



TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9321F-003

DIGITAL TUNING SYSTEM

TC9321F-003 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-003 (QFP-60PIN)
- LCD driver can control condition of key. : TC9297F (QFP-60PIN)
- Electronic volume : TC9421F 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			

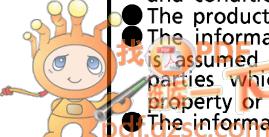
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○ Tuning function

- 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
- TC9421F or TDA7313 selectable

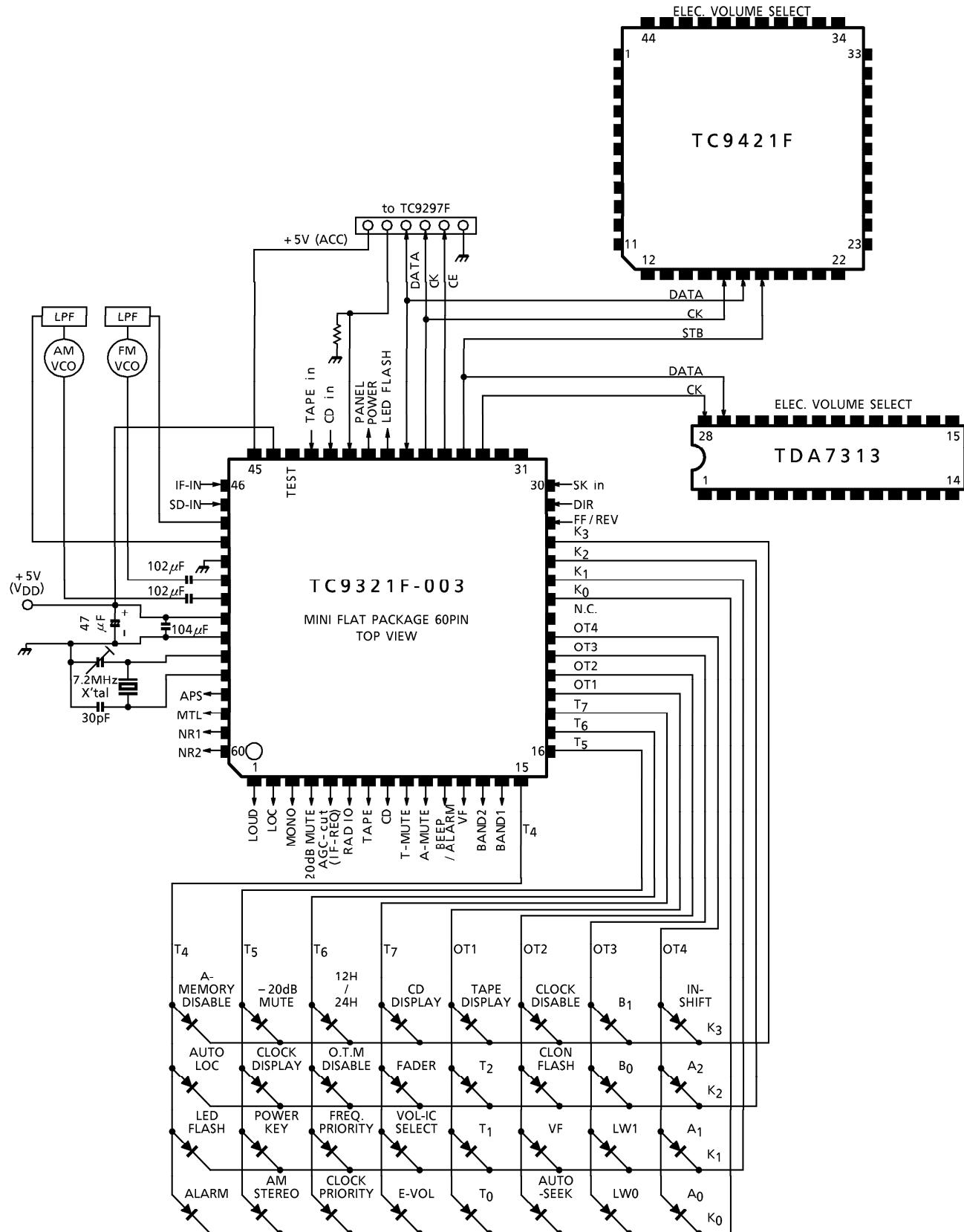
○ Clock function

- 12 hour display with 'AM' and 'PM' indicator or 24 hour display
- The colon display is possible to select flashing.

○ Other functions

- CD input and 'CD' or 'DISC' display
- Burglary prevention alarm, and LED flashing display

LAYOUT



LAYOUT

