

860 MHz Optical Receiver Integrated Circuit

FEATURES

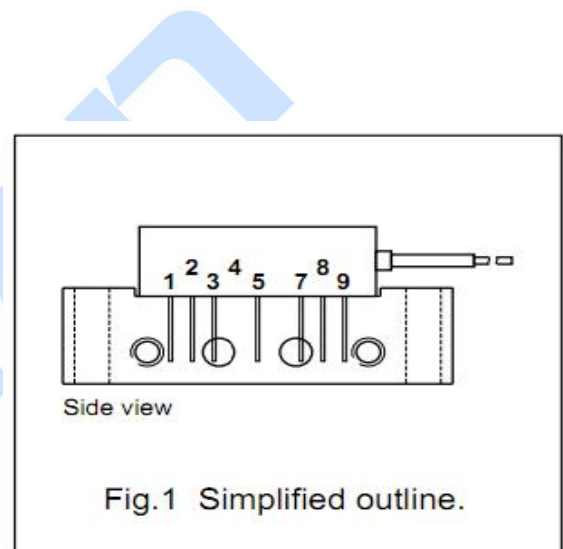
- ◆Excellent linearity
- ◆Excellent distortion performance
- ◆Low input noise
- ◆High output level

PINNING - SOT115U

| PIN | DESCRIPTION |
|-----|----------------------------------|
| 1 | current monitor |
| 2 | common |
| 3 | common |
| 5 | +V _B of the amplifier |
| 7 | common |
| 8 | common |
| 9 | output |

DESCRIPTION

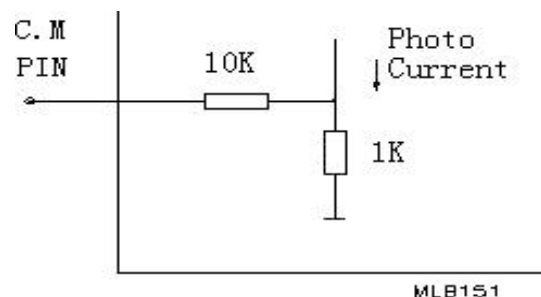
The supply voltage of KF887B0-5 is 5VDC .The module is in a package interchangeable for SOT115U(see Fig.1), has a FC/APC or SC/APC Connector, with a single mode optical input suitable for 1100 to 1650nm wavelengths , a terminal to monitor the photo diode current and an electrical output having a characteristic impedance of 75Ω . Optical power receiving at -8 ~ +2dBm , RF output is 87dBuV/Ch(@0dBm input) .



HANDLING

Fiberglass optical coupling :
 maximum tensile strength= 5 N ;
 minimum bending radius=35mm.

PHOTODIODE CURRENT MONITOR PIN



CURRENT MONITOR PIN

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LIMITING VALUES

In accordance With the Absolute Maximum Rating System

| SYMBOL | PARAMETER | CONDITION | MIN | MAX | UNITS |
|------------------------|-----------------------|---------------------------------------|-----|-----|-------|
| P_{in} | Input Optical Power | | | 3 | mw |
| T_{stg} | Storage temperature | | -40 | +85 | °C |
| T_c | Operating temperature | | -20 | +85 | °C |
| ESD | ESD sensitivity | Human body model; R=1.5KΩ ;C=100pF | 500 | | V |

