

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9309F-059

DIGITAL TUNING SYSTEM

TC9309F-059 is a single chip digital tuning system LSI designed for FM/MW/LW ratio of PLL frequency synthesizer system corresponded to the requirement of the whole world.

It have within auto memory mode, remote control, SDK, security function, and key dataachable function of high performance with clock car stereo.

FEATURES

○ Receiving band

AREA	CODE A2A1A0	BAND	FREQUENCY RANGE [Hz]	STEP [Hz]	FREF [Hz]	IF [Hz]
EUROPE	000 or 001	FM	87.50 ~ 108.00M	50k	50k	+ 10.70M
		MW	522 ~ 1620k	9k	9k	+ 450k
		LW	153 ~ 281k	1k	1k	
USA1	010	FM	87.5 ~ 107.9M	200k	50k	+ 10.7M
		MW	520 ~ 1710k	10k	10k	+ 450k
USA2	011	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	520 ~ 1710k	10k	10k	+ 450k
LATIN AMERICA	100	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	520 ~ 1620k	5k	5k	+ 450k
AUSTRALIA MIDDLE AND NEAR EAST	101	FM	87.5 ~ 108.0M	100k	50k	+ 10.7M
		MW	531 ~ 1602k	9k	9k	+ 450k
EASTERN EUROPE	110	FM	65.50 ~ 74.00M 87.50 ~ 108.00M	50k	50k	+ 10.70M
		MW	522 ~ 1620k	9k	9k	+ 450
SOUTH AFRICA	111	FM	87.50 ~ 108.00M	50k	50k	- 10.7M
		MW	531 ~ 1602k	9k	9k	+ 450k

(Note) CODE = "000" is 3 Band version of Europe.

CODE = "001" is 2 Band version of Europe.

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- Tuning function
 - Manual tuning
 - SEek tuning (up/down)
 - SCan tuning (up/*down) * Scan down tuning : Remote controller only.
 - Preset memory scan tuning
 - Auto memory tuning
 - IF count can be used (FM = ± 10.7 MHz, MW = 450 kHz)
- MEMORY FUNCTION
 - Preset memory
 - FM 18 stations (FM1, FM2, FM3)
 - MW 12 stations (MW1, MW2)
 - LW 6 stations
 - SDK 6 stations
 - One touch memory
- Function switch
 - Stereo / mono
 - Local / DX
 - Loudness on / off
 - Metal tape / normal tape
 - Dolby on / off and "B", "C"
 - ASP on / off
- Other functions
 - SDK / SK function
 - Remote control (Transmitter IC : TC9243P, TC9243F)
 - Security function
 - Key detachable function (Key input IC : TC9290P, TC9290F)
 - Power switch function
 - Tape direction indication
 - CD input

○ Tracking data

BAND	AREA	M1	M2	M3	M4	M5	M6
FM	EUROPE, SOUTH AFRICA	87.50	87.90	97.90	105.90	108.00	87.50
	USA1	87.5	87.9	97.9	105.9	107.9	87.5
	AUSTRALIA, LATIN AMERICA USA2, MIDDLE AND NEAR EAST	87.5	87.9	97.9	105.9	108.0	87.5
	EASTERN EUROPE	65.50	74.00	87.50	97.90	108.00	65.50
MW	EUROPE, EASTERN EUROPE	522	603	999	1404	1620	522
	USA1, 2	520	600	1000	1400	1710	520
	LATIN AMERICA	520	600	1000	1400	1620	520
	AUSTRALIA, SOUTH AFRICA MIDDLE AND NEAR EAST	531	603	999	1404	1602	531
LW	EUROPE	153	164	218	272	281	153

1997-06-25 3/4

LAYOUT (Key detachable specification)

