

Photodiode array chip FM24P

Description

FM24P chip is fabricated using Silicon Bipolar process technology. The chip is designed to be used in MOS-relay. Consists of 20 photodiodes that allows controlling MOSFET chips with threshold voltage 2-4 V. The spectral response range is 0.85-0.92 nm.

New monolith polysilicon structure.

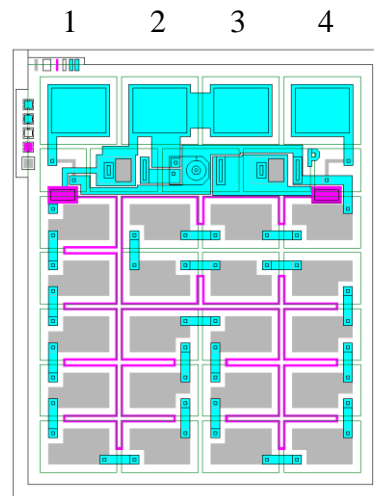
No delamination at high temperatures.

Features

- 20 photodiodes
- Thyristor discharge circuit
- Increased open circuit voltage
- Contact pad`s material - Aluminium
- Chip size 1.0 x 1.2 mm ± 0.1 mm
- Chip thickness 0.32 ± 0.02 mm

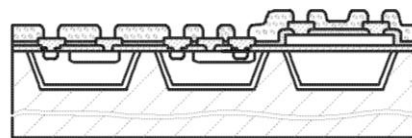
Absolute maximum ratings

| | |
|--------------------------------|------------------|
| Storage temperature | -65 °C to 150 °C |
| Operating junction temperature | -55 °C to 125 °C |



- 1 – Output
- 2 – GND
- 3 – GND
- 4 – Output

Cross section view



Electrical characteristics (T = 25 °C)

| Parameter | Symbol | Unit | Min. | Typ. | Max. | Condition |
|-----------------------|------------------|------|------|------|------|-----------|
| Open Circuit Voltage | V _{OC} | V | 11.0 | 11.4 | - | 1 |
| Short Circuit Current | I _{SC} | μA | 2.0 | 3.5 | - | 1 |
| Output Voltage | V _{OUT} | V | - | 0.7 | 0.9 | 2 |
| Discharge Resistor | R _{DIS} | MOhm | 5.0 | | 25.0 | |
| Turn-On Time | T _{ON} | ms | | 1.0 | | 3 |
| Turn-Off Time | T _{OFF} | ms | | 0.2 | | |

1 – Parameters are guaranteed when coupled with I_{RLED} = 10 mA with peak wavelength λ = 850 ± 20 nm, Φ_e = 1000 μW, at distance 0.2 mm.

2 – No light. I_F = 1.0 μA.

3 – Typical value at I_{RLED} = 10 mA, C_L = 250 pF. Coupled with LED Φ_e = 1400 μW with peak wavelength λ = 850 ± 20 nm.