based) (reduced error upon customer request) | | | | | |
| Calibration error | | ≤ ± 0.3 % FS | | | | | |
| Long term stability | | ≤ ± 0.3 % FS/year (at reference conditions) | | | | | |
| TC Offset (TC0) | | ≤ ± 0.02 % FS / °C ²⁾ | | | | | |
| TC Span (TCS) | | ≤ - 0.012 % FS / °C ²⁾ | | | | | |

¹⁾ PSI values around rounded and for reference only

²⁾ over compensated temperature range

CPA-602

Ceramic pressure sensor

Specifications

| Environmental Specification | | | | |
|-------------------------------|---|--|-----------|---------------------|
| Operating temperature range | - 40 to 85 °C | | | |
| Storage temperature range | - 40 to 100 °C | | | |
| Compensated temperature range | 0 to 85 °C | | | |
| Electrical connection | | | | |
| on PCB of sensor | Mates with JST socket parts: B3B-ZR-SM4-TF | | | |
| on connection wire | Connection housing: ZHR-3 | | | |
| | Connection pin: | Applicable wire | | |
| | Model No. | [mm ²] | AWG# | Insulation O.D.[mm] |
| | SZH-002T-P0.5 | 0.08 ~ 0.13 | 28 ~ 26 | 0.8 ~ 1.1 |
| SZH-003T-P0.5 | 0.032 ~ 0.08 | 32 ~ 28 | 0.5 ~ 0.9 | |
| Miscellaneous | | | | |
| Media wetted parts | Ceramic Al ₂ O ₃ 96 % | | | |
| Weight | approx. 7 g | | | |
| Dimension | Ø = 18 ± 0.1 mm d = 6.35 ± 0.1 mm (excl. signal conditioning board) | | | |
| Mechanical | | | | |
| Drawing | Pinout information | | | |
| | | JST socket B3B-ZR-SM4-TF Pin Out 1: +5 V 2: GND 3: signal | | |

| Ordering code | | | | |
|------------------------------|---------------------|-------|--|--|
| CPA602 | - | | | |
| Type of pressure | gauge G | | | |
| Pressure ranges | | | | |
| 30 psi / 2 bar | | 0 3 0 | | |
| 75 psi / 5 bar | | 0 7 5 | | |
| 150 psi / 10 bar | | 1 5 0 | | |
| 300 psi / 20 bar | | 3 0 0 | | |
| 750 psi / 50 bar | | 7 5 0 | | |
| 1500 psi / 100 bar | | 1 K 5 | | |
| 3000 psi / 200 bar | | 3 K 0 | | |
| 6000 psi / 400 bar | | 6 K 0 | | |
| Electrical connection | JST socket | 3 0 1 | | |
| | Others – on request | 9 9 9 | | |
| Options | Standard | 0 0 1 | | |

This data sheet contains product specification, properties are not guaranteed. Subject to be changed without notice.