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]
(*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	
(*2) USA 1	010	FM	87.5～ 107.9M	200k	25k	+ 10.7M
		MW	520～ 1710k	10k	10k	450k
(*2) USA 2	011	FM	87.5～ 108.0M	100k	25k	+ 10.7M
		MW	520～ 1710k	10k	10k	450k
(*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

(*1) CODE = 000 is 3 band (FM / MW / LW), CODE = 001 is 2 band (FM / MW)
(*2) IF offset of MW is 450k even when AMIF = 1

980910EBA2

- TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.
- The products described in this document are subject to the foreign exchange and foreign trade laws.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.

○ Tuning function

- Manual tuning

  Manual UP
  Manual DOWN ┐
  ├ Step feed and fast feed by push switch.
  ┘

- Auto-tuning

  UP / DOWN

- Memory scan tuning
- IF counter is applicable. (When IF = 10.7MHz or 450kHz, 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

