



5 V V23806-S84-Z3 3.3 V V23806-S84-Z4

Testboard for ATM, ESCON, Fibre Channel and Gigabit Ethernet 1x9 Transceivers

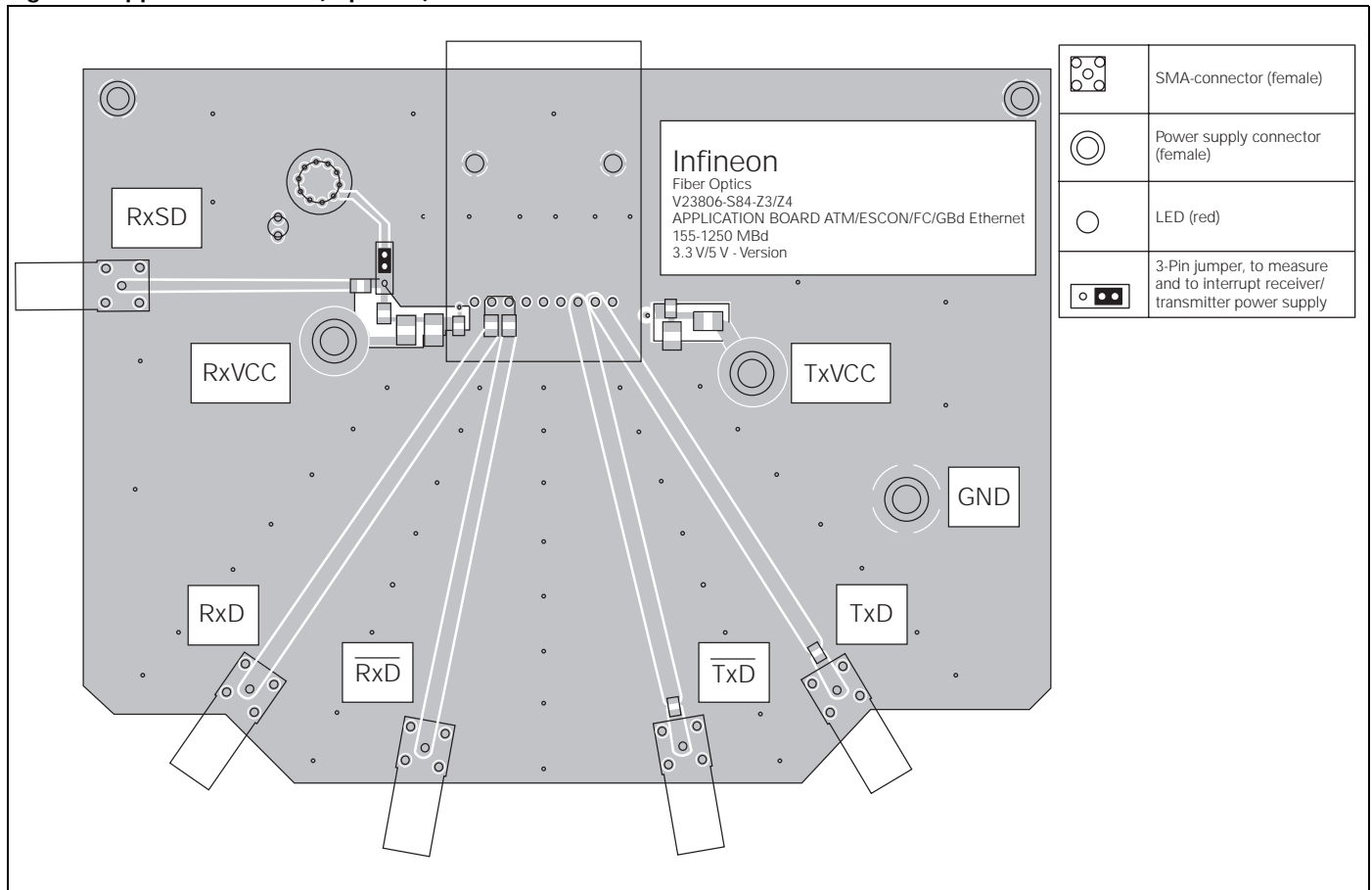
FEATURES

- Allows for separate powering of receiver and transmitter section
- Power supply lines filtered externally to module under test
- Signal Detect level displayed by LED
- Power supply can be interrupted separately for receiver and transmitter
- External Data and Signal Detect interfaces are made through high performance SMA connectors
- Receiver data outputs are DC coupled. Output voltage can be directly measured at SMA connectors

