

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

**TC9309AF-119****SINGLE CHIP DIGITAL TUNING SYSTEM FOR CD RADIO CASSETTE**

TC9309AF-119 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9309AF-119 can be used for TC9236AF or TC9284AF, TC9284BF the CD processor and receive remote control signal, a low cost compact CD radio system can be constructed.

**FEATURES**

- Receiving frequency band

AREA	CODE			BAND	RECEIVING FREQUENCY [Hz]	STEP [Hz]	REFERENCE FREQUENCY [Hz]	INTERMEDIATE FREQUENCY [Hz]
	A2	A1	A0					
EUROPE (*)	0	0	0	FM	87.50~108.00M	50k	50k	+ 10.70M
	-----			MW	522~ 1620k	9k	9k	+ 450k
	0	0	1	LW	150~ 285k	1k	1k	
USA (1)	0	1	0	FM	87.5~ 107.9M	200k	50k	+ 10.7M
				MW	520~ 1710k	10k	10k	+ 450k
USA (2)	0	1	1	FM	87.5~ 108.0M	100k	50k	+ 10.7M
				MW	520~ 1710k	10k	10k	+ 450k
LATIN AMERICA	1	0	0	FM	87.5~ 108.0M	100k	50k	+ 10.7M
				MW	520~ 1620k	5k	5k	+ 450k
AUSTRALIA MIDDLE AND NEAR EAST	1	0	1	FM	87.5~ 108.0M	100k	50k	+ 10.7M
				MW	531~ 1602k	9k	9k	+ 450k
SOUTH AFRICA	1	1	1	FM	87.50~108.00M	50k	50k	- 10.7M
				MW	531~ 1602k	9k	9k	+ 450k

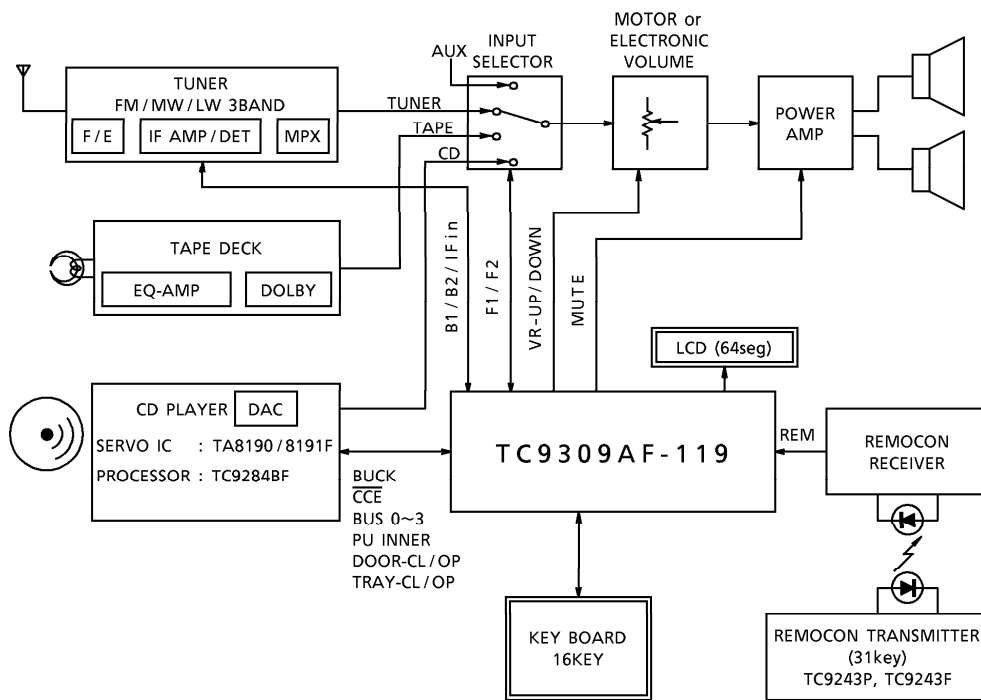
(\*) CODE 001 : LW DISABLE

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- Tuning functions and preset memory
  - manual up/down tuning
  - seek up/down tuning
  - scan up tuning
  - IF count (FM = 10.7MHz, AM = 450kHz)
  - FM : 10 stations, MW : 10 stations, LW : 5 stations
- Clock functions
  - 12H/24H clock
- 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
  - CD-G operation
- Remote control functions
  - mute ON/OFF
  - volume up/down
  - direct selecting of preset memory and track number
- Other functions
  - function change (CD/TUNER/TAPE/AUX)
  - indication of STEREO mark
  - power on/off key

**BLOCK DIAGRAM**



**LAYOUT**

