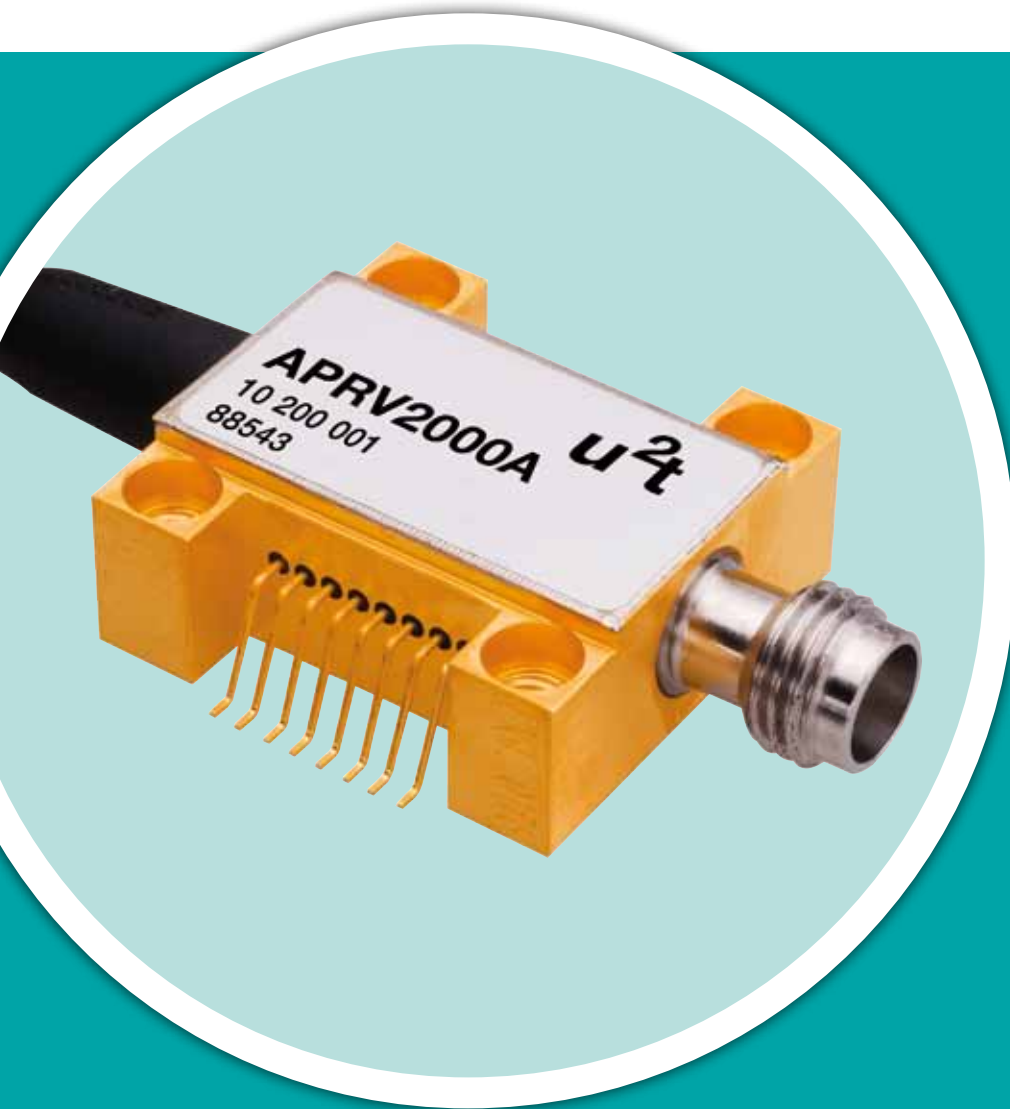


# 60 GHz Analog Photoreceiver

Product code: APRV2xxxA



## Features

- High-speed, high output power receiver
- Highly linear receiver topology
- 57 to 65 GHz operation
- SMD package with Anritsu V® connector
- Max. RF-output power of +16 dBm
- Output IP3 of +25 dBm

## Applications

- Radio-over-fiber / analog optical links
- MMW-phonic applications
- Fiber to the antenna
- COFDM

The 60 GHz analog receiver (APRV2xxxA) is optimized for the use in general purpose analog applications, requiring highly linear operation and high rf-output power. It consists of a high-speed waveguide-integrated pin-photodiode (PD) and a power amplifier (PA) in a standard 16-pin SMD package. The high-frequency, high-power handling capability of the photodiode together with a matching electrical amplifier allows for extremely linear operation with an rf-output not achievable with a photodiode alone. The analog receiver is optimized for sub-band operation between 57 and 65 GHz.

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**u<sup>2</sup>t** photonics

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## Operation Conditions

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Drain bias voltage				5		V
Gain bias voltage				-0.3		V
Photodiode bias voltage			2.8	4	5	V
Total power consumption				1.5	2	W
Case temperature				tbd.		°C
Humidity		Non condensing	5		75	%
Wavelength range			1530		1570	nm
Average optical input power		CW	-10		13	dBm

## Optical and Electrical Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Bandwidth			50	57		GHz
OIP3				+25		dBm
P1dB				+10		dBm
Output return loss	$RL_{OUT}$			-6		dB
Responsivity				0.6		A/W
Optical return loss	ORL		25			dB
Photodiode dark current	$I_{dark}$	$T = 25^{\circ}C$		5	300	nA
Conversion gain	CG			450		V/W
Equivalent input noise density	$I_{noise}$			22		pA / $\sqrt{Hz}$

## Mechanical Dimensions