DESCRIPTION

This testboard is a functional test fixture intended for use with the 1x9 pin row single mode 155MBd or 622MBd ATM transceiver, ESCON, Fibre Channel and Gigabit Ethernet transceivers. It provides a test medium for characterizing the performance of these transceivers.

Figure 1. Application board (Top view)



Connectors/Test Pins

| Label | Type | Name | Level | Description |
|-------------------|------|----------------------------|--|--|
| SD ⁽¹⁾ | SMA | Signal Detect Output | PECL Output | To measure use 50 Ω load to V _{EE} |
| RxD | SMA | Receiver Data Output | PECL Output | Load is 50 Ω to V _{EE} (GND), DC coupled or AC coupled, depending on board assembly (see page 4) |
| RxDn | SMA | Receiver Data Not Output | PECL Output | |
| TxD | SMA | Transmitter Data Input | PECL Input | Load is 50 Ω to V _{EE} (GND), AC coupled (see page 4) |
| TxDn | SMA | Transmitter Data Not Input | PECL Input | |
| V _{CC} | | Power Supply | In accordance with recommended operating conditions of transceiver (3.3V / 5V) | |
| V _{EE} | | Ground | | |

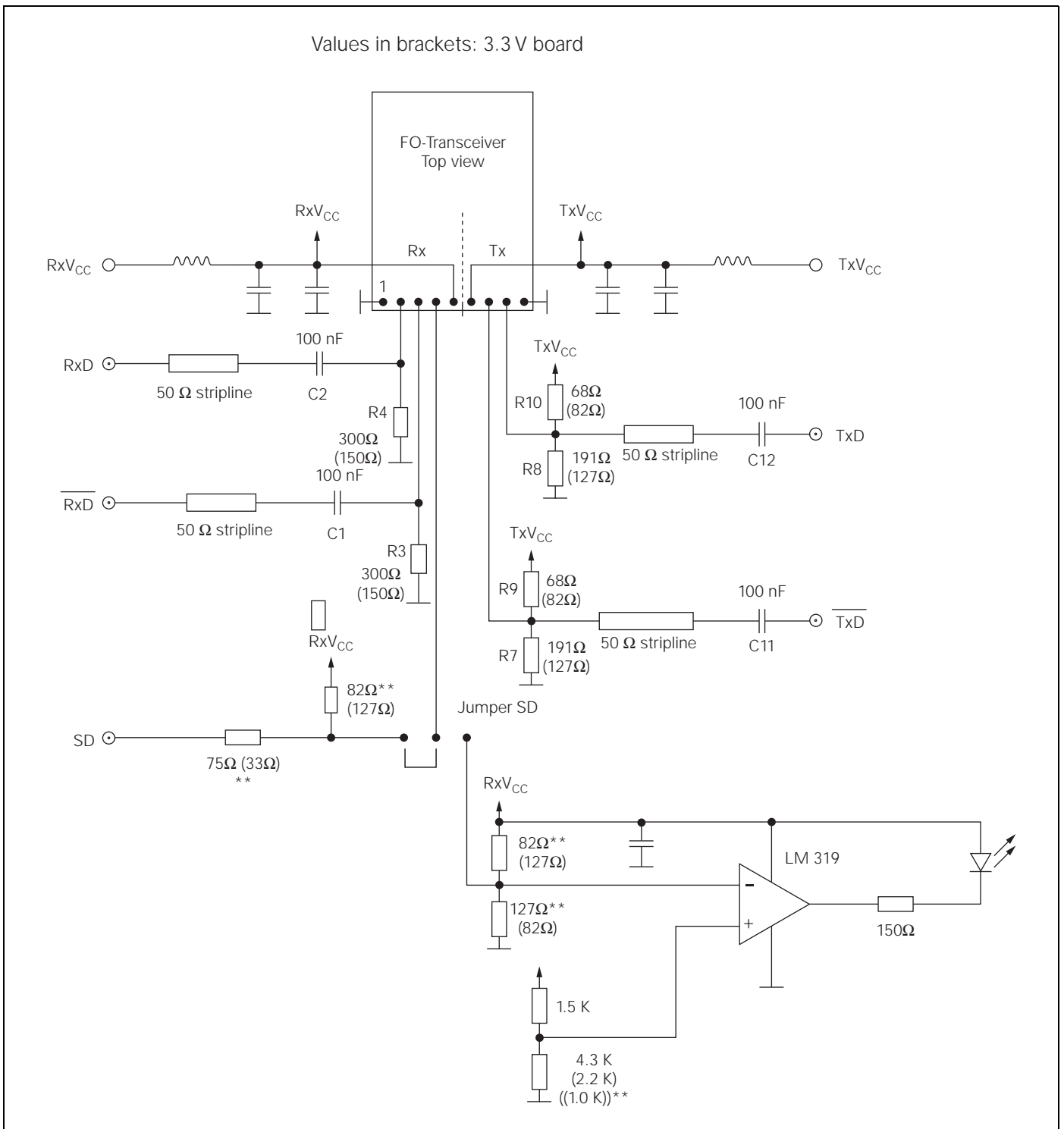
