

**TOSHIBA****TC9321F-009**

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

**TC9321F-009****DIGITAL TUNING SYSTEM**

TC9321F-009 is a CMOS LSI designed for a FM/MW/LW ratio of a PLL frequency synthesizer system corresponded to the requirement of the whole world.

This Digital Tuning System is optimum for such car audio equipment as three band ratio with detachable panel.

- PLL + controller : TC9321F-009 (QFP-60PIN)
- LCD driver can control condition of key. : TC9297F (QFP-60PIN)
- Electronic volume : TEA6330T or TDA7313

**FEATURES**

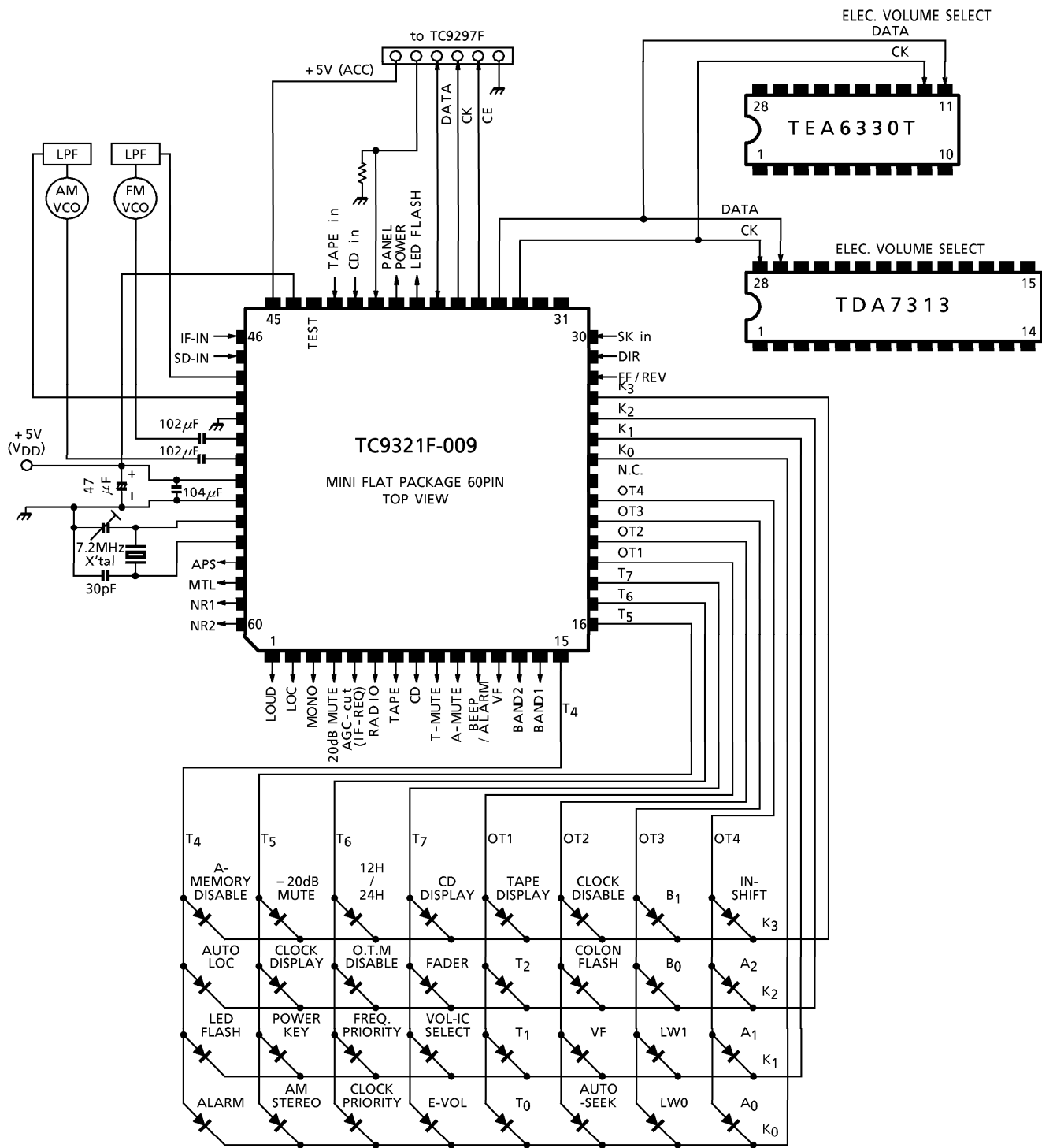
○ Receiving band

AREA	CODE A2A1A0	BAND	FREQUENCY RANGE [Hz]	STEP [Hz]	FREF [Hz]	IF [Hz]
EUROPE	000	FM	87.5 ~ 108.0M	50k	50k	+ 10.7M
		MW	522 ~ 1620k	9k	9k	450 / 459k
EAST EUROPE	001	FM	65.0 ~ 74.0M 87.5 ~ 108.0M	50k	50k	+ 10.7M
		MW	522 ~ 1620k	9k	9k	450 / 459k
USA1	010	FM	87.5 ~ 107.9M	200k	50k	+ 10.7M
		MW	520 ~ 1720k	10k	10k	+ 450k
USA2	011	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	520 ~ 1720k	10k	10k	+ 450k
LATIN AMERICA	100	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	530 ~ 1710k	10k	10k	+ 450k
AUSTRALIA MIDDLE AND NEAR EAST	101	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	531 ~ 1602k	9k	9k	+ 450k
JAPAN	110	FM	76.0 ~ 90.0M	100k	50k	- 10.7M
		MW	522 ~ 1629k	9k	9k	+ 450k
SOUTH AFRICA	111	FM	87.5 ~ 108.0M	50k	50k	- 10.7M
		MW	531 ~ 1602k	9k	9k	+ 450k

