

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9321F-006

SINGLE CHIP DIGITAL TUNING SYSTEM FOR CAR CD

TC9321F-006 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of the whole world.

Since TC9321F-006 can be used for TC9284BF the CD processor, a low cost compact CD radio system can be constructed.

FEATURES

- CD mecha : TN-CCD-1001 (TANASHIN)
- PLL + controller : TC9321F-006 (QFP-60PIN)
- LCD driver can control condition of key. : TC9297F (QFP-60PIN)
- electronic volume : TC9421F (QFP-44PIN)

○ Receiving band and preset memory

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

○ Tuning functions

- manual up/down tuning
- seek up/down tuning
- auto memory tuning
- preset memory scan
- IF count (FM = 10.7MHz, MW (AM) / LW = 450kHz)
- FM1 / 2 / 3 : 18 stations, MW (AM) 1 or 1/2 : 6 or 12 stations, LW : 6 stations

○ CD functions

- track repeat play
- random play
- F-skip / P-skip
- CD FF / REW

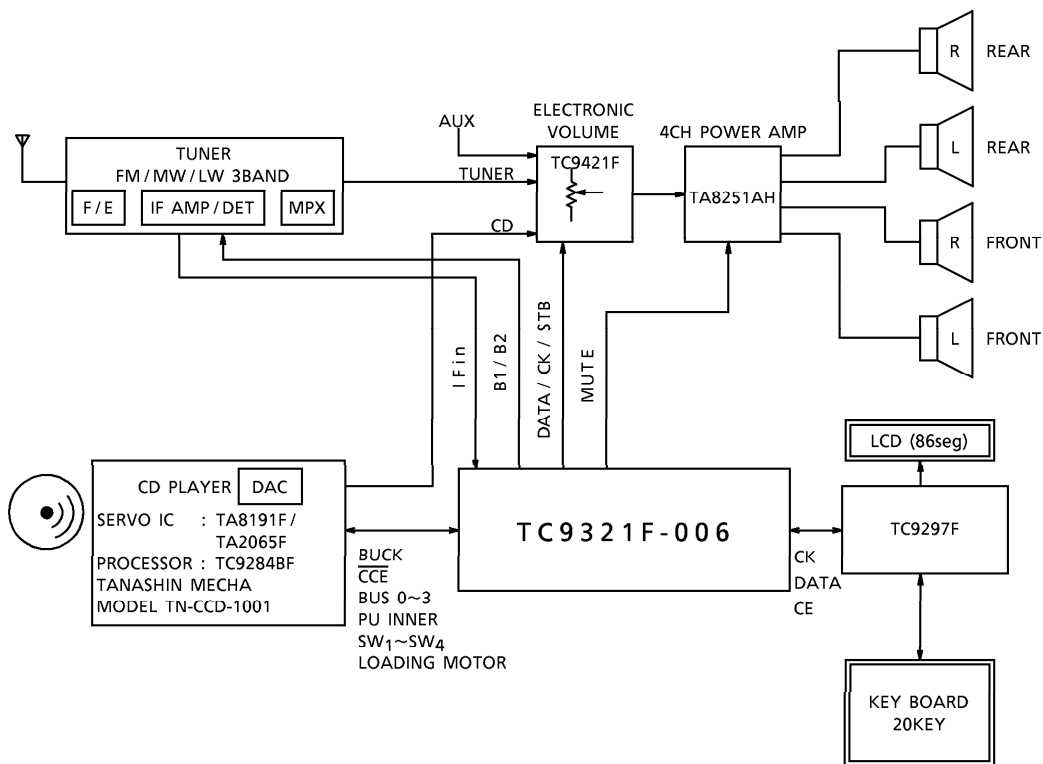
○ Other functions

- electronic volume control
- BASS BOOST function
- mute function
- AUX function
- indication of STEREO mark