Notes

1. Some transceiver versions have TTL-SD-output. For this type no load is required.

Indicators/Switches

| Label | Type | Name | Level | Description |
|-------|--------|-------------------------|-------------|---|
| SD | LED | Signal Detect Indicator | active high | LED off: SD off LED on: SD on |
| JMP | Jumper | Signal Detect | | connects signal detect to either SMA connector or OPAMP (LED) |

Figure 2. Schematic of Application board (initial assembly)*



* Suitable for DC/DC Transceiver only. For AC/AC and AC/DC please see page 4.

** Remove when TTL-SD; change resistor to value in double brackets.

Variation of Testboard for different type of electrical transceiver interfaces.

Values in brackets refer to 3.3 V operation. Part numbers of passive components refer to Fig. 9 to 12 (Assembly plan).

Figure 3. DC-type receiver (V23826-XXX-C(3)6X, V23806-A84-XXX, V23809-E11-C10) - AC-coupled to test (initial assembly)

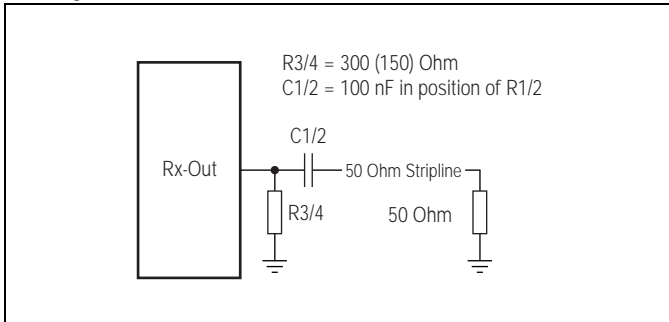


Figure 4. DC type receiver (V23826-XXX-C(3)6X, V23806-A84-XXX, V23809-E11-C10) - DC-coupled to test system

