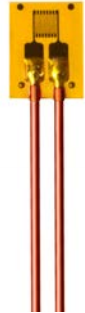


Customer Requirements

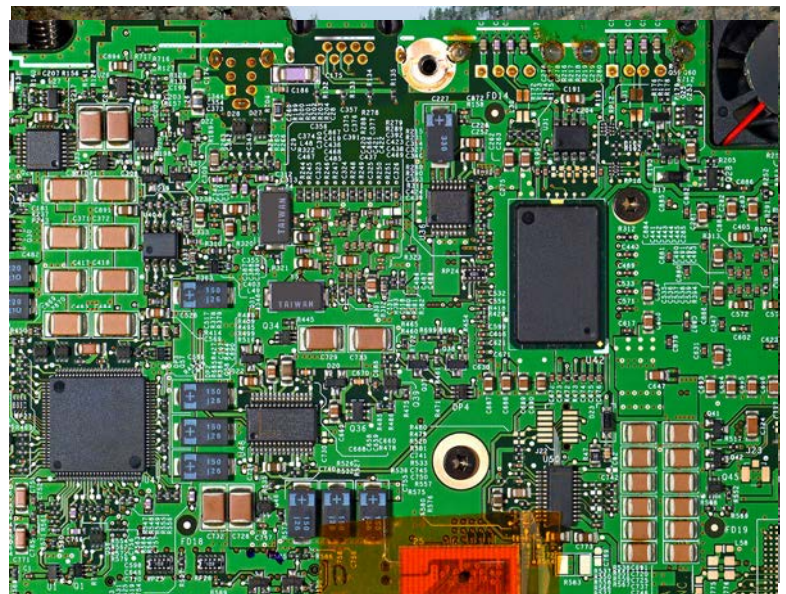
- Temperature range: -60°F to $+180^{\circ}\text{F}$ (-50°C to $+80^{\circ}\text{C}$)
- Miniature Uniaxial strain pattern with a 0.015 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $120\ \Omega$
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier



Applications

- Circuit Board Testing
- Automotive
- Aircraft
- Any application requiring measurement at a strain concentration or in a small area

Datasheet:
<http://www.vishaypg.com/doc?11200>



Customer Requirements

- Temperature range: -60°F to $+180^{\circ}\text{F}$ (-50°C to $+80^{\circ}\text{C}$)
- Uniaxial strain pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ (30,000 $\mu\epsilon$) one time elongation; $\pm 1500 \mu\epsilon$ for 10^6 cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet:

<http://www.vishaypg.com/doc?11200>



Customer Requirements

- Temperature range: -60°F to $+180^{\circ}\text{F}$ (-50°C to $+80^{\circ}\text{C}$)
- Uniaxial strain pattern with a 0.250 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys



Datasheet:

<http://www.vishaypg.com/doc?11297>

Customer Requirements

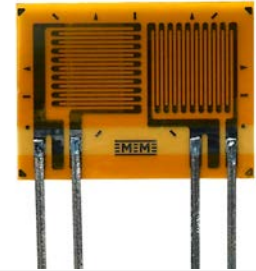
- Temperature range: -60°F to $+180^{\circ}\text{F}$ (-50°C to $+80^{\circ}\text{C}$)
- Biaxial strain pattern (T-rosette) with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier

Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys including structural health monitoring (SHM), pressure vessel and tank applications where maximum and minimum, or longitudinal and hoop, strain measurements are required

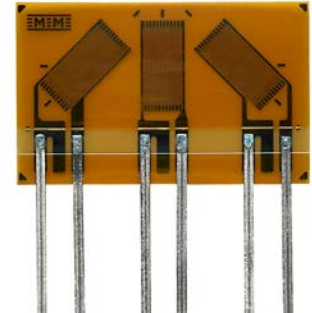
Datasheet:

