

ML0131

FOR OPTICAL TRANSMITTER

PRELIMINARY

Notice : This is not a final specification
Some parametric limits are subject to change.

DESCRIPTION

The laser driver IC were designed for use in 2.5Gb/s lightwave applications.

FEATURES

- High speed operation
tr/ta = 80ps (RL=25)
- ECL/SCFL compatible interface
- Adjustable outout current
Iout = ~60mA
- Low Power Dissipation
Vss = -5.2V, PD = 700mW

Photograph of Laser Driver IC

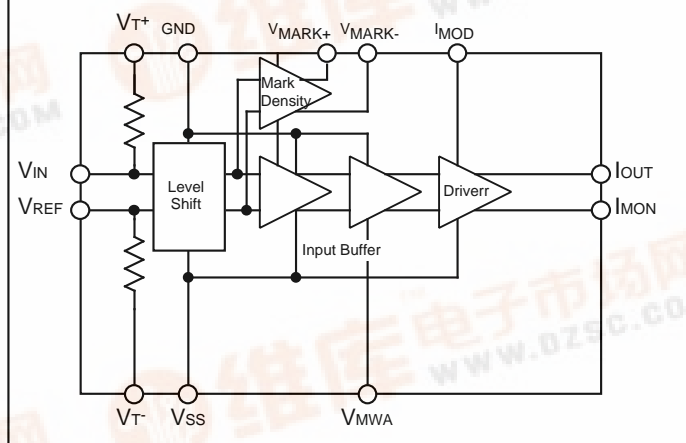


Package Size : 9.6mm x 7.6mm x 1.6mm

APPLICATION

- 2.5Gb/s optical transmitter

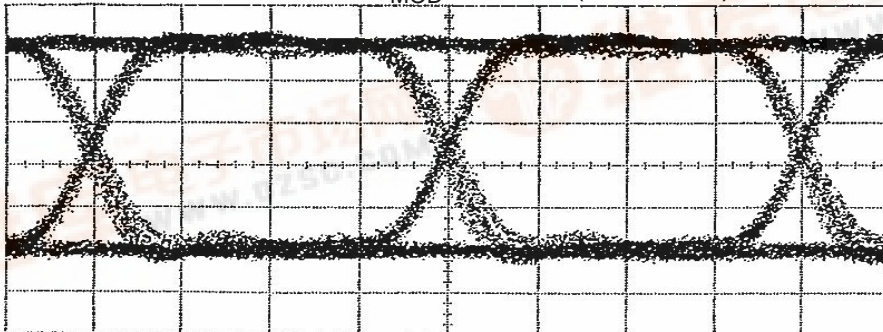
CIRCUIT DIAGRAM



TYPICAL CHARACTERISTIC (Ta = 25°C)

Output waveform (@2.5Gb/s)

Vss = -5.2V, I_{MOD} = 3.2mA (@2.5Gb/s), PN : 211-1



10 mA/div. 100 ps/div.

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ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Symbol	Parameter	Ratings	unit
V _{SS}	Supply Voltage	-7.5	V
V _{IN}	Input Voltage	V _{SS} to 0	V
T _c	Operating Temperature	-30 to +85	°C
T _{stg}	Storage Temperature	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Symbol	Parameter	Test Conditions	Limits			unit	
			Min	Typ	Max		
V _{SS}	Supply voltage		-5.46	-5.2	-4.94	V	
I _{SS}	Supply current	V _{SS} = -5.2V	-	130	170	mA	
V _{REF}	Input reference voltage	V _{SS} = -5.2V	ECL	-	-1.3	-	V
			SCFL	-	-0.5	-	V
V _{IN}	Input signal voltage	V _{SS} = -5.2V	ECL	-	0.8	-	V
			SCFL	-	1.0	-	V
I _{OUT}	Output modulation current	V _{SS} = -5.2V	40	-	60	mA	
I _{MOD}	Adjust modulation current	V _{SS} = -5.2V	-	-	3.5	mA	
t _r	Rise time of modulation voltage	V _{SS} = -5.2V	-	80	-	ps	
t _f	Fall time of modulation voltage	V _{SS} = -5.2V	-	80	-	ps	

BLOCK DIAGRAM OF TEST SYSTEM

