

Ordering Information

MFR62340-JX	MPX Connector
MFR62340-JO	MPO/MTP Connector
MFR62340-JT	MT Connector
0 to +80 °C	

Applications

- High-speed interconnects
- Switches, Routers, Transport equipment
- Interconnects within and between equipment
- Rack-to-rack
- Shelf-to-shelf
- Board-to-board
- Board-to-optical backplane

Features

- Data rate 155Mbps to 2.5Gbps per channel
- 12 parallel channels, total 30Gbps capacity
- Differential CML (Current-Mode Logic) interface
- Link length up to 300m (fiber dependent)
- Channel BER 10^{-15} when used with MFT62340
- Designed for multimode fiber ribbon
- MPX, MPO/MTP or MT connector options
- Surface-mount package
- Pick-and-placeable, standard soldering
- Matches the MFT62340 Transmitter

Description

The MFT62340 and MFR62340 is a very high speed transmitter and receiver pair for parallel fiber applications. This pair, together with a multimode parallel fiber ribbon cable, constitute a complete parallel fiber link. The link provides high-speed interconnects for use within and between large capacity switches, routers and data transport equipment. The transmitter and receiver have a differential CML interface and support MPX, MPO/MTP and MT fiber connectors.

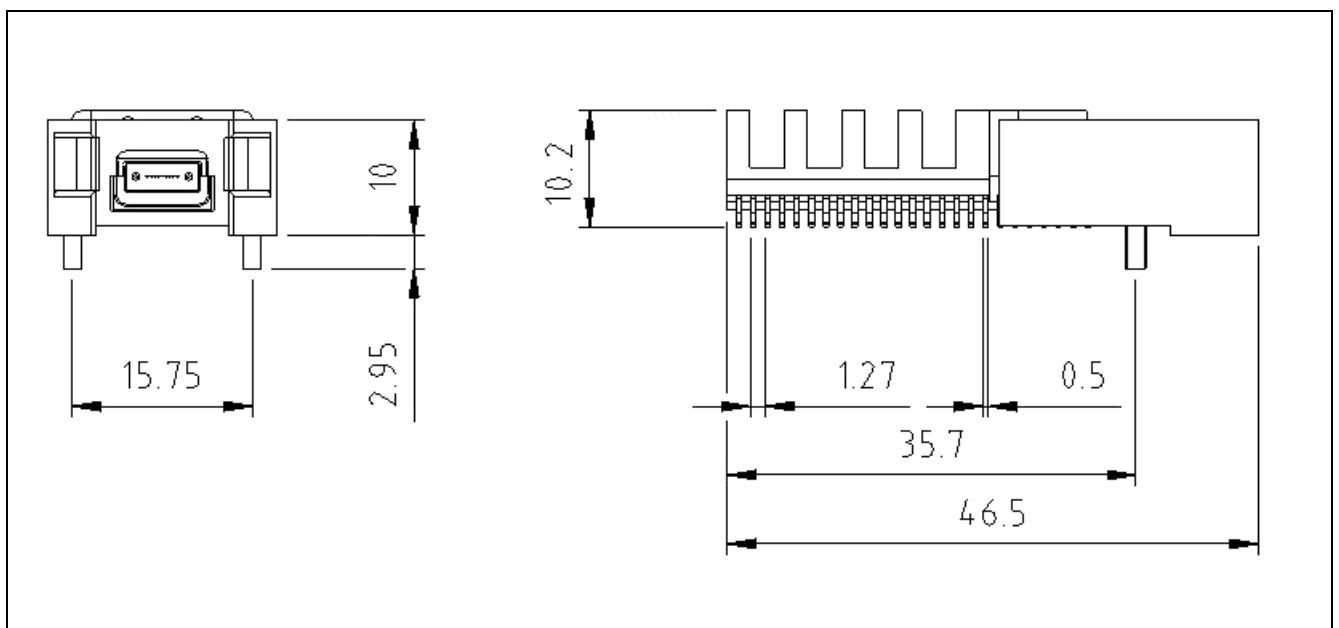


Figure 1 - MFR62340-JX: MPX Connector Option

Absolute Maximum Ratings*

	Parameter	Symbol	Min	Max	Unit
1	Supply voltage	V_{CC}	-0.5	4.0	V
2	Voltage on any pin	V_{PIN}	-0.5	$V_{CC}+0.3$	V
3	Operating and storage moisture	M_{OS}	20	85	%
4	Storage temperature	T_{STG}	-20	100	°C
5	ESD resistance all I/O	V_E	-2	2	kV

* Exceeding these values may cause permanent damage. Functional operation under these conditions is not implied.

Recommended Operating Conditions

	Parameter	Symbol	Min	Max	Unit
1	Case temperature	T_{CASE}	0	80	°C
2	Supply voltage	V_{CC}	3.3-5%	3.3+5%	V
3	Average fiber input power per channel	P_F	-18	-3	dBm
4	Data rate per channel	f_D	0.155	2.5	Gbps
5	Optical wavelength	λ	800	860	nm
6	CML output load impedance (Fig. 2)	Z_L	80	120	Ω

Test pattern PRBS $2^{31}-1$ at 2.5Gbps and 50% duty cycle unless otherwise specified.