<http://www.vishaypg.com/doc?11199>



Customer Requirements

- Temperature range: -60° to $+180^{\circ}\text{F}$ (-50° to $+80^{\circ}\text{C}$)
- Three-element rectangular rosette pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Ideal for stress states where the magnitude and direction need to be determined
- Pre-attached vinyl insulated cables makes installation fast and much easier
- Three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys including structural health monitoring (SHM)

Datasheet:

<http://www.vishaypg.com/doc?11198>



Customer Requirements

- Temperature range: -60° to $+150^{\circ}$ F (-50° to $+66^{\circ}$ C)
- Miniature three-element stacked rosette pattern with a 0.031 inch active grid length
- Temperature compensated for Steel, Stainless (17-4)
- Resistance: 120 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ (30,000 $\mu\epsilon$) one time elongation; ± 1500 $\mu\epsilon$ for 10^6 cycles
- Ideal for placement with limited space
- Pre-attached vinyl insulated cables makes installation fast and much easier
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements



Applications

- Automotive
- Aerospace
- Oilfield
- Other applications of steel alloys where a small footprint with less averaging is required

Datasheet:

<http://www.vishaypg.com/doc?11250>



Customer Requirements

- Temperature range: -60° to $+150^{\circ}\text{F}$ (-50° to $+66^{\circ}\text{C}$)
- Miniature (5mm diameter matrix) three-element stacked rosette
- Temperature compensated for FR4 Circuit Board, Steel
- Resistance: $120\ \Omega$
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Ideal for placement with limited space such as the corners of BGA's for testing per IPC/JEDEC publications
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements

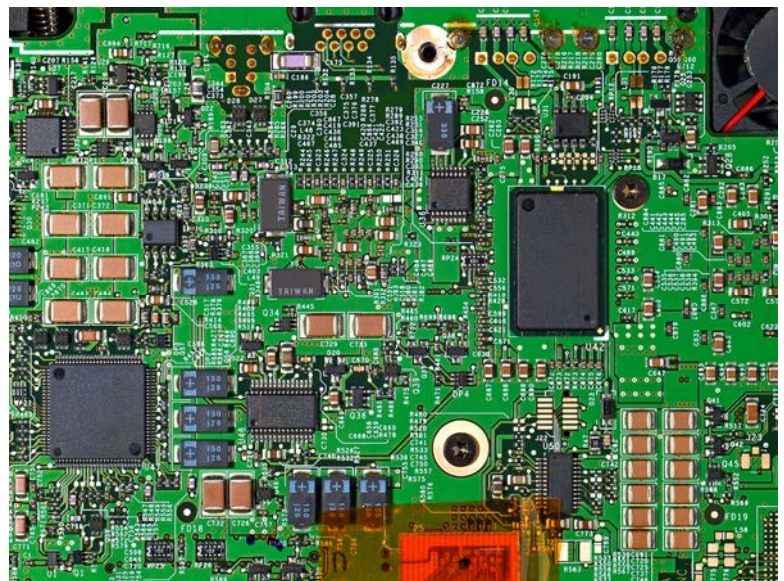


Applications

- Circuit Board Testing
- Automotive
- Aircraft
- Where small footprint with less averaging is required

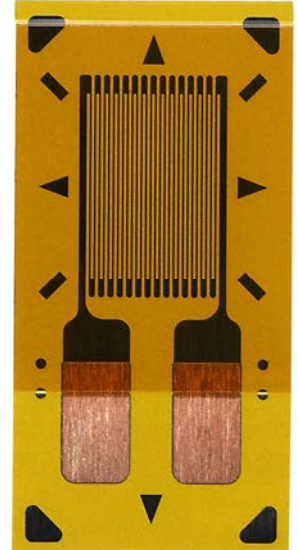
Datasheet:

<http://www.vishaypg.com/doc?11377>



Customer Requirements

- Temperature range: -100°F to $+350^{\circ}\text{F}$ (-75°C to $+175^{\circ}\text{C}$)
- Uniaxial strain pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

