35057-TE

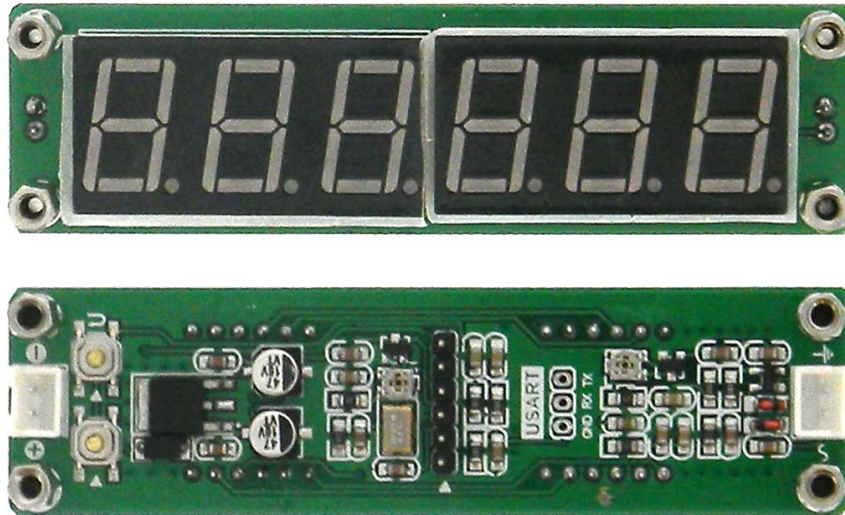## 6-digit LED Frequency Counter Module
RED DISPLAY

PLJ-6LED-A LED
Frequency Display
Module Manual

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OVERVIEW

The PLJ-6LED-A module is a cost-effective 8-digit frequency counter and display module primarily to display the operating frequency in a transceiver and other equipment. It may also be used for conventional frequency measurement. The module offers compact, reliable high performance with clear display at low cost.

Main Fea**tures include:**

➢ *Microchip PIC16F628A 65MHz Processor*

➢ Frequency reference using a temperature-compensated voltage controlled crystal oscillator (2.5 ppm VC-TCXO). Unique gate control with precise time algorithm (No timer interrupt).

➢ The gate (display refresh) time is 0.1 seconds and the frequency value is displayed in real time

➢ The frequency measurement accuracy is 10Hz/100Hz (shifting one bit to the right) is optional

➢ Dual IF design, IF +/- offset value can be set

➢ Six-digit 0.56-inch LED display, 8 level adjustable brightness with automatic zero blanking

➢ Simple operation, 2 Button Control

➢ Settings are saved automatically and directly recalled at power-up

PREPARATIONS & PRECAUTIONS

NOTE: Check the Polarity of the Power & Input Pigtails! Do Not go by color alone:
1 Pigtail is Pinned for Power the other is for the Signal Input
　　　　　　CHECK THE SYMBOLS ON THE BOARD
　　　Power:+Red/-Black　　Signal Input "S" Red /Gnd symbol Black

➢ Do not place the instrument in a hot, humid, dusty environment
➢ Do not subject to severe shock or vibration.
➢ The clock reference has been factory calibrated with a cesium atomic clock.
➢ Under Normal conditions adjustments are not required.
➢ The sensitivity has been factory adjusted to the optimal state.
　　　Do not adjust it by yourself

35057-TE   PLJ-6LED-A

TECHNICAL SPECIFICATIONS

1. GATE TIME

- 0.10 sec

2. INPUT

- High Impeadance
- Measurement Range: 0.1MHz~ 65MHz
- Resolution: 10Hz
- Sensitivity: >60mVpp

3. IF SETTINGS

- Independent double-IF design allows the IF settings to be adjusted in minimum increments of 100 Hz.
- Intermediate frequency range: 0-99.9999MHz
- Offset: Select Plus or minus IF Offset (Add to Input Frequency or Subtract from

4. FREQUENCY REFERENCE

- 13.000MHz temperature compensated voltage controlled crystal oscillator (VC-TCXO)
- Frequency stability: ± 2.5 ppm

5. SUPPLY

- DC Input: 8V - 15V (Reverse polarity protection) Can be modified for 5VDC (No Polarity Protection)
- Current: 90 mA max (Test conditions: 12VDC supply, red LED display, brightness=8)

6. DISPLAY

- Six common anode 0.56in. 7-segment LED displays
- Eight adjustable LED brightness levels, factory set to the highest brightness

