10/100/1000BASES-T SFP Module RJ-45 100m data range

\*\*GBIC-, SFP-, XFP-, XENPAK-Transceiver

The tde Small Form Pluggable Optical Transceiver are easy installed for enterprise and telecom applications. The tde SFP modular line provides a fully compatible, highly reliable and volume accessible supply of quality transceiver products with excellent performance for design-in manufacturing and end-user enterprise applications.

\*\*SFP Modules

\*\*TECHNISCHE\_DATEN

Features
• Support 10/100/1000BASE-T operation in host systems with SGMII interface
• Up to 1.25Gbps bi-direction data links
• Hot-pluggable SFP footprint
• Fully metallic enclosure for low EMI
• Low power dissipation (1.05 W typical)
• Compact RJ-45 connector assembly
• 100m transmission over unshielded twisted pair (UTP) Category 5 Cable
• Access to physical layer IC via 2-wire serial bus
• Extended Case Temperature Range 0°C-85°C

Applications
• LAN 1000Base-T
• 1.25 Gigabit Ethernet over Cat 5 cable
• Switch to Switch interface
• Router/Server interface

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| Maximum Supply Voltage (Vcc) | min. -0.5 / max. 4.0 |
| Storage Temperature (TS) | min. -40 / max. 85 |

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| Operating Case Temperature (Top) | min. 0°C / max. 85°C |
| Power Supply Voltage (Vcc) | min. 3.14 V / typ. 3.3 V / max. 3.46 V |

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| +3.3 Volt Electrical Power Interface |   |   |
| Supply Current (Icc) | typ. 300 mA / max. 350 mA |   |
| Input Voltage (Vcc) | min. 3.18 V / typ. 3.3 V / max. 3.47 V |   |
| Surge Current (Isurge) | max. 30 mA |   |
| Low-Speed Signals, Electronic Characteristics |   |   |
| SFP Output LOW (VOL) | min. 0 V / max. 0.5 V | 4.7k to 10k pull-up to host\_Vcc, measured at host side of connector |
| SFP Output HIGH (VOH) | min. host\_Vcc -0.5 V / max. host\_ Vcc +0.3 V | 4.7k to 10k pull-up to host\_Vcc, measured at host side of connector |
| SFP Input LOW (VIL) | min. 0 V / max. 0.8 V | 4.7k to 10k pull-up to Vcc, measured at SFP side of connector |
| SFP Input HIGH (VIH) | min. 2 V / max. Vcc +0.3 V | 4.7k to 10k pull-up to Vcc, measured at SFP side of connector |
| High-Speed Electrical Interface, Transmission Line-SFP |   |   |
| Line Frequency (fL) | typ. 125 MHz | 5-level encoding, per IEEE 802.3 |
| Tx Output impedance (Zout,TX) | typ. 100 Ohm | Differential, for all frequencies between 1MHz and 125MHz |
| Rx Input Impedance (Zin,RX) | typ. 100 Ohm | Differential, for all frequencies between 1MHz and 125MHz |
| High-Speed Electrical Interface, Host-SFP |   |   |
| Single ended data input swing (Vin) | min. 250 mV / max. 1200 mV | Single ended |
| Single ended data output swing (Vout) | min. 350 mV / max. 800 mV | Single ended |
| Rise/Fall Time (Tr,Tf) | typ. 175 psec | 20%-80% |
| Tx Input Impedance (Zin) | typ. 50 Ohm | Single ended |
| Rx Output Impedance (Zout) | typ. 50 Ohm | Single ended |

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| Datarate | min. 10 Mbps / max. 1000 Mbps |   |
| Distance | max. 100 m | Category 5 UTP. BER <10-12 |