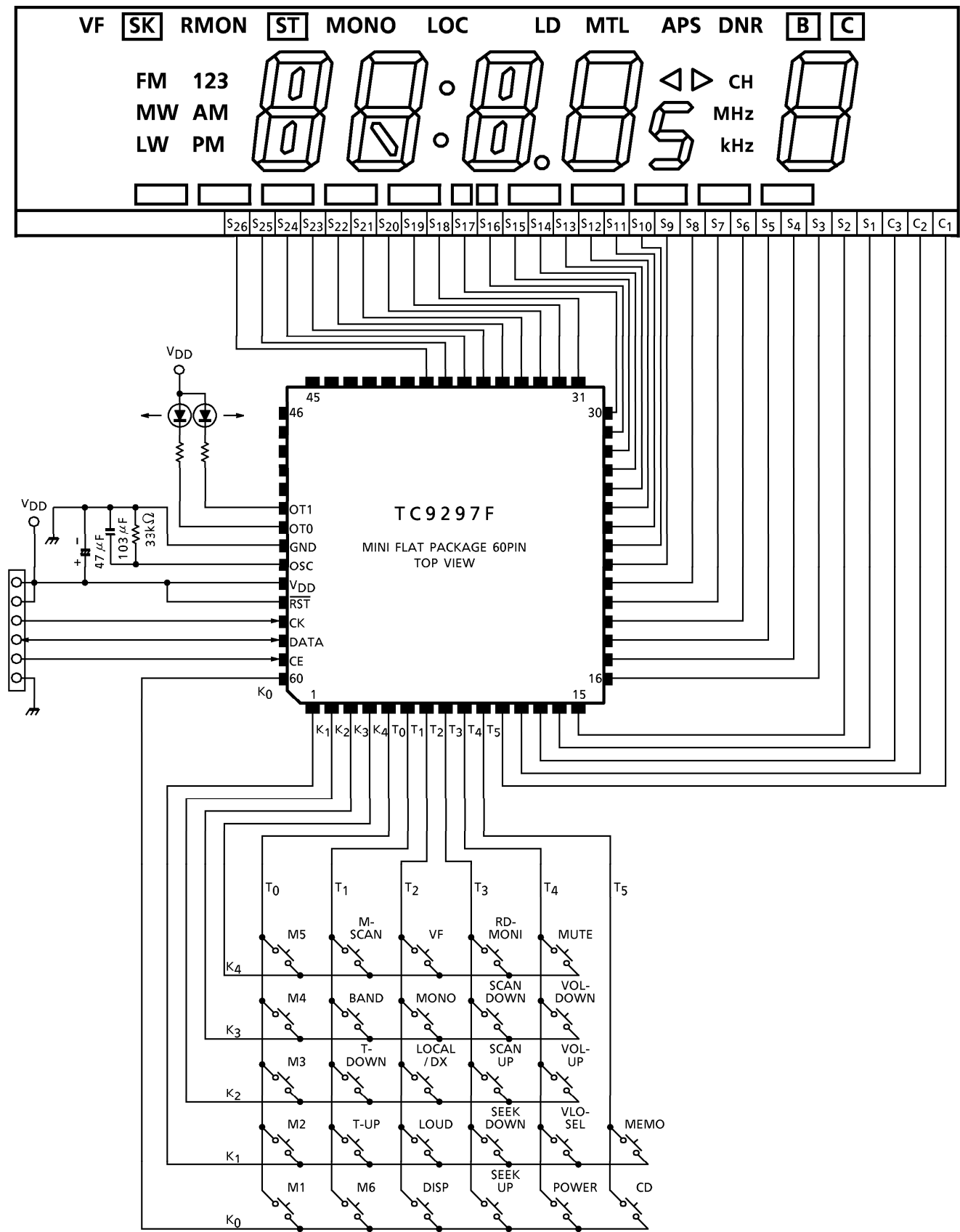
BAND	CODE LW1 LW0	FREQUENCY RANGE [Hz]	STEP [Hz]	FREF [Hz]	IF [Hz]
LW disable	00	—			
LW enable	01	153~279k	1k	1k	450 / 459k
	10	144~288k			
	11	146~290k			

- Tuning function
  - Manual tuning (up / down)
  - Seek tuning (up / down)
  - Scan tuning (up / down)
  - Auto memory tuning
  - Preset memory scan
- Memory function
  - FM1 / FM2 / FM3 : max 18 stations
  - MW1 / MW2 : max 12 stations
  - LW : 6 stations
  - VF : 6 stations
  - Maximum 42 stations in total.
  - Each band has a last memory.
- Radio function
  - VF band (VF auto tuning and DK stand by)
  - LOC / DX control (Auto local function select possible)
  - Stereo display and Mono / Stereo select
  - Radio monitor function
- Tape function
  - 'Tape' display
  - Metal / Normal select
  - APS on / off control
  - DNR on / off and B / C select
  - Tape running display (|> / <| and □□□□ )
- Electronic volume / input select function
  - Volume / Bass / Treble / Balance / Fader
  - Loudness control
  - Radio / tape / CD input
  - Mute function
  - TEA6330T or TDA7313 selectable
- Clock function
  - 12 hour display with 'AM' and 'PM' indicator or 24 hour display
  - The colon display is possible to select flashing.
- Other function
  - CD input and 'CD' or 'DISC' display
  - Burglary prevention alarm, and LED flashing display

LAYOUT



LAYOUT



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