7. PHYSICAL

- Dimensions: (L×W×H): 91 X 28 X 20mm
- Weight: 46g net
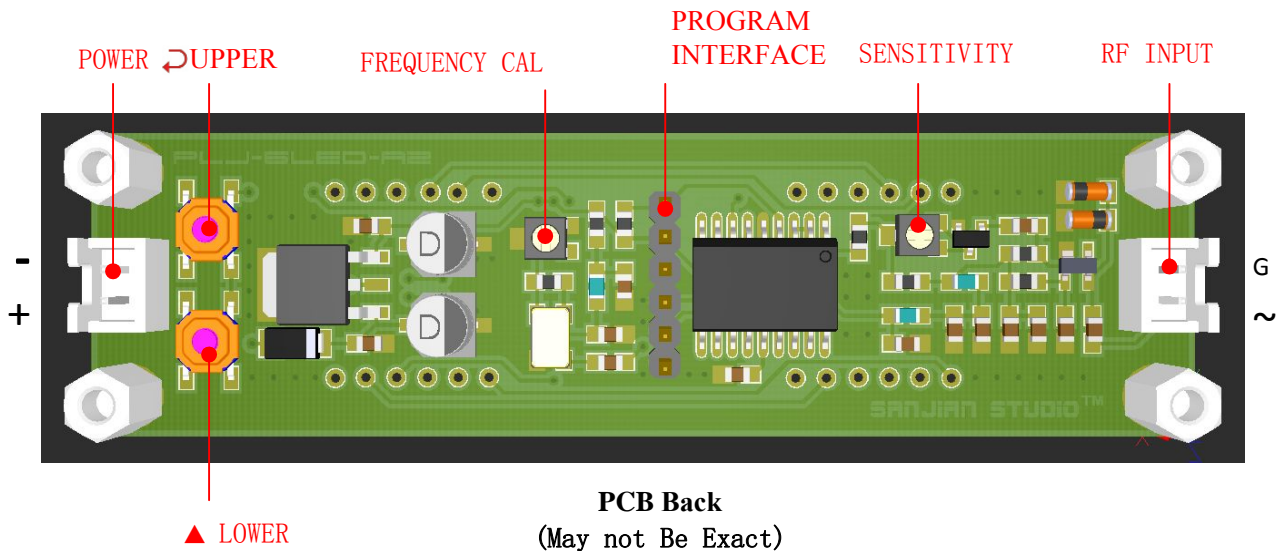
8. CONNECTIONS

- RF Signal Input: HX2.54-2P
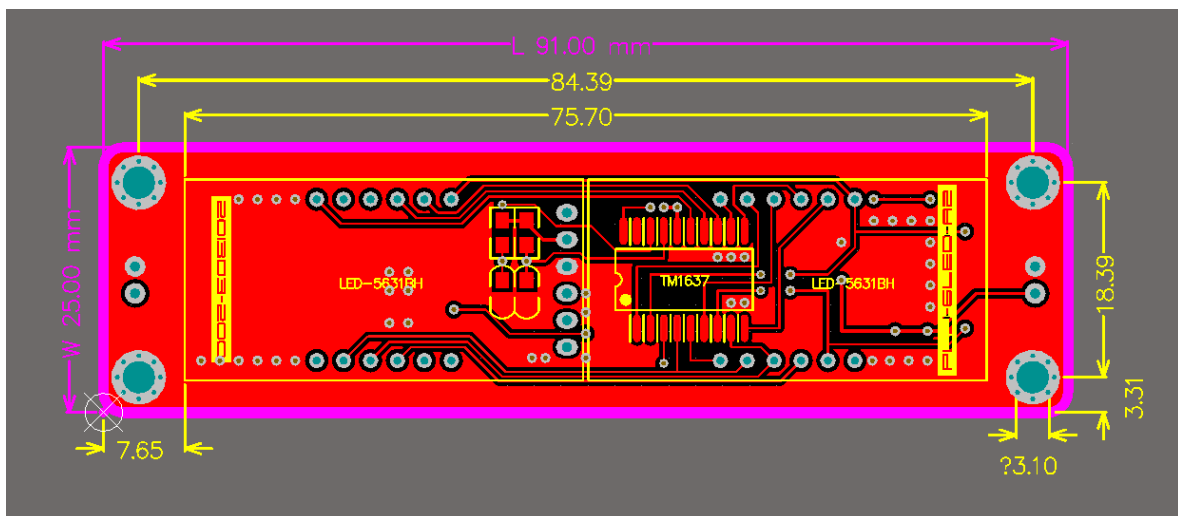- DC Power: HX2.54-2P
- Program Port: 2.54-6P Header (Factory Use)

