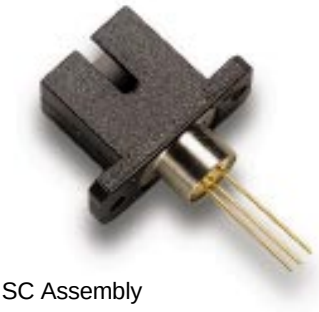
MF432 ST



ST Assembly

MF432 SC



SC Assembly

MF432 Pigtail



Pigtail Assembly

ST Applications

- FDDI
- ESCON
- ATM-SDH/SONET 155, 622 and 2488Mbps
- FITL - Fiber In The Loop
- FTTH/FTTC - Fiber To The Home/Curb
- Intra-Office Telecommunications
- General Purpose

SC Applications

- FDDI
- ESCON
- ATM-SDH/SONET 155, 622 and 2488Mbps
- FITL - Fiber In The Loop
- FTTH/FTTC - Fiber To The Home/Curb
- Intra-Office Telecommunications
- General Purpose

Pigtail Applications

- ATM-SDH/SONET 155, 622 and 2488Mbps
- FITL - Fiber In The Loop
- FTTH/FTTC - Fiber To The Home/Curb

Features-All MF432 Devices

- 1300 and 1550nm PIN Photodiode
- 2.5GHz Bandwidth
- Designed for Single-Mode and Multi-Mode Fiber
- Aligned in ST®, SC Receptacle or with a Single-Mode Fiber Pigtail
- Tested to Bellcore TA-NWT-000983
- High Return Loss in Pigtail Configuration

Description

This family of PIN Photodiodes is designed for Datacom, Telecom and General purpose applications. Their unique design combines high bandwidth with high responsivity for single-mode as well as multimode fibers up to 62.5µm core diameter. The MF432 PIN Photodiode is available in ST, SC, or Pigtail package.

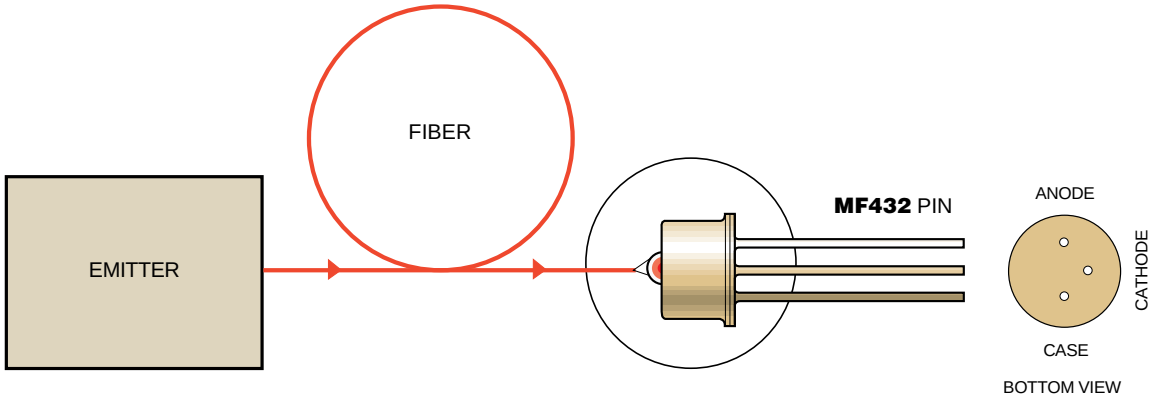
Specially-designed connectors and clips for PC board assembly are included in deliveries of MF432 in SC and Pigtail configurations.

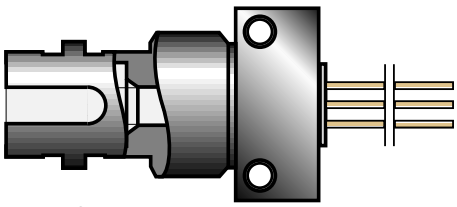
The MF431 LED is the recommended transmitter for these PIN photodiodes.

