

TOSHIBA CMOS Digital Integrated Circuit Silicon Monolithic

TC9314F-043

Single Chip Digital Tuning System for CD Radio Cassette

TC9314F-043 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9314F-043 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 Rang (Hz)	Step (Hz)	FREF (Hz)	IF	
	A1	A0	FM Step						
			MW Step						
USA	0	0	0	FM	87.5~107.9 M	200 k	25 k	+10.7 M	
			1		87.5~108.0 M	100 k			
			0	AM (Note 1)	530~1710 k	10 k	5 k	+450 k	
			1		531~1602 k	9 k	3 k		
General	0	1	0	FM	87.50~108.00 M	50 k	25 k	+10.7 M	
			1		87.5~108.0 M	100 k			
			0	MW/AM	522~1602 k	9 k	3 k	+450 k	
			1		530~1602 k	10 k	5 k		
			—	LW	146~281 k	1 k	1 k		
East Europe	1	0	0	FM	65.00~74.0 M	50 k	25 k	+10.7 M	
			1		87.50~108.00 M				50 k
					87.50~108.00 M				100 k
			0	MW/AM	531~1602 k	9 k	3 k	+450 k	
			1		530~1610 k	10 k	5 k		
			—	LW	146~281 k	1 k	1 k		
Japan	1	1	— (Note 2)	FM	76.0~90.0 M	100 k	25 k	-10.7 M	
			—	MW/AM	522~1629 M	9 k	3 k	+450	
			— (Note 3)	TV	1~12 ch	1 ch	25 k	-10.7 M	

Note 1: AM mark is indicated, even if band is MW with SW band in USA area.

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

Note 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 Rang (Hz)	Step (Hz)	FREF (Hz)	IF	Note
	SW1	SW0	FM Step						
			MW Step						
	0	0	—	no SW					
	0	1	—	SW _A	3.8~12.5 M	5k	5 k	+450 k	
	1	0	—	SW _B	5.95~15.6 M				
	1	1	—	SW ₁	2.3~7.3 M				
			—	SW ₂	9.5~26.1 M				

Note 4: Only SW mark is indicated for SW_A or SW_B.

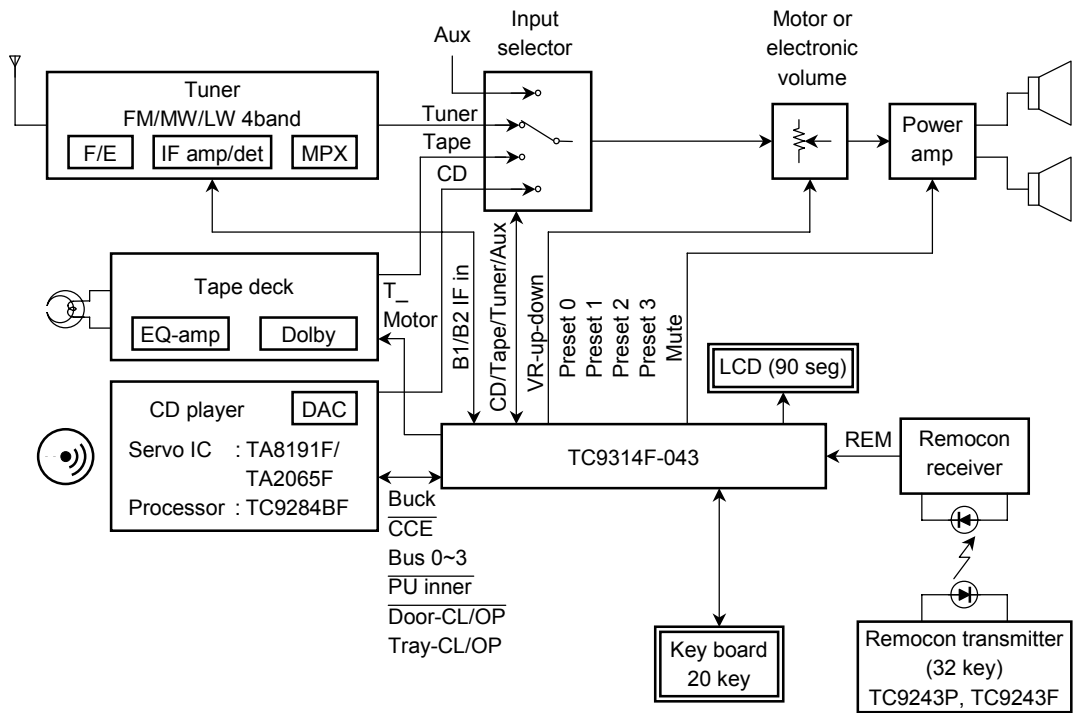
Note 5: If jumper setting is SW₁, SW₂ when there is LW/TV band, SW₁, SW₂ bands are no set. (Maximum 4 band)

