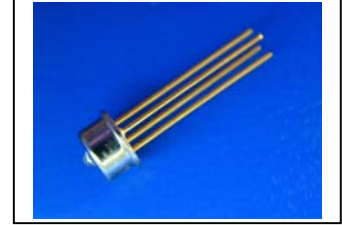


TMC-1C42-758

1.25Gbps InGaAs PIN plus AGC Pre-amplifier

FEATURES:

- Industry standard TO-46 package with short cap lens and tab-less.
- Optimized for fiber optic application.
- Design for long wavelength 1.25Gbps application.
- Single power supply +3.3V.



ELECTRO-OPTICAL CHARACTERISTICS: (Typical values are at +3.3V@ 25°C):

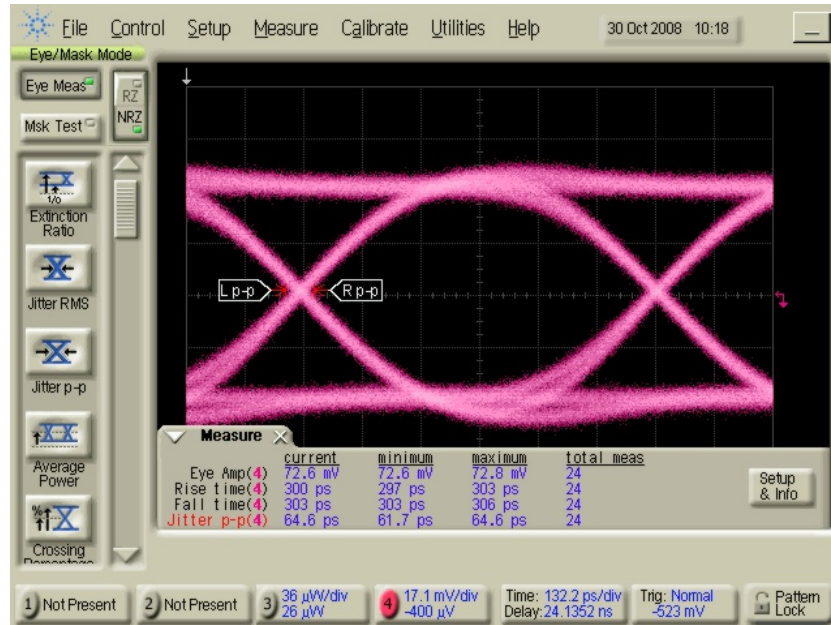
PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Power Supply	V_{CC}	3.0	3.3	3.6	V	
Supply Current	I_{CC}		28	35	mA	no loads
Differential Responsivity	R_d	13	18	28	mV/ μ W	$R_{load} = 100\text{ohm}$, $P = -24\text{dBm}$, $\lambda = 1310\text{nm}$
Single Ended Responsivity	R_s	6.5	9	14	mV/ μ W	$R_{load} = 50\text{ohm}$, $P = -24\text{dBm}$, $\lambda = 1310\text{nm}$
Small-Signal Bandwidth	BW	730			MHz	
Low-Frequency Cut off	LF			115	kHz	
Rise / Fall Time(20 % ~ 80 %)	tr/tf			400	ps	$P = -24\text{dBm}$, $\lambda = 1310\text{nm}$
Saturation Power	P_{Sat}	0			dBm	
Single Ended Output Impedance	R_O		50		ohm	
Wavelength	λ	1260		1620	nm	
Sensitivity				-28	dBm	$\lambda = 1310\text{nm}$, @1244.16Mbps, PRBS7, ER=10dB, BER=1E-10

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	TEST CONDITIONS
Storage Temperature	-40	100	°C	
Operating Temperature	-40	85	°C	
Lead Solder Temperature		260	°C	10 seconds

Eye Diagram :

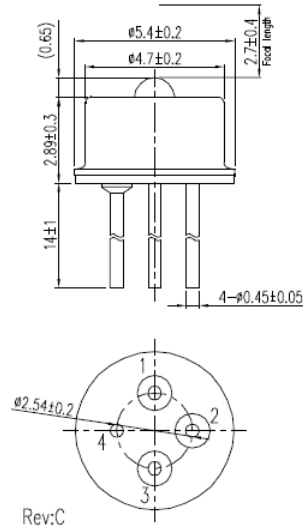
$R_{load} = 50\Omega$, $P = -24\text{dBm}@1244.16\text{Mbps}$, 1310nm, PRBS 7.



$t_r=300\text{ps}$, $t_f=303\text{ps}$, Jitter p-p=64.6ps

OUTLINE DIMENSIONS:

• Unit: mm

**Pinout: A-4**

1. Vcc
2. Dout
3. Dout
4. Gnd