Ordering Information	
PART #	**RECEPTACLE**
MF431 ST	ST
MF 432 SC	SC
MF 432 Pigtail	Pigtail
-40°C to +85°C	

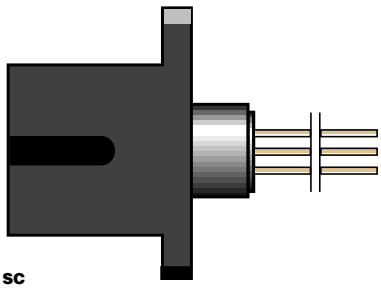
13325.11 1997-04-01
13326.11 1997-04-01
13327.11 1997-04-01

MF432 Functional Diagram For ST, SC and Pigtail

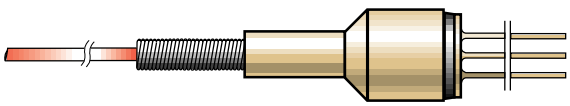




ST



SC



Pigtail

Absolute Maximum Ratings*

Parameter	Symbol	Min.	Max.	Units
Storage Temperature	T_{stg}	-40	+85	°C
Operating Temperature	T_{op}	-40	+85	°C
Reverse Voltage	V_R		20	V
Soldering Temperature (Note 1)	T_{sld}		260	°C

*Exceeding these values may cause permanent damage. Functional operation under these conditions is not implied.
Note 1: 2mm from the case for 10s.

Optical & Electrical Characteristics (Case Temperature -25 to +70˚C)

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Responsivity (Fig 1, 2, 3)	R	0.7 0.8	0.8 1.0		A/W	λ=1300nm (Note 1) λ=1550nm V_R=5V
Bandwidth	f_c	2.5			GHz	V_R=5V R_L=50Ω (Note 1)
Capacitance (Fig 4)	C		0.8	1.2	pF	V_R=5V f=1MHz
Dark Current	I_d			3 50	nA	T_{Case}=25˚C T_{Case}=70˚C V_R=5V
Return Loss	RL	40	55			(Note 2)

Note 1: Data for 10/125µm single-mode fiber (NA=0.11) to 62.5/125µm graded index fiber (NA=0.275).
Note 2: With 10/125µm single-mode fiber pigtail (NA:0.11).

Thermal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Units
Temperature Coefficient - Dark Current	dI_d/dT_j		5		%/˚C