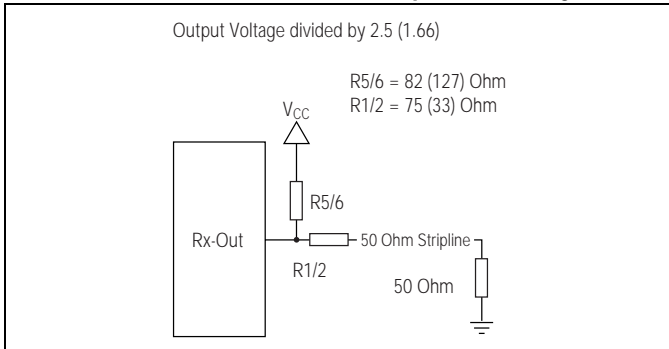


Figure 5. AC-type receiver V23826-XXX-C(3)53

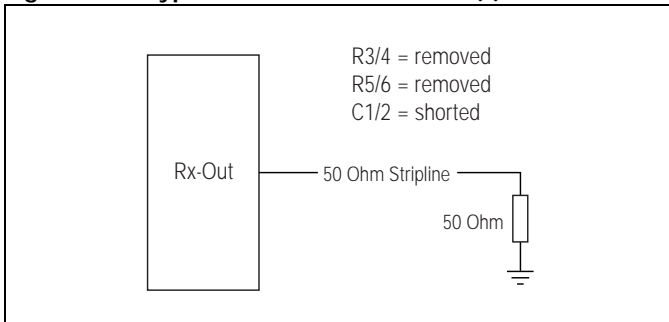


Figure 6. DC-type transmitter (V23826-XXX-C(3)6X, V23806-A84-XXX, V23809-E11-C10) - AC-coupled to test (initial assembly)(1)

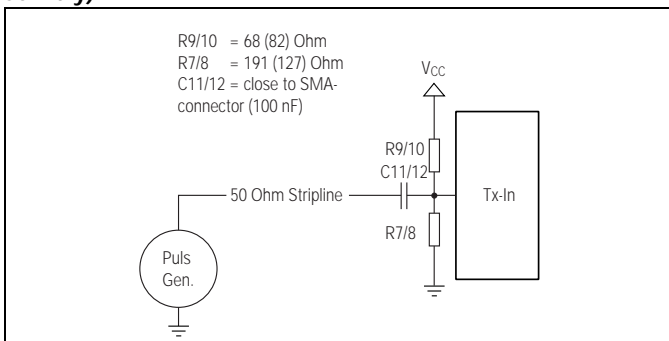


Figure 7. DC-transmitter (V23826-XXX-C(3)6X, V23806-A84-XXX, V23809-E11-C10) - DC-coupled to test(1)

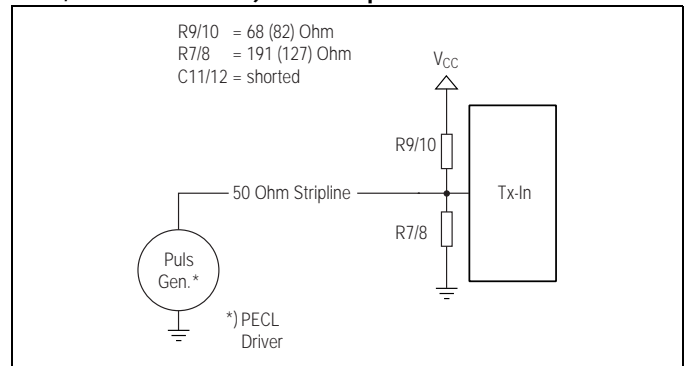
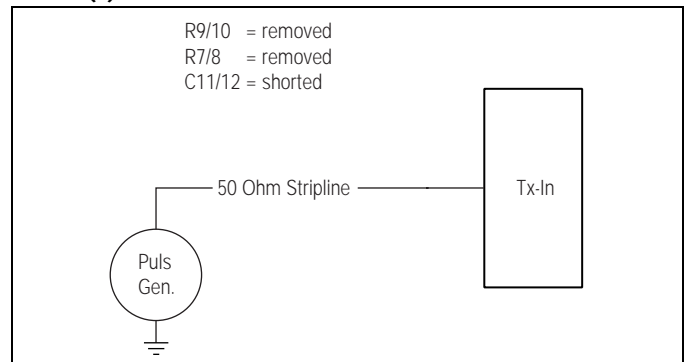


Figure 8. AC-type transmitter V23826-XXX-C(3)13, V23826-XXX-C(3)53(1)



Assembly Plan

Figure 9. Top side (Detail of Figure 11)

