

- InGaAs PIN/TIA
- 1GHz minimum bandwidth
- Differential output and AGC

Performance Highlights

- Responsivity typically 3300 V/W
- Typical sensitivity -28dBm
- Minimum overload -3dBm

LIMITING VALUES	SYMBOL	VALUE	UNITS
Supply voltage	V_{DD}	7	V
Optical input power	P_{IN}	+5	dBm
Operating temperature	T_{amb}	0 to +70	°C
Storage temperature	T_{stg}	-65 to +125	°C

OPTICAL/ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITION
Differential responsivity	R	2000	3300		V/W	$P_{IN} = -17\text{dBm}$, $R_L = 100\Omega$, $f = 50\text{MHz}$
Operating wavelength	λ	1270		1560	nm	
Rise and Fall time (20 - 80%) ⁽²⁾	t_f			0.5	ns	$P_{IN} = -3\text{dBm}$, $R_L = 100\Omega$
Bandwidth	f_c	1000	1100		MHz	$P_{IN} = -17\text{dBm}$, $R_L = 100\Omega$
Low frequency cutoff	f_L		800		kHz	
Output resistance	R_O	25	40	60	Ω	
Output offset voltage	V_{off}		2.2		V	
Optical overload ⁽¹⁾	P_{OL}	-3	0		dBm	
Optical sensitivity ⁽¹⁾	P_{MIN}	-25	-28		dBm	
Differential output voltage ⁽²⁾	V_O		350	600	mV	$P_{IN} = -3\text{dBm}$, $R_L = 100\Omega$
Duty cycle distortion ⁽³⁾			3	6	%	$P_{IN} = -3\text{dBm}$, $R_L = 100\Omega$
RMS Jitter ^{(3), (4)}	J_{RMS}	15	30		ps	$P_{IN} = -3\text{dBm}$, $R_L = 100\Omega$
Total jitter (pk-pk) ^{(3), (5)}	J_T	90	150		ps	$P_{IN} = -3\text{dBm}$, $R_L = 100\Omega$
Supply current	I_s		35	50	mA	
Operating voltage	V_{DD}	4.5	5.0	5.5	V	

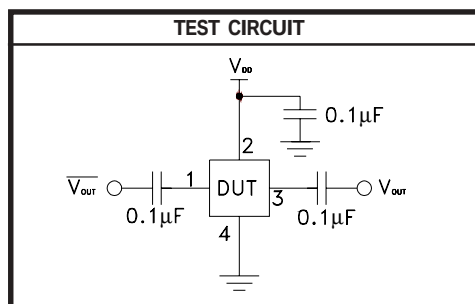
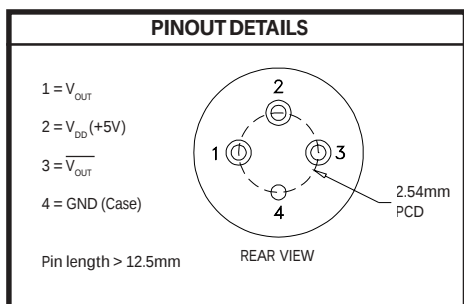
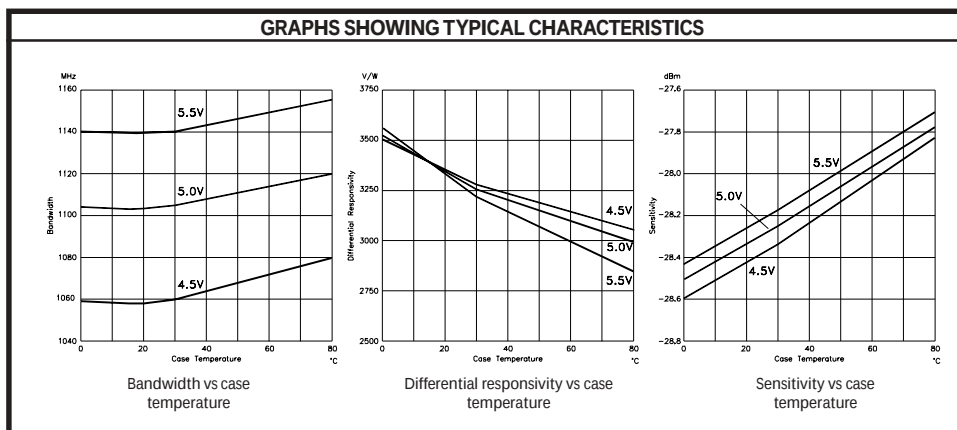
- (1) Measured at 10^{-10} BER with a 2^7-1 PRBS, 1.25Gb/s
- (2) Measured with 625MHz, 50%duty cycle square wave
- (3) Measured with a 1.25Gb/s 2^7-1 PRBS
- (4) 1σ about the centre eye crossing
- (5) 6σ about the centre eye crossing

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NOTES:

- 1) The device is very susceptible to damage by electrostatic discharge.