TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

TC9309AF-125

SINGLE CHIP DIGITAL TUNING SYSTEM FOR 3 DISC CD CHANGER UNIT

TC9309AF-125 is a CMOS LSI designed for a PLL frequency synthesizer radio system corresponded to the requirement of 2 areas.
Since TC9309AF-125 can be used for TC9284BF the CD processor and receive remote control signal, a low cost compact 3 CD with radio system can be constructed.

FEATURES

○ Receiving band and preset memory

AREA	CODE AREA	BAND	RECEIVING FREQUENCY [Hz]	STEP [Hz]	REFERENCE FREQUENCY [Hz]	INTERMEDIATE FREQUENCY [Hz]
EUROPE	0	FM	87.50～108.00M	50k	50k	+10.70M
		MW	522～ 1620k	9k	9k	+450k
		LW	150～ 285k	1k	1k	
USA	1	FM	87.5～ 108.0M	100k	50k	+10.7M
		AM	520～ 1710k	10k	10k	+450k

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○ Tuning functions and preset memory

- manual up / down tuning
- seek up / down tuning
- scan up tuning
- IF count (FM = 10.7MHz, MW (AM), LW = 450kHz)
- Preset memory

  EUROPE area : FM 10 stations, MW 5 stations, LW 5 stations

  USA area FM 10 stations, AM 10 stations
- indication of STEREO mark.

○ CD functions

- CD F-SKIP, R-SKIP
- CD FF / REW
- repeat play or track repeat play
- memory play (max 20 preset)
- tray open / close control
- 3 disk CD changer control (Mecha : SAMSUNG [CMS-CR3])
- synchro recording mode

○ Clock functions

- 24H clock (EUROPE area)
- 12H clock (USA area)