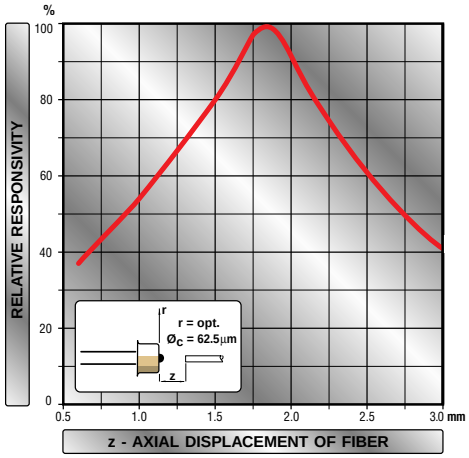


Figure 1

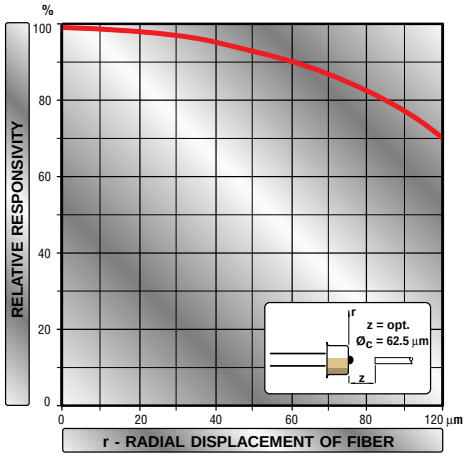


Figure 2

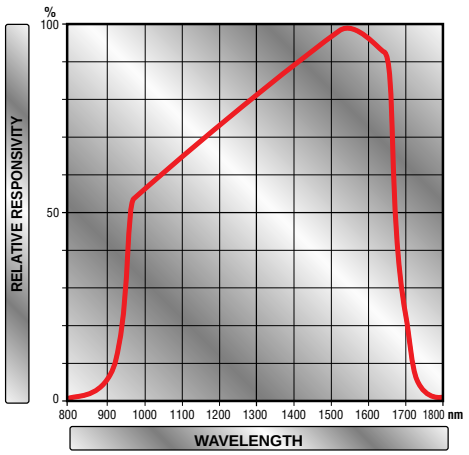


Figure 3

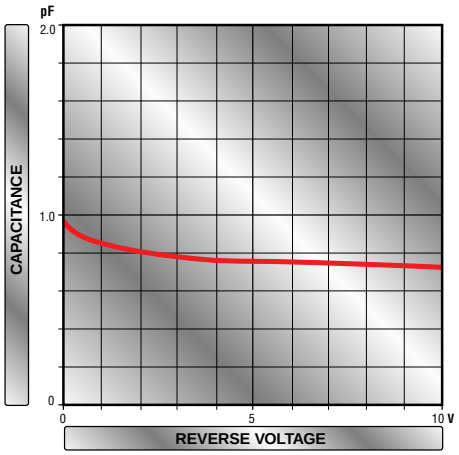
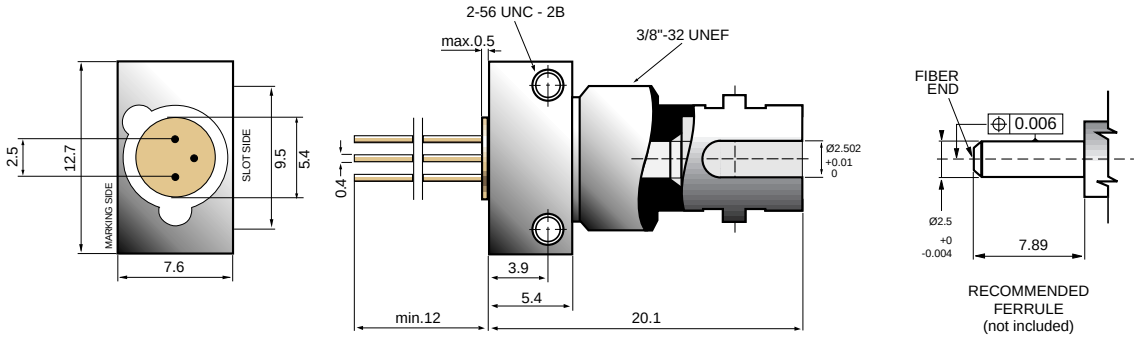


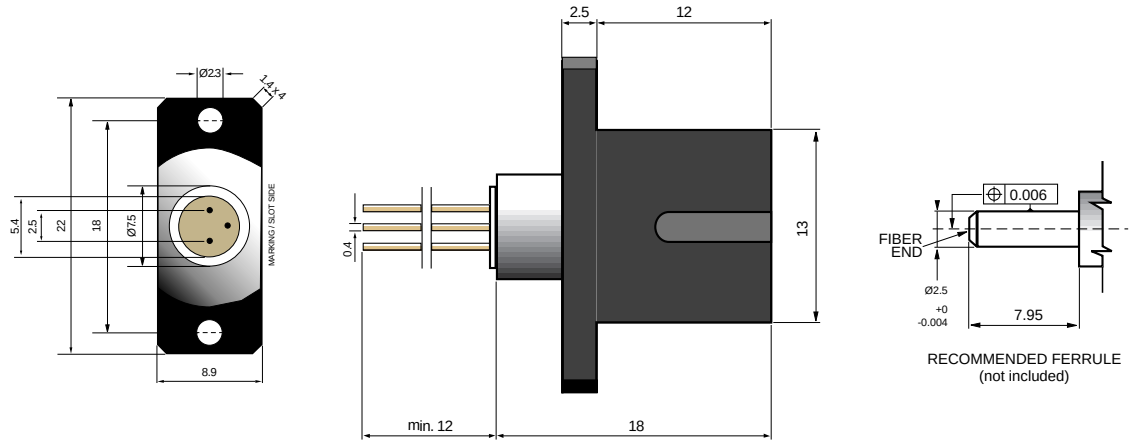
Figure 4

MF432 ST Mechanical Data

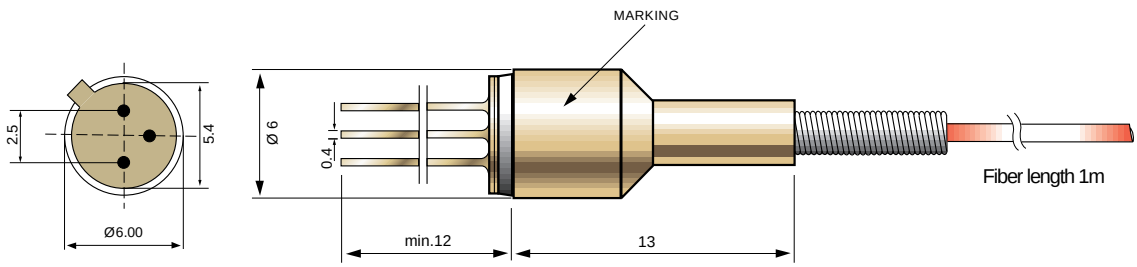


Note: The PIN chip is isolated from the case. All dimensions in mm.

