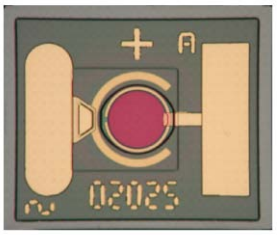
PDCS80T-XS
5 Gb/s InGaAs PHOTODIODE

PDCS80T-XS is a photodiode chip with a dual-pad layout and a large optical aperture with a diameter of 80 µm. The top illuminated photodiode is optimized for single-mode data, telecom and analog applications up to 5 Gb/s and offers excellent responsivity and a high speed response from 1260 to 1620 nm. Over this entire wavelength range, a broadband AR coating offers low reflectivity and high return loss. Furthermore, the photodiode has a low capacitance and achieves full speed at low bias voltages.



BENEFITS

- Volume production
- Top illumination optimizes single-mode date
- Telecom and analog applications up to 5 Gb/s
- AR coating causes low reflectivity

FEATURES

- Top illuminated 5 Gb/s InGaAs photodiode, combining a large optical aperture with a low chip capacitance
- High responsivity of up to 1.1 A/W
- Large optical aperture of 80 µm
- Low capacitance: 380 fF
- Low bias voltage: 1.5 V
- Operating temperature range: -40 to 85 °C

APPLICATIONS

- Analog or digital receiver in ONT/ONU di- and triplexers
- SONET / SDH up to 2.7 Gb/s
- 1,2 & 4 G Fiber Channel
- 5 GHz analog links

DATA SHEET

The pad metallization is optimized for wire-bonding or flip-chip soldering with the pads positioned to enable easy and direct bonding to any TIA layout. In addition, the small chip footprint saves valuable space in small packages such as TO-46.

CHARACTERISTICS (T = 25º C)

Parameter		Sym	U_R	Min	Typ	Max	Unit
Responsivity	λ = 1310 nm λ = 1550 nm	R	2.5 V	0.9 0.9	1.00 1.10		A/W
Dark current	T = 25 °C T = 85 °C	I_D	5 V		5	12 250	nA
Bandwidth		B	2.5V	4			GHz
Total capacitance		C	5 V		380		fF
Linearity		CSO	10	-70			dB

DIMENSIONS

Parameter	Min	Typ	Max	Unit
Aperture		80		µm
Chip length	340	350	360	µm
Chip width	290	300	310	µm
Chip thickness	145	150	155	µm

For more information
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