

TOSHIBA CMOS Digital Integrated Circuit Silicon Monolithic

# TC9304F-027

## Single Chip DTS Micro Controller (DTS-10)

TC9304F-027 is a CMOS LSI designed for FM/MW/LW radio of PLL frequency synthesizer system. It is applicable to the whole world.

It can construct high performance system as home stereo compactly, because it contain not only PLL, controller but prescaler and LCD driver.

### Features

#### Receiving Band

AREA	CODE A2A1A0	BAND	RECEIVING RANGE [Hz]	STEP [Hz]	FREF [Hz]	IF [Hz]
(Note 1) Europe	000 or 001	FM	87.50~108.00M	50k	25k	+ 10.70M
		MW	522~ 1620k	9k	9k	450, 459k
		LW	153~ 281k	1k	1k	
(Note 2) USA 1	010	FM	87.5~ 107.9M	200k	25k	+ 10.7M
		MW	520~ 1710k	10k	10k	450k
(Note 2) USA 2	011	FM	87.5~ 108.0M	100k	25k	+ 10.7M
		MW	520~ 1710k	10k	10k	450k
(Note 2) Middle and South America	100	FM	87.5~ 108.0M	100k	25k	+ 10.7M
		MW	520~ 1620k	5k	5k	450k
Oceania Middle and near East	101	FM	87.5~ 108.0M	100k	25k	+ 10.7M
		MW	531~ 1602k	9k	9k	450, 459k
Japan	110	FM	76.0~ 90.0M	50k	25k	- 10.7M
		MW	522~ 1629k	9k	9k	450, 459k
South Africa	111	FM	87.50~108.00M	50k	25k	- 10.7M
		MW	531~ 1602k	9k	9k	450, 459k

Note 1: CODE = 000 is 3 band (FM/MW/LW), CODE = 001 is 2 band (FM/MW)

Note 2: If offset of MW is 450 k even when AMIF = 1

**Tuning Function**

- Manual tuning
  - Manual up..... Step feed and fast feed by push switch.
  - Manual down..... Step feed and fast feed by push switch.
- Auto-tuning
  - Up/down
- Memory scan tuning
- If counter is applicable. (when if = 10.7 MHz or 450 kHz, it is possible.)
- If offset of AM (MW/LW) is possible.  
(limited only to Europe, Oceania, Middle and Near East, Japan and South Africa.)
- Band changeover can be mode with 1-button cyclic method or 3-button cycle method.

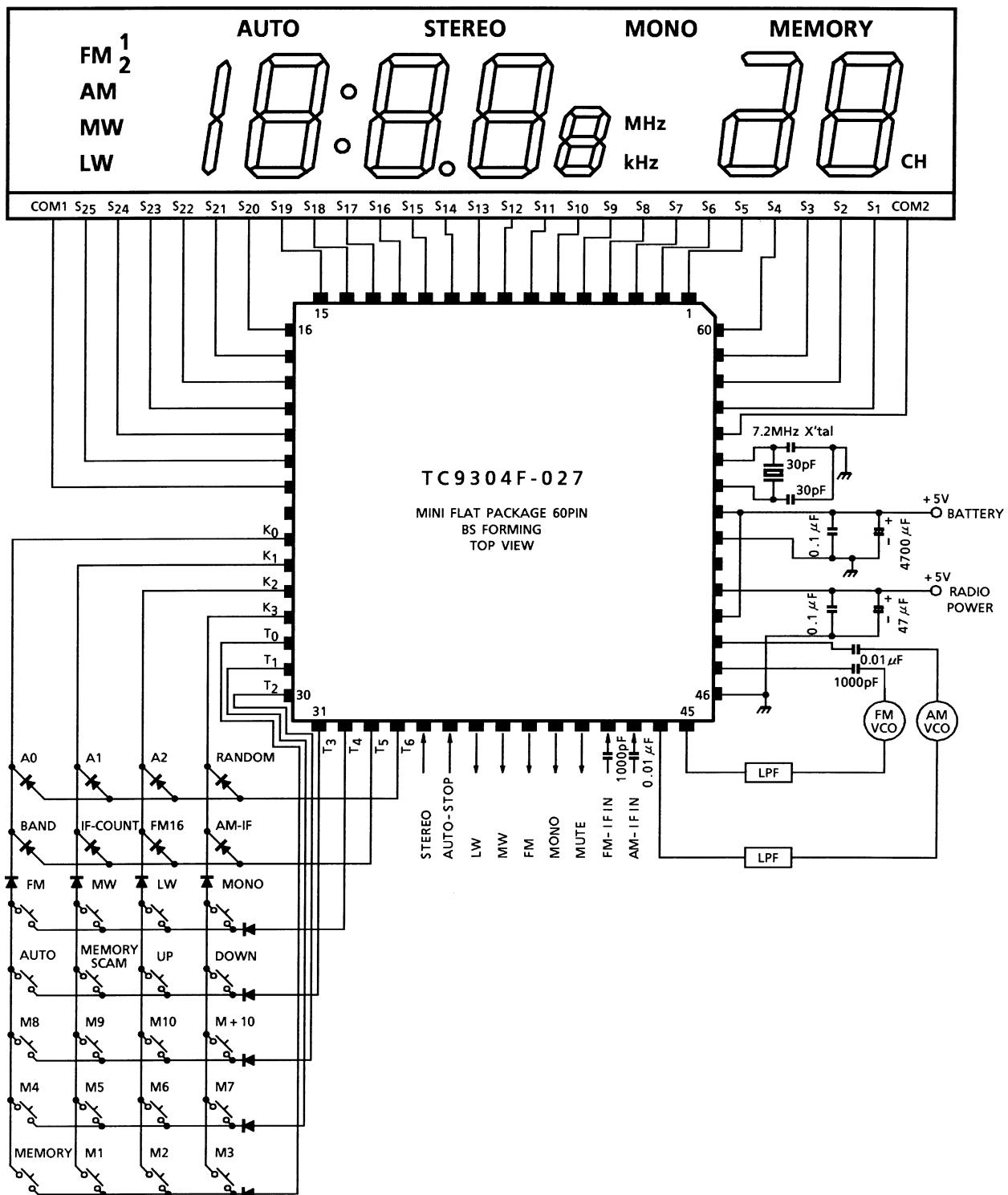
**Memory Function**

- Preset memory function is 8 channels each for FM1/FM2/MW/LW bands (totally 32 stations) or 8 channels each of FM/MW/LW bands (totally 24 stations) or random 20 channels (FM/MW/LW).

**Others**

- STEREO indication and MONO indication can be mode.

## TC9304F-027 Layout



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