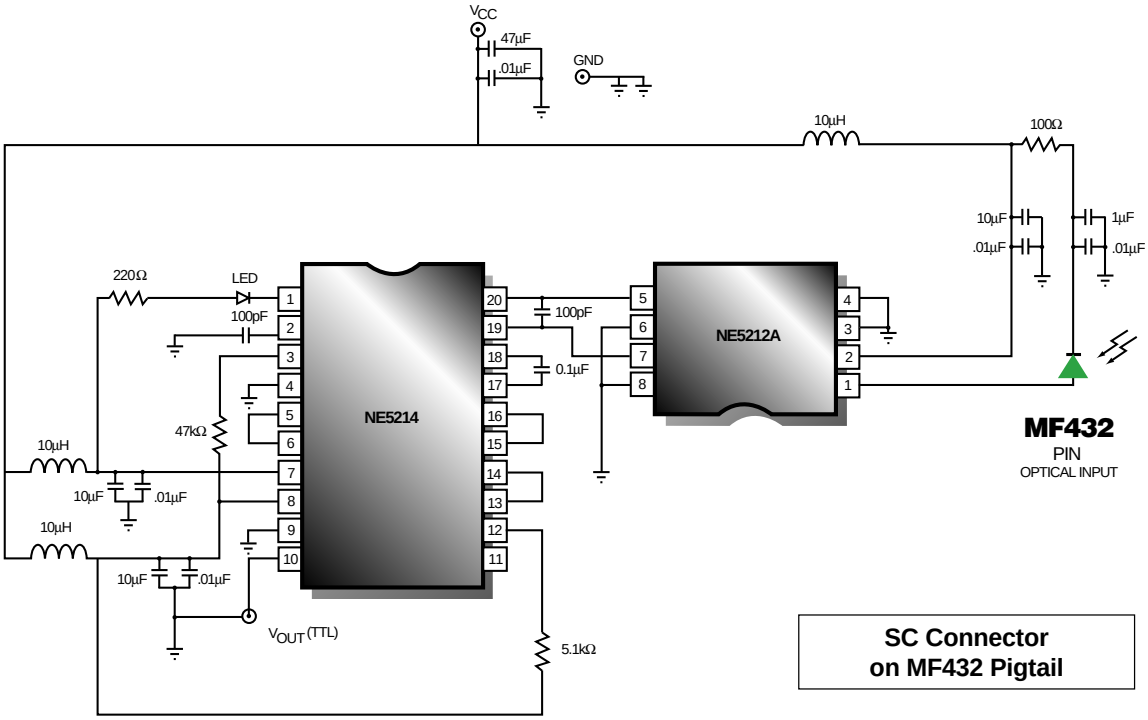
MF432 SC Mechanical Data



MF432 Pigtail Mechanical Data

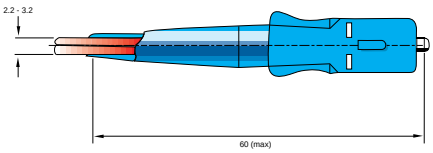


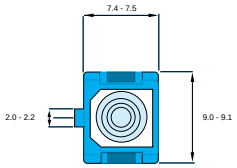
Typical Receiver Circuit



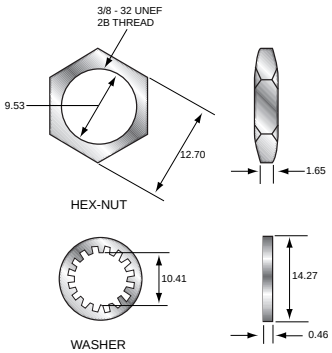
A typical Fiber Optic Receiver Circuit interfacing the PIN Photodiode to a Philips NE52121 transimpedance amplifier (140MHz) and to the Philips NE5211 FDDI Fiber Optic Postamplifier. This design is capable of operating at 125Mbps with single +5 or -5.2V supply with differential output impedance of 100k.

SC Connector on MF432 Pigtail

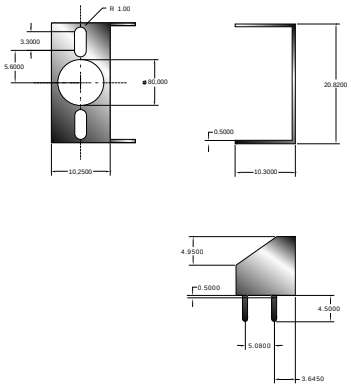




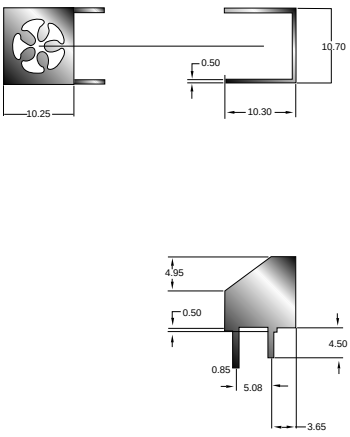
ST Packaging Hardware



MF432 SC Clip



MF432 Pigtail Clip





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