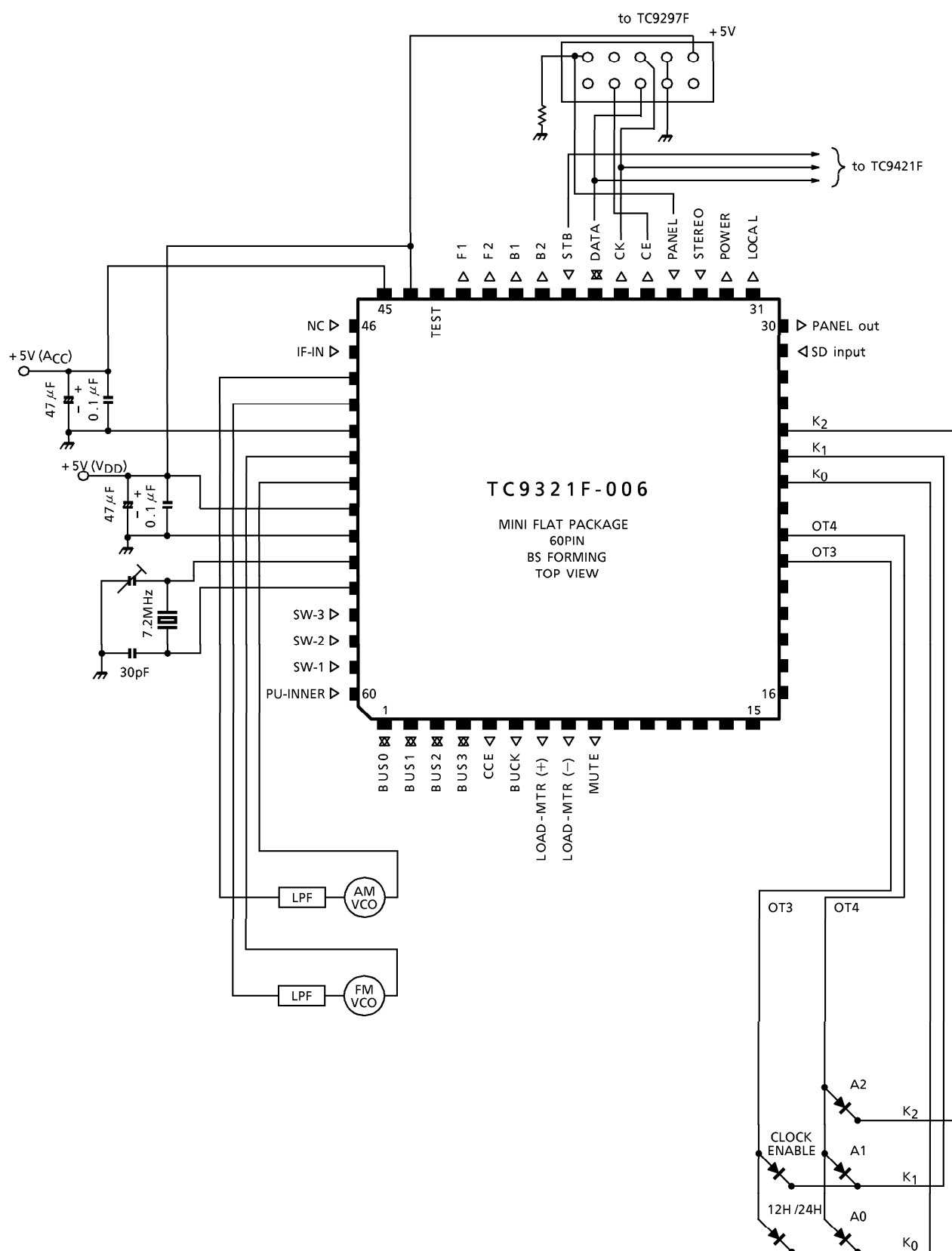
○ Clock functions

- 12H / 24H clock

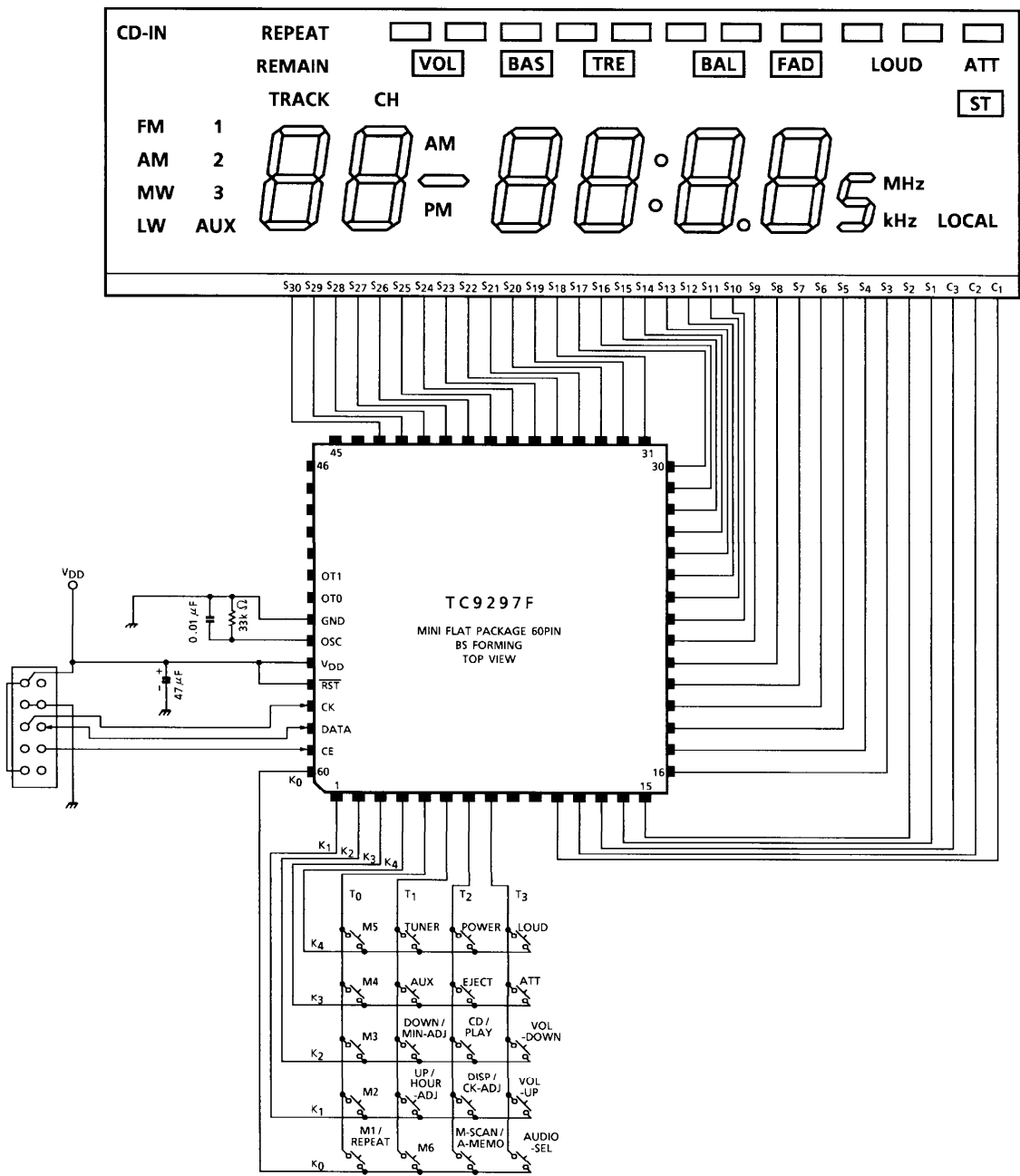
BLOCK DIAGRAM



TC9321F-006 Layout



TC9321F-006 Layout



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