

**LC7210**

c-mos LSI

CIRCUIT DRAWING  
No.4053**TUNING CIRCUIT OF PSL<sup>2</sup> ELECTRONIC  
TUNING SYSTEM**

3012A

**Features**

- Multiband reception (FM, MW, LW/FM, SW1, SW2/TV, FM, MW, etc.) is available with micro-computer control.
- 3 tuning methods of auto search, preset, manual.
- Tuning control of PLL synthesizer mode, SL<sup>2</sup> voltage synthesizer auto search mode, S curve AFC reception mode, local oscillation frequency count mode.
- Little harmonic interference to FM band due to low reference oscillation frequency of 32kHz.
- With FM-IF ceramic filter variation adjusting function provided ( $\pm 150\text{kHz}/10\text{kHz}$  step fine adjustment), multirank ceramic filter can be used.
- Because of S curve AFC reception, PLL control step can be made small (10kHz step) by lowering comparison frequency ( $f_{\text{ref}}=0.1\text{kHz}$ : FM band) without regard to CN ratio at the time of PLL operation.
- +5V single power supply, C-MOS process, 28-pin DIP.

**Functions**

- SL<sup>2</sup> auto search control.
- PLL control (Number of frequency divisions FM: 39999 max., AM: 3999 max.).
- Analog switch for S curve AFC.
- Local oscillation frequency counter (Number of counts FM, AM: 39999 max./10ms).
- Data generation for FM band IF offset fine adjustment (5 bits).

**LC7220, -1, -2, -3, -5, -6, -7**

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CIRCUIT DRAWING  
No.4054**PLL SYNTHESIZER TUNER AND  
CONTROLLER FOR FM/AM RADIO**

3025B



3026B

LC7220 series are PLL frequency synthesizer C-MOS LSIs designed for use in FM/AM 2-radio band radios. By using in conjunction with LB3500 (1/8 frequency division prescaler), electronic tuning system with 18-dot analog frequency display can be formed.

LC7220 series offer a choice of the following types according to destination and package.

| Type No | Package | Area            | Radio band | Frequency        | Step    | $f_{\text{ref}}$ | IF                 |
|---------|---------|-----------------|------------|------------------|---------|------------------|--------------------|
| LC7220  | DIP42S  | U.S.A.          | FM         | 87.5~108.1 MHz   | 200 kHz | 6.25 kHz         | +10.70, +10.75 MHz |
| LC7225  | QIP64   |                 | AM(1)*     | 520~1610 kHz     | 10 kHz  | 10 kHz           | +450 kHz           |
|         |         |                 | AM(2)*     | 522~1611 kHz     | 9 kHz   | 9 kHz            | +450 kHz           |
| LC7221  | DIP42S  | Japan           | FM         | 76.0~90.0 MHz    | 100 kHz | 6.25 kHz         | -10.70, -10.65 MHz |
| LC7226  | QIP64   |                 | AM         | 522~1611 kHz     | 9 kHz   | 9 kHz            | +450 kHz           |
| LC7223  | DIP42S  | Japan           | FM         | 76.0 to 90.0 MHz | 100 kHz | 6.25 kHz         | -10.70, -10.65MHz  |
|         |         |                 | AM         | 522 to 1629 kHz  | 9 kHz   | 9 kHz            | +450kHz            |
| LC7222  | DIP42S  | Europe (U.S.A.) | FM         | 87.5~108.1 MHz   | 50 kHz  | 6.25 kHz         | +10.70, +10.75 MHz |
| LC7227  | QIP64   |                 | AM(1)*     | 520~1610 kHz     | 10 kHz  | 10 kHz           | +450 kHz           |
|         |         |                 | AM(2)*     | 522~1611 kHz     | 9 kHz   | 9 kHz            | +450 kHz           |

\*: AM(1) or AM(2) is selected by changing pin connection.

- Package Number: 3025B (LC7220, 7221, 7222, 7223), 3026B (LC7225, 7226, 7227)