CHARACTERISTICS

T_{mb}=25°C, V_B=5VDC, Z_s=Z_L=75 Ω

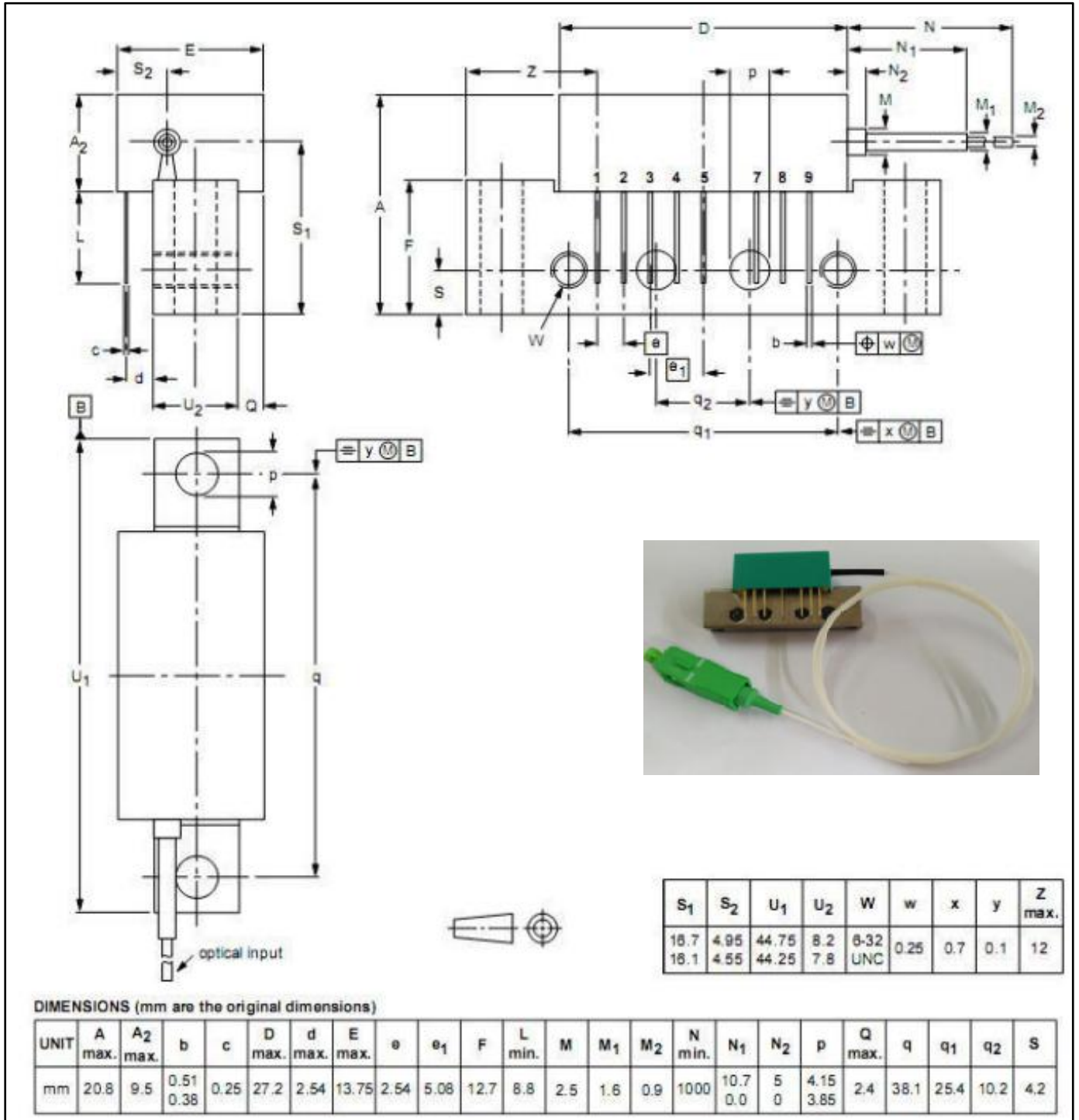
| SYMBOL | PARAMETER | UNIT | MIN. | TYP. | MAX. | CONDITIONS |
|------------------------|-----------------------------------|------|------|------|-------|--|
| f | Frequency range | MHz | 40 | | 860 | |
| S_λ | Spectral sensitivity | A/W | 0.85 | | | λ=1310±20nm |
| | | A/W | 0.9 | | | λ=1550±20nm |
| λ | Optical wavelength | nm | 1100 | | 1650 | |
| V_{cm} | Voltage of C.M Pin | mV | 850 | | | λ=1310nm , 0dBm input |
| V_o | Output Level | dBμV | | 87 | | Optical power receiving at 0dBm, m=3.7%, Reference value @543.25MHz |
| FL | Flatness of frequency response | dB | - | - | ±0.65 | f=40 to 860 MHz |
| CTB | Composite Triple Beat | dB | - | -68 | - | 60 channels flat, m=3.7%; |
| CSO | Composite Second Order distortion | dB | - | -60 | - | measured at 543.25MHz; Optical power receiving at 0dBm |
| C/N | Carrier to Noise Ratio | dB | - | 51 | - | Optical power receiving at 0dBm |
| S₂₂ | Output Return losses | dB | - | - | -12 | f=40 to 860 MHz |
| | Optical input return losses | dB | - | - | -45 | |
| I_{tot} | Total Current Consumption | mA | 140 | 160 | 180 | V _B =5V |

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PACKAGE OUTLINE

Rectangular single-ended package; aluminium flange; 2 vertical mounting holes; 2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads; optical input;

SOT115U



UNIT:mm