



1250Mbps 850nm Multi-Mode 550m Industrial SFP Transceiver BT-SFP-IG05

❖ Overview

BT-SFP-IG05 transceiver is compliant with SFP MSA, high performance at low cost, which supports operating data-rate up to 1250Mbps.

The transmitter section and receiver section work independently in the transceiver. The receiver section contains an InGaAs Pin photodiode, a transimpedance amplifier and a post amplifier (with working data rate up to 1250 Mbps), functionally transmit received optical power into steady electrical data. The transmitter section contains an 850nm VCSEL laser diode with back-face monitor and a laser driver with APC function, transmitting input electrical data to steady optical output signal.

The product is fully compliant with the SFP MSA such as the LC optical interface receptacle, 3.3V supply voltage, TTL signal detect logic.

❖ Features

- ❖ 850nm VCSEL emission wavelength
- ❖ InGaAs photodiode pin receiver
- ❖ Operation data up to 1250Mbps
- ❖ Compliant with SFP MSA and SFF-8472
- ❖ Industrial standard small package.
- ❖ Double LC receptacle
- ❖ Single 3.3V power supply
- ❖ Differential LVPECL input /output
- ❖ TTL Signal detect function
- ❖ Support hot-swap

❖ Specifications

Operating information				
Model	Input/ Output	Signal detection	Power supply	Operating Temperature
BT-SFP-IG05	AC/AC	TTL	+3.3V	-40°C to 75°C



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Absolute maximum ratings				
Parameter	symbol	min	max	unit
Storage temperature	T_s	-40	+85	°C
Operating temperature	T_o	-40	+75	°C
Power supply	V_{cc}	-0.5	+3.7	V

BT-SFP-G05 (850nm VCSEL and PIN, 550m)						
Transmit optical, electrical characteristics						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Differential Impedance	R_{in}		100		Ω	
Transmit Differential Input Voltage	V_{inPP}	300		1600	mV	
Transmit disable input high voltage		2.0			V	
Transmit disable input low voltage				0.8	V	
Transmit fault input high voltage		2.0			V	
Transmit fault input low voltage				0.8	V	
Transmit disable assert time			0.14	5	us	
Launch optical power	P_o	-9.5		-3	dBm	
Extinction ratio	ER	10			dB	
Central wavelength	λ		850		nm	
Output spectrum width	$\Delta\lambda$			0.85	nm	

Receive electrical ,optical characteristics						
parameter	symbol	min	tipical	max	unit	note
Receiver differential output signal	V_{outPP}	400		1600	mV	
Receiver loss of signal Voltage high		2			nm	
Receiver loss of single voltage low				0.8	dBm	
Receiver sensitivity	Sen			-17	dBm	
Maximum input power	$PinMAX$	-3			dBm	-
Signal detect range		-35		-18	dBm	-
Signal detect hysteresis		0.5			dB	-



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❖ Application

- Routing or server
- Switched backplane applications
- Other optical transmission systems

❖ Order Information

Model	Specification								
	Package	Data Rate	Tx	Pout	Rx	Sensitivity	Top	Reach	others
BT-SFP-IG05	SFP	1.25G/s	850 VCSEL	-9.5~-3dBm	850 PIN	<-17dBm	-40~75	550m	3.3V,LC

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WARRANTY:

2 YEARS (EXPANDABLE UPTO 4 YEARS)