Characteristics*

	Parameter	Symbol	Min	Typ	Max	Unit
1	Power consumption (0.155 to 2.5 Gbps)	P_D		1.8	2.4	W
2	Sensitivity (BER 10^{-15})	S_{15}			-15	dBm
3	Sensitivity (BER 10^{-12})	S_{12}			-18	dBm
4	Deterministic jitter	DJ			50	ps _{p-p}
5	Random jitter (PF = -15dBm, ER = 6dB)	RJ			11	ps _{rms}
6	CML differential output rise/fall time (20-80%, Fig. 3)	t_{RC}, t_{FC}			100	ps
7	CML differential output voltage (Fig. 2,3)	V_{OCML}	300	350	450	mV
8	CML differential output impedance (Fig. 2)	Z_{OUT}	160	200	240	Ω

* Supply voltage and operating temperature are as per Recommended Operating Conditions

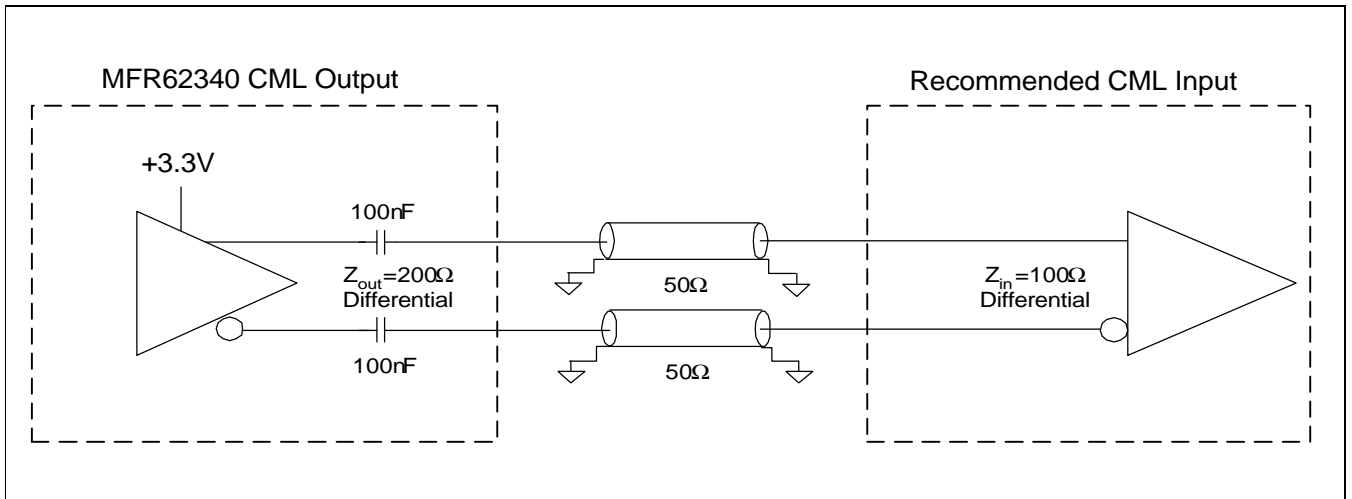


Figure 2 - Differential CML Interface

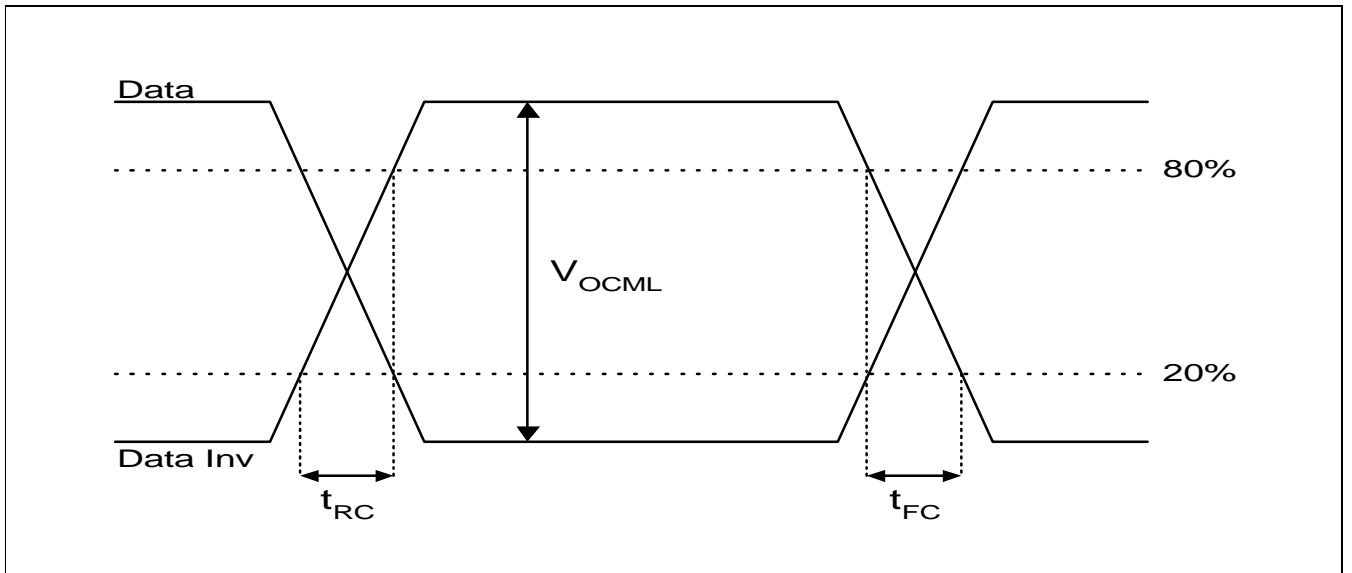


Figure 3 - Differential CML Timing Diagram



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