

DSC-R405 DSC-R405ER

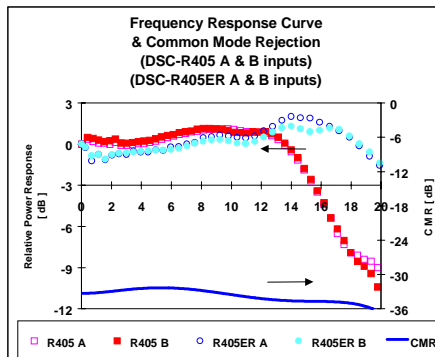
Balanced Photoreceivers with 14 or 20 GHz bandwidth

Applications:

- ✓ Coherent Lightwave Systems
- ✓ Laser jitter measurements
- ✓ 12.3 Gigabits per second digital receiver for telecom and datacom w/FEC
- ✓ Analog RF links over fiber
- ✓ Test & measurement analyzers

Features:

- ✓ Low-group delay and wide-bandwidth
- ✓ Dual co-planar waveguide photodiodes
- ✓ Small footprint package
- ✓ Hermetically sealed
- ✓ Microwave package with type K coaxial RF output



Description:

Use the R405 or R405ER in coherent-lightwave link designs to eliminate DC intensity noise, effectively using all of the link signal and local oscillator power. Losses due to mixing in single port receivers are eliminated and the link is able to operate near the shot-noise limit. Fed by the user's 3-dB optical coupler, the optical signal is converted to electrical signals in identical wide-bandwidth InGaAs PIN diodes. The signals are then combined and amplified with 10 dB of power gain, rejecting common-mode noise, thus improving link SNR.

Specifications:

Parameter	Min.	Typ	Max	Units
Linear overload (into each diode)		+5		dBm
Damage limits:		13		dBm
Common mode rejection:	20	30		dB
Noise (Equiv. current density):		50		pA/√Hz
Responsivity @ 1550 nm:	90	100		V/W
AC output voltage swing:	800	1000		mVp-p
Power gain:	12	15		dB
Equiv. transimpedance:		150		Ohms
Bandwidth R405 (electrical -3 dB):	12	14		GHz
Bandwidth R405ER (electrical -3 dB):	18	20		GHz
Low-frequency cutoff (std):		30	100	KHz
Ripple (0.2-7 GHz):		+/- 1		dB
Power Supply:		-5		V
Power dissipation:		0.5		W
Electrical return loss:	10	15		dB
Optical return loss:	25	30		dB
Operating temperature range:	0		+70	°C
Storage temperature range:	-40		+85	°C
Logic Sense:	non-inverting (option: inverting)			

Options:

RF Output:

K connector

Optical Input:

Spectral center:

Specify operating wavelength for proper testing

Pigtail:

Two x Single mode fibers > 1.2 meters

Fiber buffer:

0.9 mm buffer dia. (no option for 3 mm)

Connector:

FC, SC, LC

Finish:

UPC, APC (UPC is compatible with PC)

R405e 0302

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