

Fiber Optic Receiver 650/850nm 25MBit/s

1 General

This 25MBit/s fiber optic receiver is designed to meet data transmission requirements for factory, office and home applications. A large area photodiode, a fast TIA and a CMOS compatible push/pull output stage are integrated into a single device, eliminating the need for additional signal recovery circuitry. Optical fibers with core diameters of 50µm up to 1mm are easy to apply.

2 Applications

Due to the high data rate of 25MBit/s, the good optical and mechanical features, this receiver may be used in many applications:

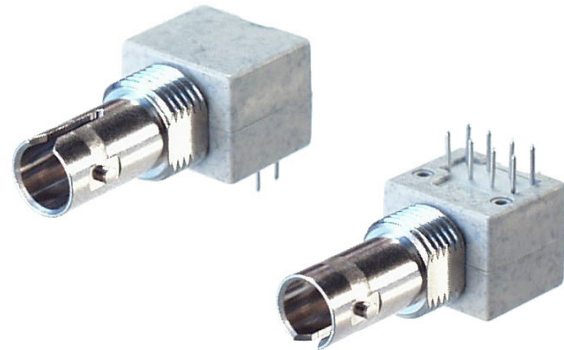
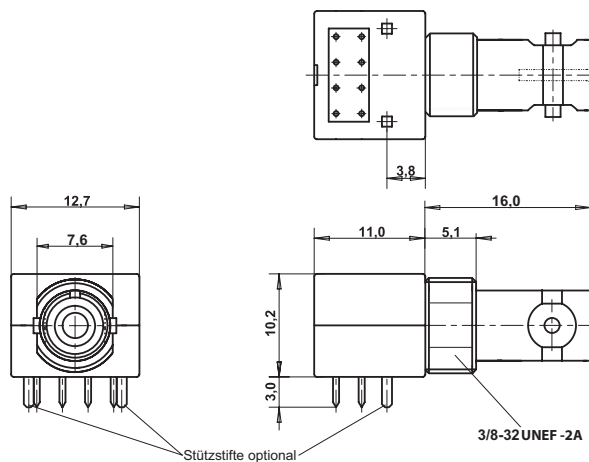
- Optical networks
- Industrial electronic
- Power electronic

3 Ordering Information

Style	Part Number
F-ST	905EM850ST007-02

4 Technical Drawing

Case



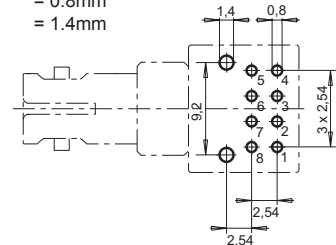
Pic. 1 Fiber optic receiver

5 Features

- 650/850nm optical receiver
- -28dBm input sensitivity
- DC to 25MBit/s data rate
- push-pull CMOS compatible output stage
- conductive plastic receptacle
- F-ST metal port
- Qualified for 50/125µm GI, PCF and plastic fiber
- wave soldering compatible

PCB hole pattern

View: Component Side
 Drill diameters:
 PIN 1 .. 8 = 0.8mm
 Fixing Pins = 1.4mm



Pinout

PIN Nr.	Function
2	Vcc
3, 7	Gnd
6	D _{OUT}
1, 4, 5, 8	not used

Pic 2 Case drawing

Fiber Optic Receiver 650/850nm 25MBit/s

6 Maximum Ratings _____

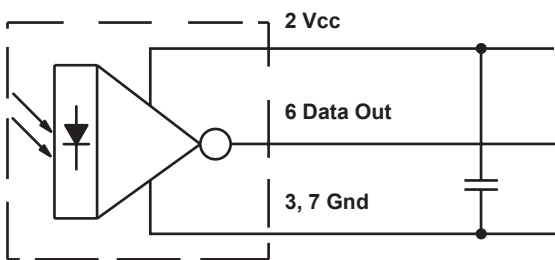
Stresses beyond those listed under 'Maximum Ratings' may cause permanent damage to the device. Listed values are stress limits only and functional operation of the device at these conditions is not recommended. Exposure to maximum rating conditions for extended periods may affect the device reliability.

Parameter	Symbol	Value	Unit
max. optical input	P_{Max}	2	dBm
supply voltage	V_{CC}	-0.3 to 5.5	V
operating temperature	T_{opr}	-25 to +85	°C
storage temperature	T_{stg}	-40 to +100	°C
solder temperature	T_{Solder}	260°C for 10sec.	°C

7 Technical Data _____

Parameter	Symbol	Condition	Min	Typ	Max	Unit
supply voltage	V_{CC}		4.75	5	5.25	V
data rate	f_d		DC	-	25	MBit/s
current consumption	I_{CC}	no load	-	35	-	mA
output voltage H	V_{OHI}	light input	4.44	-	-	V
output voltage L	V_{OLO}	no light input	-	-	0.5	V
min. opt. input power	P_{INmin}	$\lambda = 850nm$	-28	-	-	dBm

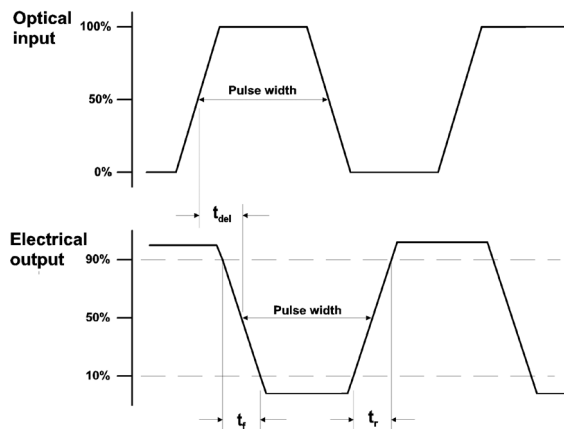
8 Circuit Example _____



Pic. 3 Schematic

Note:
 Avoid unwanted signals on the voltage supply.
 Place an 100nF decoupling capacitor as close as possible to the receiver.
 Keep PCB traces as short as possible.
 Defend the receiver from dirt.

9 Timing Definition _____



Pic. 4 Timing

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