1. MODULE ARRANGEMENT

PCB Front
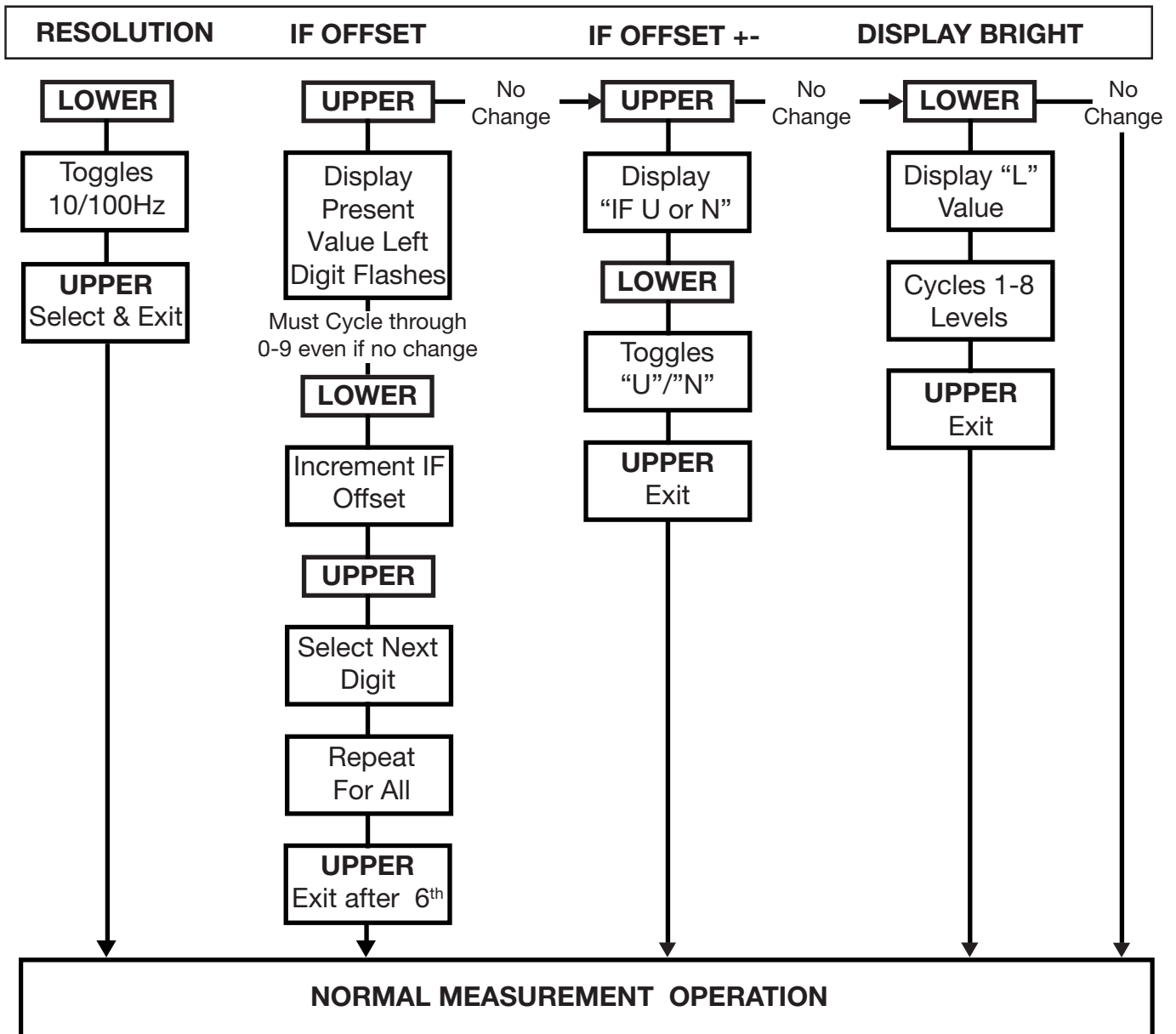(May not Be Exact

PCB Back
(May not Be Exact)

▲ LOWER

Mechnical

OPERATION AND USE

1. PARAMETER SETUP

"LOWER ▲" : Lower Button on Back "UPPER↵": Upper Button on Back

RESOLUTION	IF OFFSET	IF OFFSET +-	DISPLAY BRIGHT

RESOLUTION

LOWER

Toggles 10/100Hz

UPPER Select & Exit

IF OFFSET

UPPER — No Change →

Display Present Value Left Digit Flashes

Must Cycle through 0-9 even if no change

LOWER

Increment IF Offset

UPPER

Select Next Digit

Repeat For All

UPPER Exit after 6th

IF OFFSET +-

UPPER — No Change →

Display "IF U or N"

LOWER

Toggles "U"/"N"

UPPER Exit

DISPLAY BRIGHT

LOWER — No Change

Display "L" Value

Cycles 1-8 Levels

UPPER Exit

NORMAL MEASUREMENT OPERATION

Resolution (Shift one Digit right)

Press▲Key

7.050.00 ←→ 7.050.0

Press▲Key

Accuracy 10Hz   **Accuracy 100Hz**

Press▲Key

4.270.00 ←→ 14.270.0

Press▲Key

Accuracy 10Hz   **Accuracy 100Hz**