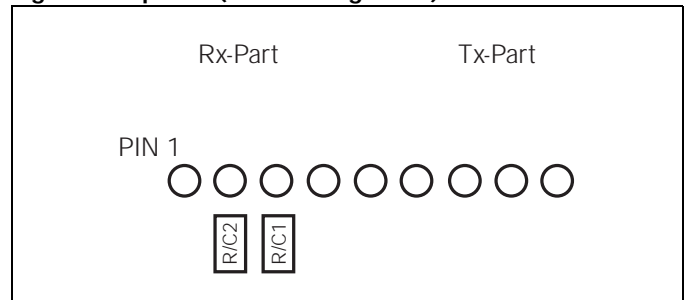
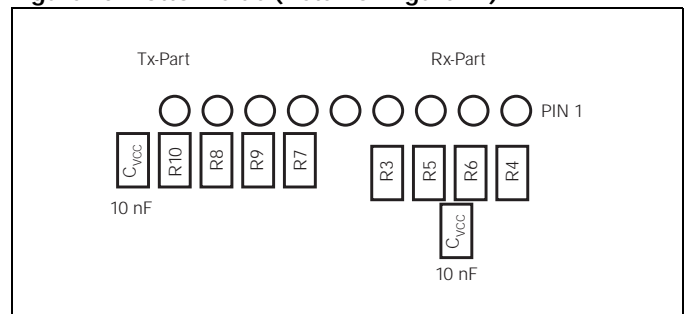


Figure 10. Bottom side (Detail of Figure 12)



Note:

1. It is recommended to drive the transmitter with differential signals.

Figure 11. Top side of application board

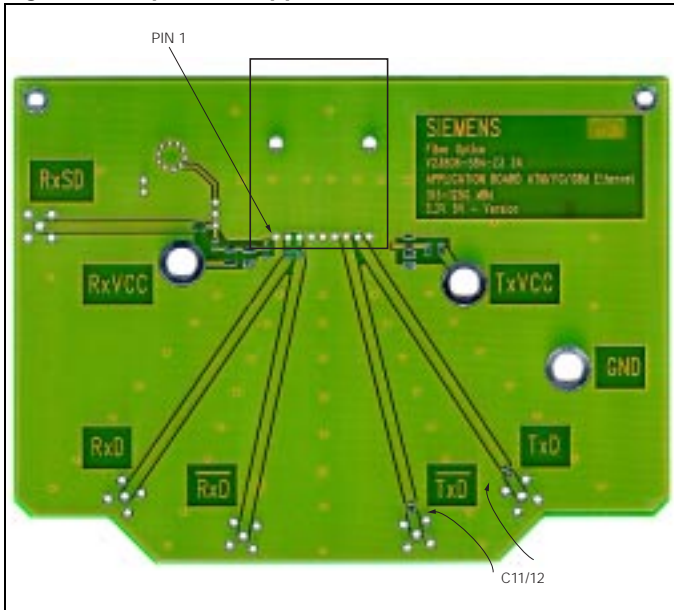
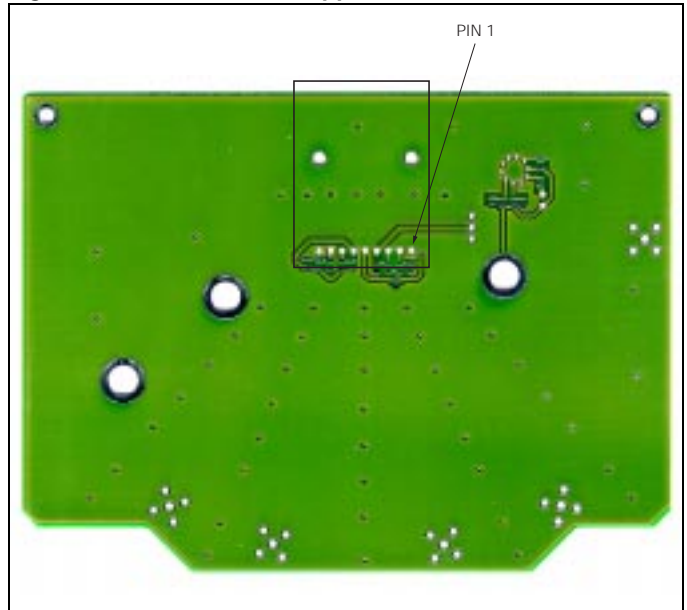


Figure 12. Bottom side of application board



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