- Tuning functions and preset memory
 - manual up/down tuning
 - seek up/down tuning
- Preset memory
 - Fixed

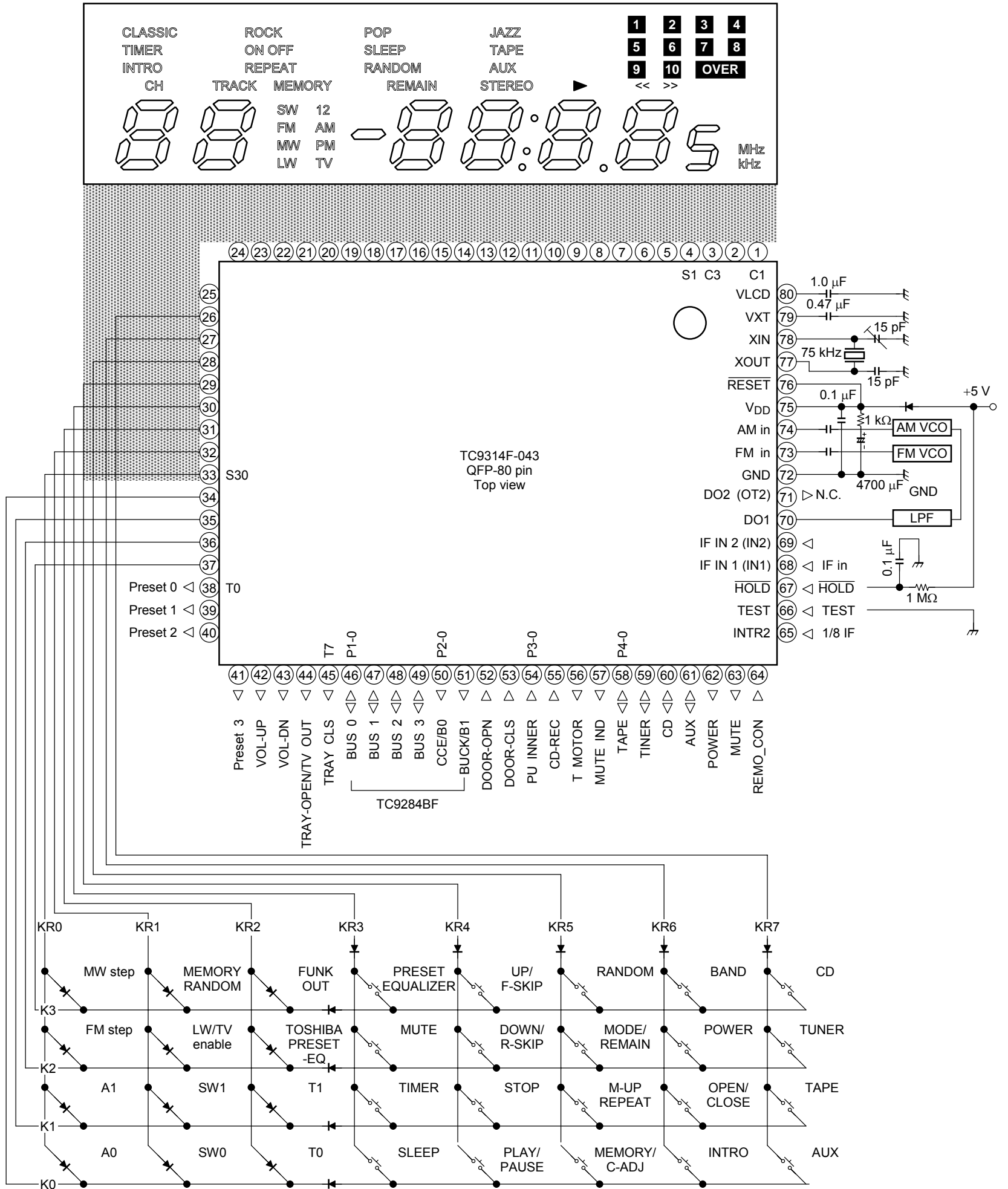
FM/AM	20/20	stations
FM/MW/LW or TV	20/10/10	stations
FM/MW/SW-A or B	20/10/10	stations
FM/MW/LW or TV/SW-A or B	20/10/5/5	stations
FM/MW/SW ₁ /SW ₂	20/10/5/5	stations
 - Random

total	30	stations
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- 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



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