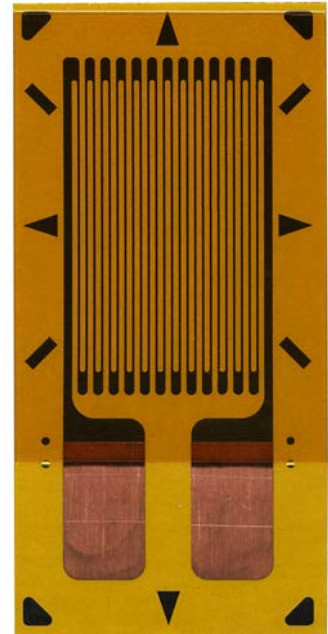


Datasheet:

<http://www.vishaypg.com/doc?11224>

Customer Requirements

- Temperature range: -100°F to $+350^{\circ}\text{F}$ (-75°C to $+175^{\circ}\text{C}$)
- Uniaxial strain pattern with a 0.250 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloy

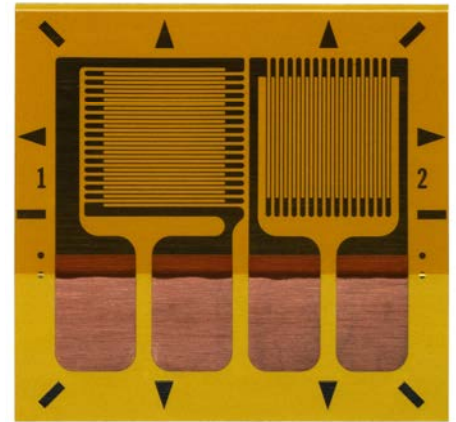
Datasheet:

<http://www.vishaypg.com/doc?11312>



Customer Requirements

- Temperature range: -100°F to $+350^{\circ}\text{F}$ (-75°C to $+175^{\circ}\text{C}$)
- Biaxial strain pattern (T-rosette) with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- Ideal for biaxial stress states where direction is known



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

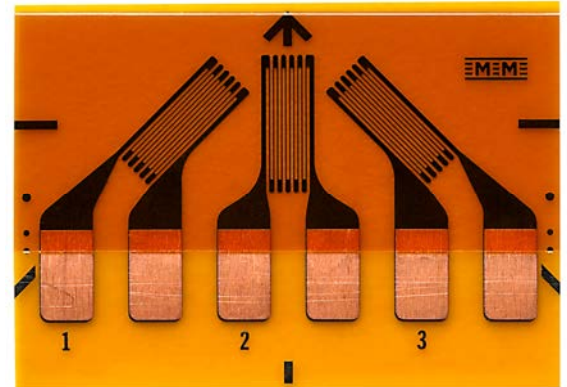
Datasheet:

<http://www.vishayvpg.com/doc?11230>



Customer Requirements

- Temperature range: -100°F to $+350^{\circ}\text{F}$ (-75°C to $+175^{\circ}\text{C}$)
- Three-element rectangular rosette pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: $350\ \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: $\pm 3\%$ ($30,000\ \mu\epsilon$) one time elongation; $\pm 1500\ \mu\epsilon$ for 10^6 cycles
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements



Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet:

<http://www.vishaypg.com/doc?11225>



Customer Requirements

- Weldable strain gage
- Temperature range: -100°F to $+200^{\circ}\text{F}$
- Linear
- Temperature compensated for Steel, Stainless (17-4)
- Resistance: $350\ \Omega$
- Elongation: $\pm 0.5\%$ ($5,000\ \mu\epsilon$) one time elongation
- Ideal when bonding condition due not allow adhesives to be used to bond the gage



Applications

- Civil engineering
- Rebar
- Bridges
- Structural health monitoring
- Other applications on steel alloys



Datasheet:

<http://www.vishaypg.com/doc?11519>