

OC-3/STM-1 Digital Transmitter Module



Model # 1803A

The 1803A Digital Transmitter module is designed for use in transmission systems of medium to high speed data communication applications. The transmitter operates at the SONET OC-3 or STM-1 (155 Mb/s) data rate.

The transmitter module features an Auto Power Control (APC) circuit to maintain optical output power at a constant level to account for variations in ambient temperature and device aging. A Duty Cycle Compensation circuit is included to maintain proper operation with unbalanced data patterns. The transmitter module meets the ITU-T G.957 and G.958 recommendations.

DATA SHEET

Features:

- Laser Transmission on
- Complies with SONET OC-3 and STM-1 standard
- Internal APC Circuit
- ECL or PECL Logic Signal
- Excellent Reliability
- 20 pin-DIP Metal Package

Applications:

- Data Transmission between 1 Mb/s to 200 Mb/s

| Characteristics | Min | Typ | Max | Units |
|----------------------|------|------|------|-------|
| Data Rate | 1 | 155 | 200 | Mb/s |
| Average Output Power | -10 | -3 | +5 | dBm |
| Extinction Ratio | 10 | - | - | dB |
| Center Wavelength | 1280 | 1310 | 1330 | nm |



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| Electrical Characteristics | Sym | Min | Typ | Max | Units |
|----------------------------|----------------------------------|-------------------------|-----|-------------------------|-------|
| Supply Voltage | V _{CC} -V _{EE} | 4.75 | 5.0 | 5.5 | V |
| Supply Current | I | - | 70 | 130 | mA |
| Input High Voltage | V _{IHS} | V _{CC} - 1.165 | - | V _{CC} - 0.880 | V |
| Input Low Voltage | V _{ILS} | V _{CC} - 1.810 | - | V _{CC} - 1.475 | V |
| Trans. Disable Voltage | V _{DIS} | V _{CC} - 2.0 | - | V _{CC} | V |
| Trans. Enable Voltage | V _{DEN} | V _{EE} | - | V _{EE} +0.8 | V |

Note: Case must be connected to circuit ground (0V).

| Absolute Maximum Ratings | Min | Max | Units |
|--------------------------------|-----------------|-----------------|-------|
| Operating Temperature | -40 | +85 | °C |
| Storage Temperature | -40 | +85 | °C |
| Operating & Storage Humidity | - | 85 | % |
| Supply Voltage | 0 | 6 | V |
| Input Voltage (to Transmitter) | V _{EE} | V _{CC} | V |
| Lead Soldering | - | 240 °C, 10 sec | - |

Ordering Information

1803A- PT53XX - XX - 2 - XX

Digit 5,6: Output Power

11 : <0.5 mW

12 : 0.5 - 1 mW

13 : 1-2 mW

20 : 2-4 mW

Digit 3:

4 : FP-LD assembly with (P) ECL Interface

6 : other types

Digit 4: Package

3 : 20-Pin DIP package with pigtail Ref N

4 : 20-Pin DIP package with receptacle Ref O

Digit 8, 9 : Connector Type

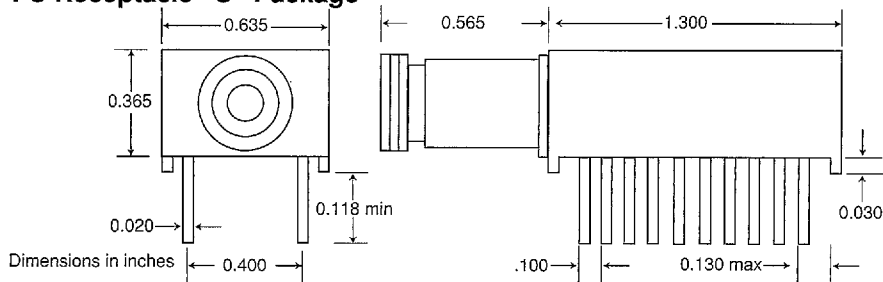
blank : No connector

FC : FC connector

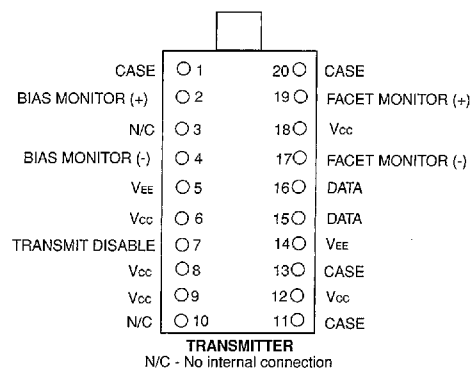
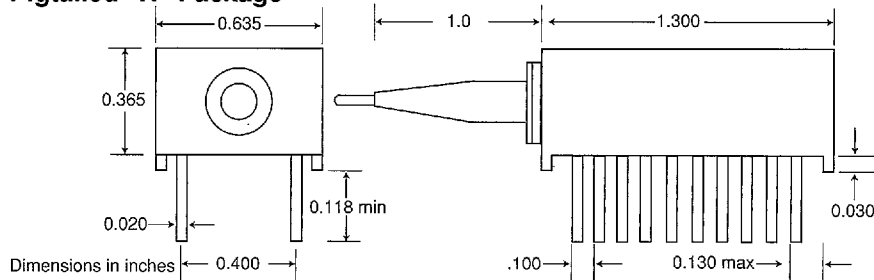
ST : ST connector

SC : SC connector

FC Receptacle "O" Package



Pigtailed "N" Package



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