

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9314F-026**SINGLE CHIP DIGITAL TUNING SYSTEM FOR CD RADIO CASSETTE**

TC9314F-026 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9314F-026 can be used for TC9284BF the CD processor and receive remote control signal, a low cost compact CD radio system can be constructed.

FEATURES

○ Receiving band

| AREA | JUMPER SETTING | | | BAND | FREQUENCY RANGE [Hz] | STEP [Hz] | FREF [Hz] | IF | |
|-------------|----------------|----|--------------------|------------|----------------------|-----------|-----------|---------|--------|
| | A1 | A0 | FM STEP MW STEP | | | | | | |
| USA | 0 | 0 | 0 | FM | 87.5 ~ 107.9M | 200k | 25k | + 10.7M | |
| | | | 1 | | 87.5 ~ 108.0M | 100k | | | |
| | | | 0 | AM (*1) | 530 ~ 1710k | 10k | 5k | | |
| | | | 1 | | 531 ~ 1602k | 9k | | | 3k |
| general | 0 | 1 | 0 | FM | 87.50 ~ 108.00M | 50k | 25k | + 10.7M | |
| | | | 1 | | 87.5 ~ 108.0M | 100k | | | |
| | | | 0 | MW / AM | 522 ~ 1602k | 9k | 3k | | |
| | | | 1 | | 530 ~ 1602k | 10k | | | 5k |
| | | | — | LW | 146 ~ 281k | 1k | 1k | | + 450k |
| | | | — | — | — | — | — | | |
| EAST EUROPE | 1 | 0 | 0 | FM | 65.00 ~ 74.0M | 50k | 25k | + 10.7M | |
| | | | 1 | | 87.50 ~ 108.00M | | | | 50k |
| | | | — | | 87.50 ~ 108.00M | | | | 100k |
| | | | 0 | MW / AM | 531 ~ 1602k | 9k | 3k | | |
| | | | 1 | | 530 ~ 1610k | 10k | | | 5k |
| | | | — | LW | 146 ~ 281k | 1k | 1k | | + 450k |
| JAPAN | 1 | 1 | — (*2) | FM | 76.0 ~ 90.0M | 100k | 25k | - 10.7M | |
| | | | — | MW / AM | 522 ~ 1629M | 9k | 3k | + 450k | |
| | | | — (*3) | TV | 1 ~ 12ch | 1ch | 25k | - 10.7M | |

(*1) AM mark is indicated, even if band is MW with SW band in USA area.

(*2) In case that there is not TV band, FM band extends (76.0-90.0MHz + TV 1-3ch).

(*3) If TV band is selected, prescaler (TD7104P) is need.

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There are SW bands with bands as shown above by setting of SW₀, SW₁ Jumper.

| | JUMPER SETTING | | | BAND | FREQUENCY RANGE [Hz] | STEP [Hz] | FREF [Hz] | IF | NOTE |
|--|-----------------|-----------------|---|-----------------|----------------------|-----------|-----------|--------|------|
| | SW ₁ | SW ₀ | | | | | | | |
| | 0 | 0 | — | no SW | | | | | |
| | 0 | 1 | — | SW _A | 3.8~ 12.5M | 5k | 5k | + 450k | |
| | 1 | 0 | — | SW _B | 5.95~ 15.6M | | | | |
| | 1 | 1 | — | SW ₁ | 2.3~ 7.3M | | | | |
| | | | — | SW ₂ | 9.5~ 26.1M | | | | |

(*) Only SW mark is indicated for SW_A or SW_B.

(*) If jumper setting is SW₁, SW₂ when there is LW/TV band, SW₁, SW₂ bands are no set. (Maximum 4 band)

○ Tuning functions and preset memory

- manual up/down tuning
- seek up/down tuning

○ Preset memory

- Fixed

| | | |
|---|-----------------|----------|
| FM / AM | 20 / 20 | stations |
| FM / MW / LW or TV | 20 / 10 / 10 | stations |
| FM / MW / SW-A or B | 20 / 10 / 10 | stations |
| FM / MW / LW or TV / SW-A or B | 20 / 10 / 5 / 5 | stations |
| FM / MW / SW ₁ / SW ₂ | 20 / 10 / 5 / 5 | stations |
| total | 30 | stations |
- Random

○ Clock functions

- 12H / 24H clock
- TIMER on / off
- SLEEP

○ CD functions

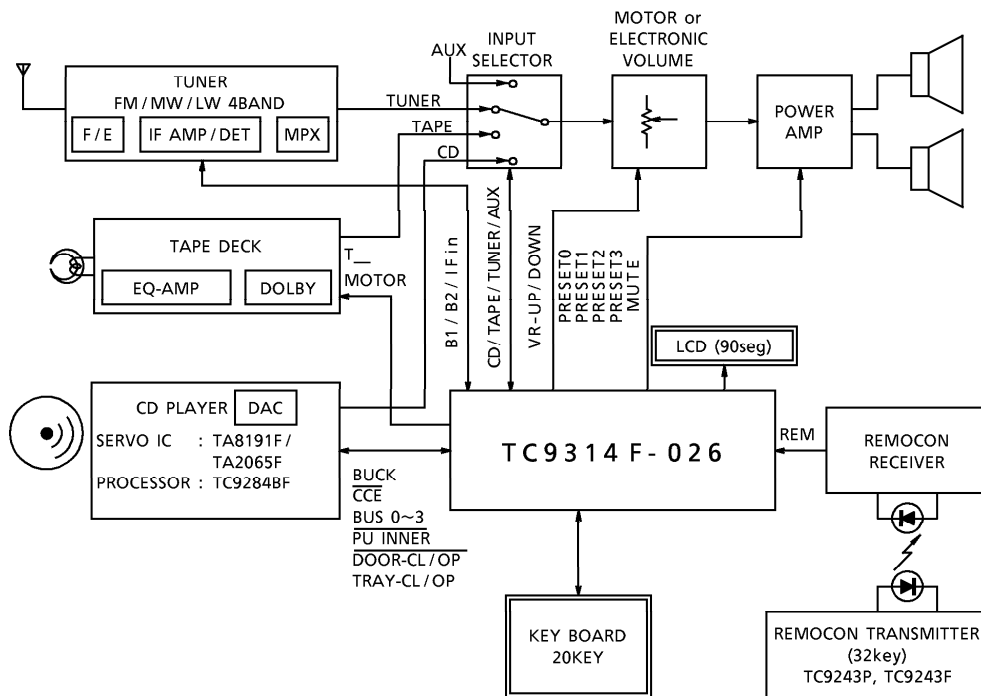
- random play
- intro play
- repeat play or track repeat play
- memory play (max 20 preset)

○ CD FF / REW

- synchro rec mode
- tray open / close control
- indication of CD remain time
- music calendar display

- Remote control functions
 - volume up/down control
 - direct selecting of preset memory and track number
- Other functions
 - preset equalizer control
 - function change (CD/TUNER/TAPE/AUX)
 - indication of STEREO mark
 - power on/off key
 - mute on/off control

BLOCK DIAGRAM



LAYOUT

