# Photodiode array chip FM056P

Description

FM056P is designed to drive MOSFETs, including SiC MOSFETs, with threshold voltage 3-7 V and can be used in MOS-relay within one package or as a separate device. The spectral response range is 850 – 940 nm. The chip should be used for face-to-face coupling design together with one IR-LED.

Features

- Contact pad's material – Aluminium
- Contact pad's size 0.09 x 0.13 mm
- Module size 1.2 x 1.4 mm (including scribe line)
- Scribe line width 80 μm
- Chip thickness 0.32 mm ± 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
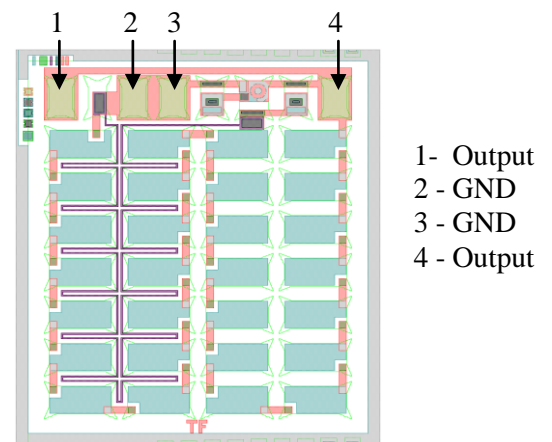
Electrical characteristics (T = 25 °C)

Parameter	Symbol	Unit	Min.	Typ.	Max.	Condition
Open Circuit Voltage	V_{OC}	V	14.0	15.5	-	1
Open Circuit Voltage	V_{OC}	V	-	17.0	-	2
Short Circuit Current	I_{SC}	μA	2.0	2.2	-	1
Short Circuit Current	I_{SC}	μA	-	7.3		2
Output Voltage	V_O	V	-	-	0.9	3
Turn-On Time	T_{ON}	ms	-	0.4	1.0	4
Turn-Off Time	T_{OFF}	ms	-	0.05	0.3	4

1 – Light source with peak wavelength $\lambda = 850 \pm 20$ nm that provides surface irradiance $E = 20$ mW/cm^2 is used.

2 – Testing condition: $I_F = 10$ mA. The PDA is assembled with IR-LED of $P = 1500$ μW (at 10 mA) with peak wavelength $\lambda = 850 \pm 20$ nm.

3 – No light. I_O=100 μA

4 – Typical value at $I_F = 10$ mA, $C_L = 330$ pF. The PDA is assembled with IR-LED of $P = 1500$ μW (at 10 mA) with peak wavelength $\lambda = 850 \pm 20$ nm. The measurement was performed in accordance with the specified testing circuit and diagram.

Typical characteristics

Typical characteristics` measurement is performed on PDA chip assembled with
IR-LED chip of P = 1500 µW (at 10 mA) with peak wavelength λ = 850 ±20 nm.
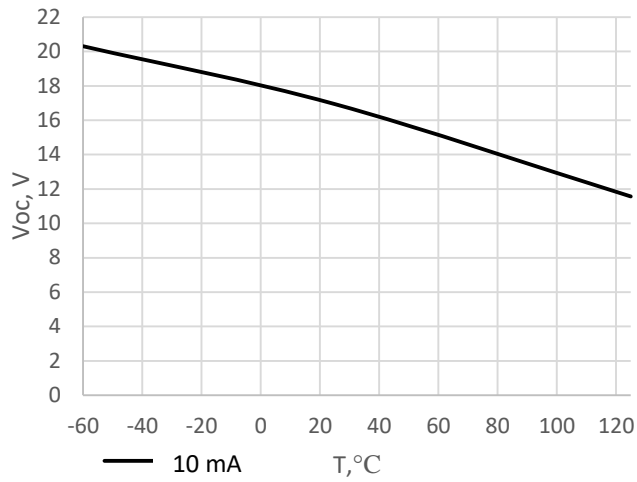
Picture 1 – typical characteristics V_{OC} (T)
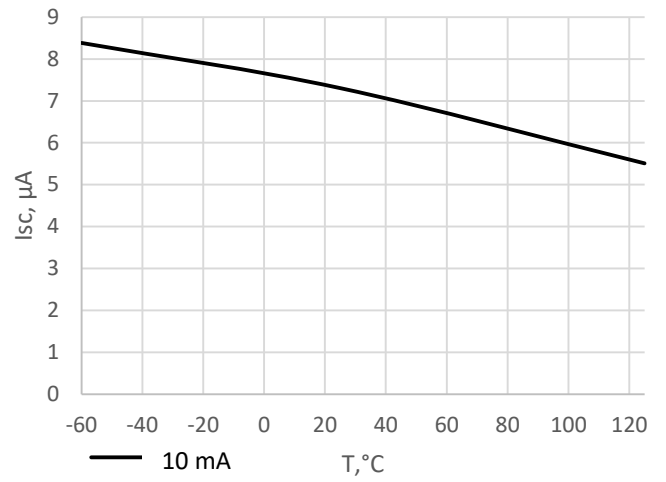
Picture 2 – typical characteristics I_{SC} (T)

Dynamic parameters testing circuit and diagram