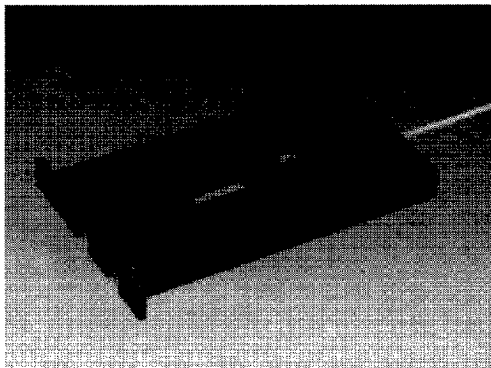


Description

The TRM5732AN is a lightwave transmitter for OC-12.

Features

- Complied with SONET/SDH standard
- DFB laser diode
- Operation from 1Mb/s to 622.08Mb/s at 1.3 μ m wavelength
- 50 Ω , AC-coupled interface
- Low-power-alarm and performance monitors



Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

Item	Symbol	Rated Value	Units
Operating case temperature	T_{opr}	-40 to 75	$^\circ\text{C}$
Storage case temperature	T_{stg}	-40 to 85	$^\circ\text{C}$
Humidity (long-term)	—	55	%
Lead soldering temperature	T_s	250	$^\circ\text{C}$
Lead soldering time	—	10	sec

Optical Characteristics (Unless otherwise indicated, measurement conditions are $T_C = 25^\circ\text{C}$, 50% duty-cycle data signal)

Item	Symbol	Min	Typ	Max	Units	Test Conditions
Average power output	$\overline{P_O}$	-1.75	0	1.75	dBm	622Mb/s, $T_C = 0$ to 65°C
		-2.0	0	2.0		156Mb/s, $T_C = -40$ to 75°C
Center wavelength	λ_c	1280	1310	1335	nm	622Mb/s, $T_C = 0$ to 65°C
						156Mb/s, $T_C = -40$ to 75°C
Spectral width	$\Delta\lambda$ (-20dB)	—	—	1	nm	20 dB down
Side mode suppression ratio	S_r	30	—	—	dB	
Extinction ratio	—	10	—	—	dB	P_{OH} / P_{OL}
Optical rise and fall times	t_r, t_f	—	—	0.5	ns	10 to 90% (50% duty cycle)
Optical path penalty	—	—	—	1	dB	max. 110 ps/nm (1.3 μ m) at 4% optical reflection

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Item	Symbol	Min	Typ	Max	Units	Test Conditions
DC power supply voltage	V_{CC}	4.75	5.0	5.25	V	
	V_{EE1}	-4.95	-5.2	-5.45		
	V_{EE2}	-2.1	-2.2	-2.3		
DC power supply current	I_{CC}	—	—	800	mA	$V_{CC} = 5.0\text{ V} \pm 5\%$
	I_{EE1}	—	—	200		$V_{EE1} = -5.2\text{ V} \pm 5\%$
	I_{EE2}	—	—	1000		$V_{EE2} = -2.2\text{ V} \pm 5\%$
Input data voltage	V_{IN}	0.6	0.8	1.0	V_{pp}	
Input transition time	T_{IN}	—	—	T/4	ns	10 to 90% (50% duty cycle)
						T: bit-period

Top View

4.000 (101.60)

Fiber pigtail

- Single-mode fiber
- Core/cladding diameters=10/125µm

Heat Transfer Surface

0.225 (5.72)

0.375 (9.53) MAX

0.110 (2.79)

1.450 (36.83)

0.018 (0.46) DIA

11 SPACES @ 0.100 = 1.100 (2.54 = 27.94)

Technical drawing of a rectangular plate with the following dimensions and specifications:

- Overall width: 2.600 (66.04)
- Overall height: 0.188 (4.78)
- Distance between hole centers: 2.300 (58.42)
- Hole diameter: 0.125 (3.18)
- Number of holes: 2
- Through holes: THROUGH 2 PLACES
- Distance from right edge to hole center: 0.150 (3.81)

Figure 1: Dimensions of the test fixture. The diagram shows a rectangular frame with various dimensions in inches and millimeters. Key dimensions include: overall width 3.800 (96.52), overall height 2.000 (50.80), and various internal offsets and hole positions. Labels include PIN 1, PIN 12, PIN 24, PIN 13, and M2.5-diameter 0.45-pitch tap-thru screw hole 4 PLACES.

Pin	Description
1:	Case Ground (RF ground)
2:	Case Ground (RF ground)
3:	V _{EE1}
4:	V _{EE2}
5:	V _{CC}
6:	Case Ground (RF ground)
7:	DATA (50Ω, AC-coupled)
8:	Case Ground (RF ground)
9:	Case Ground (RF ground)
10:	Case Ground (RF ground)
11:	Case Ground (RF ground)
12:	No User Connection
13:	No User Connection
14:	Laser Bias Monitor (+)
15:	Laser Bias Monitor (–)
16:	Laser Backface Monitor (+)
17:	Laser Backface Monitor (–)
18:	Disable
19:	Case Ground (RF ground)
20:	Alarm Output
21:	Temperature Monitor (+)
22:	Temperature Monitor (–)
23:	Case Ground (RF ground)
24:	Case Ground (RF ground)

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