

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9314F-018**SINGLE CHIP DIGITAL TUNING SYSTEM FOR CD RADIO CASSETTE**

TC9314F-018 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9314F-018 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	NOTE	
	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	+ 450k	
			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	531 ~ 1602k	9k	3k	+ 450k	
			1		530 ~ 1610k	10k			5k
			—	LW	146 ~ 281k	1k	1k		
EAST EUROPE	1	0	0	FM	65.00 ~ 74.0M	50k	25k	+ 10.7M	
			1		87.50 ~ 108.00M				100k
			0		65.00 ~ 74.0M				
			1	MW / AM	531 ~ 1602k	9k	3k	+ 450k	
			—		530 ~ 1610k	10k			5k
—	LW	146 ~ 281k	1k	1k					
JAPAN	1	1	— (*2)	FM	76.0 ~ 90.0M	100k	25k	- 10.7M	
	—	—	—	MW / AM	522 ~ 1629M	9k	3k	+ 450k	
	1	1	— (*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 extend. (76.0-90.0MHz + TV 1-3ch)

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

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)

○ Outline of functions

○ 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

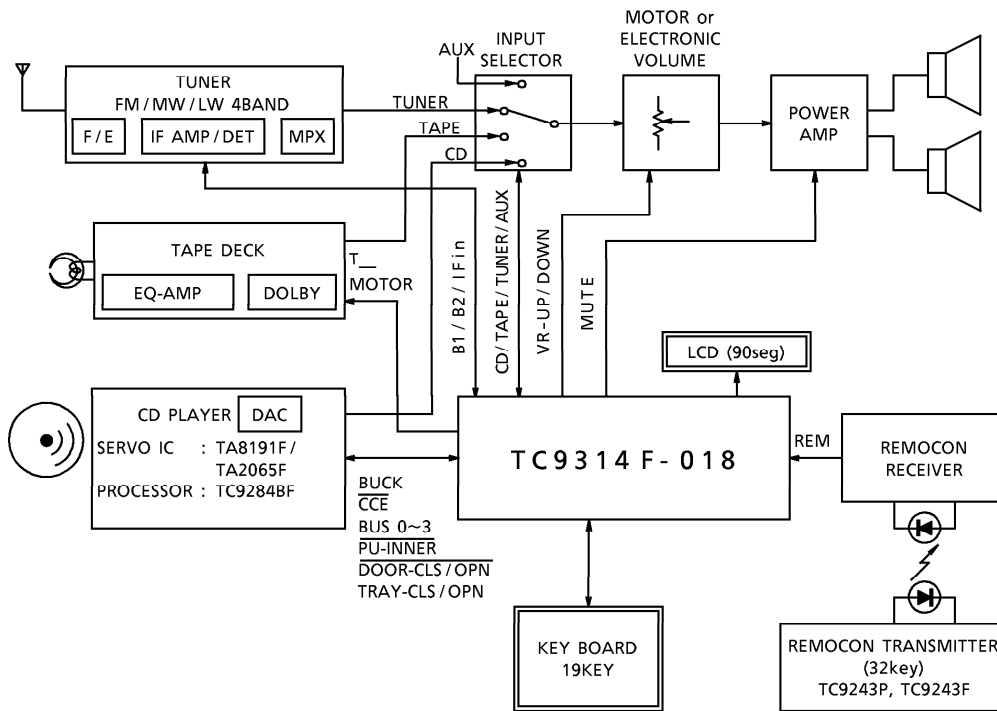
- 12H / 24H clock
- TIMER on / off
- SLEEP

○ CD functions

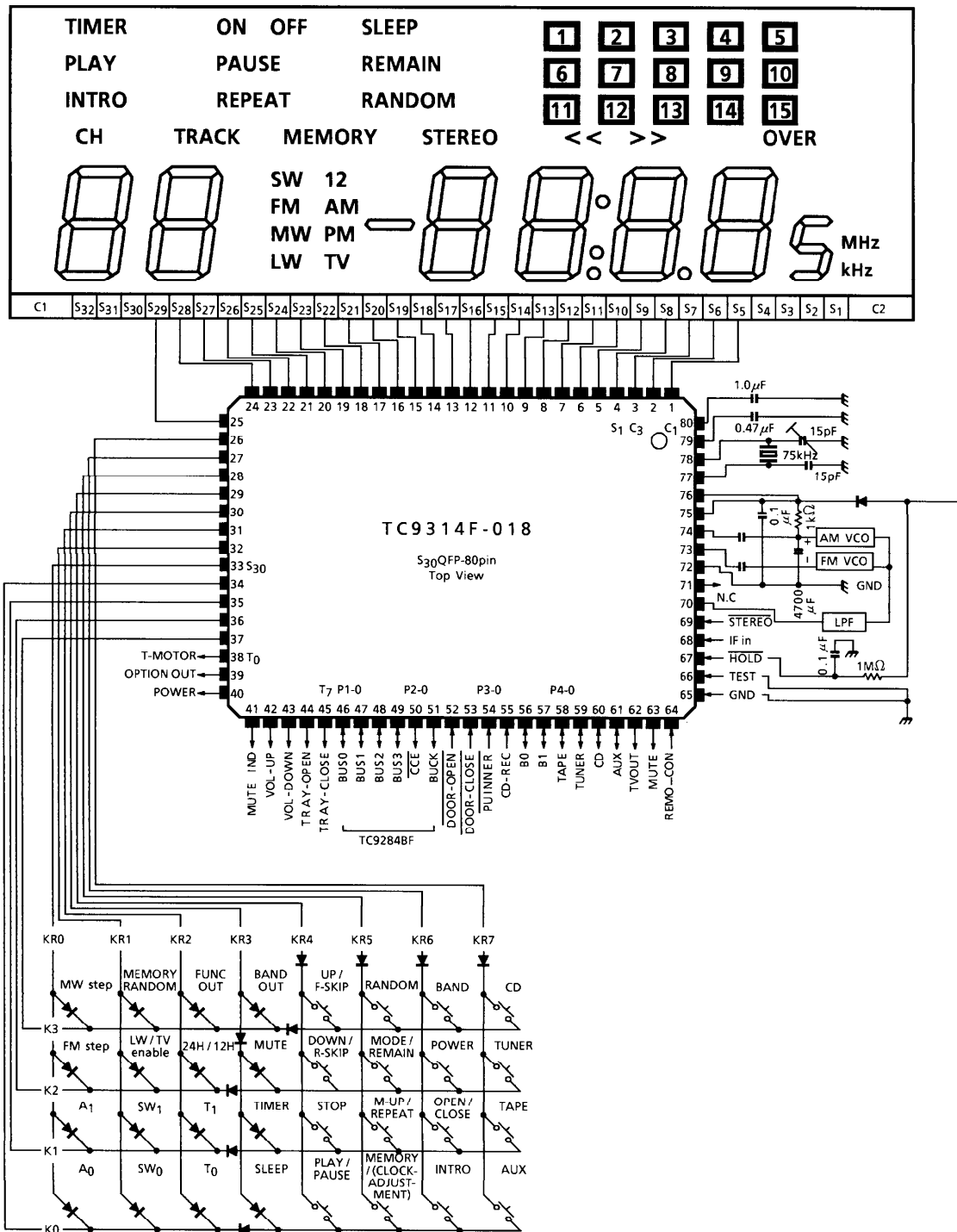
- random play
- intro play
- repeat play or track repeat play
- memory play (max 20 preset)
- CD FF / REW
- synchro rec mode
- tray open / close control
- indication of CD remain time
- music calendar display

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

BLOCK DIAGRAM



LAYOUT



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