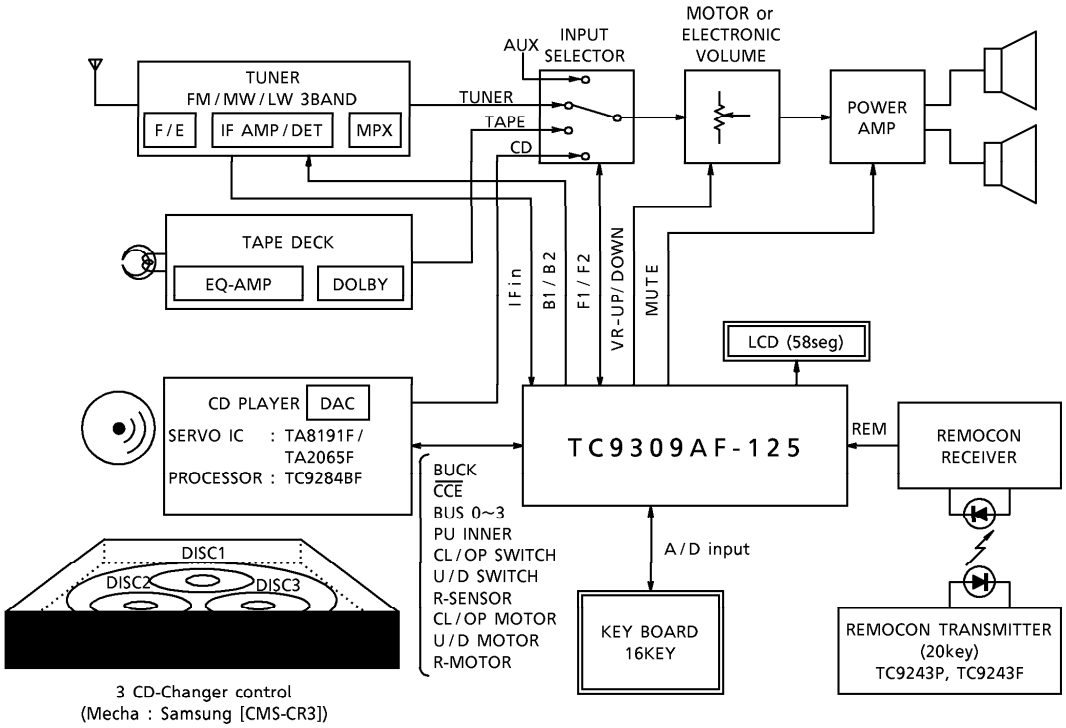
○ Remote control functions

- volume up / down control
- mute ON / OFF control

○ Other functions

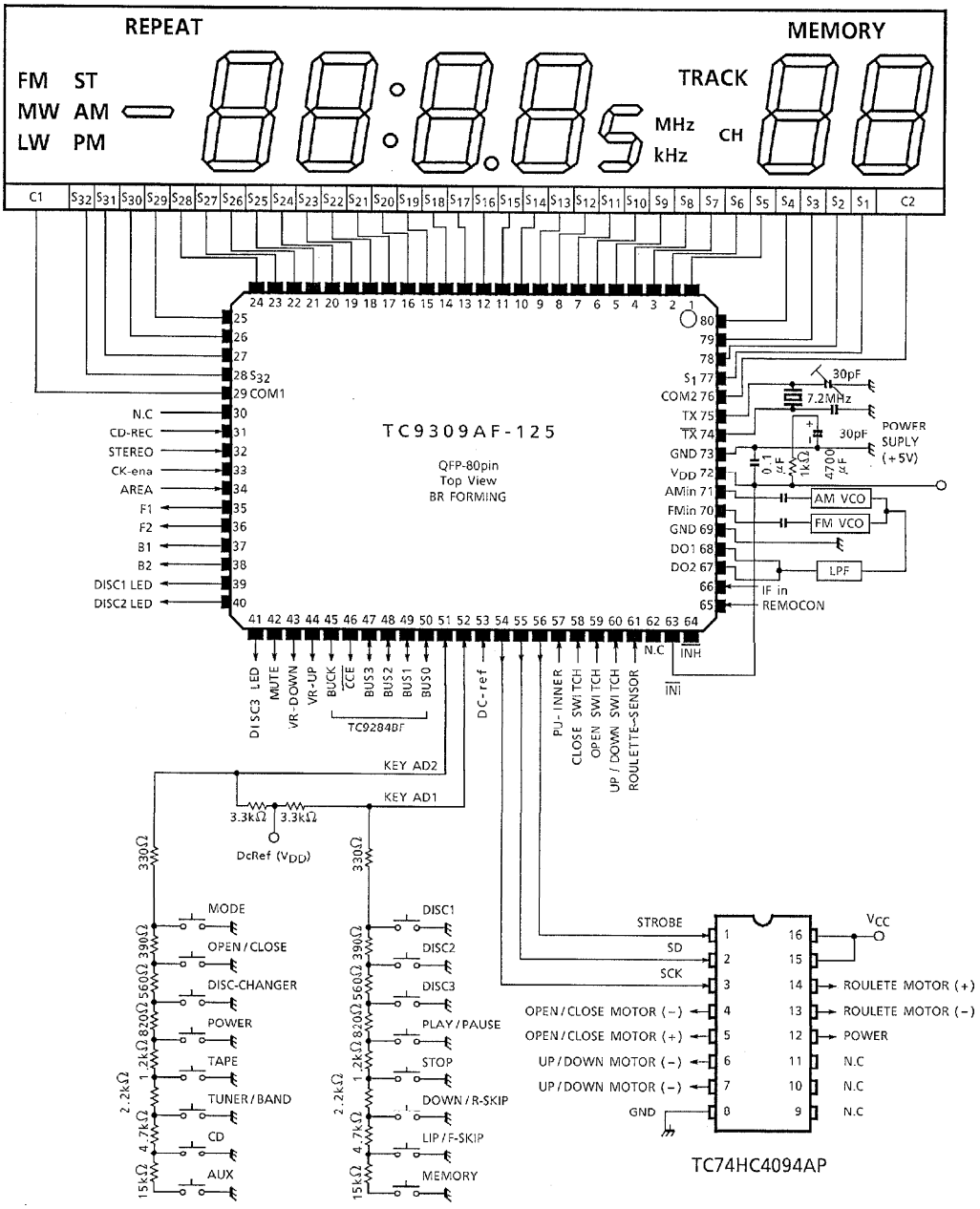
- function change (CD / TUNER / TAPE / AUX)
- power on / off key

BLOCK DIAGRAM



3 CD-Changer control
(Mecha : Samsung [CMS-CR3])

LAYOUT


REPEAT
MEMORY
FM ST
MW AM
LW PM
TRACK
MHz
kHz
CH
TC9309AF-125
QFP-80pin
Top View
BR FORMING
TC9284BF
TC74HC4094AP
AM VCO
FM VCO
LPF
30pF
7.2MHz
30pF
POWER SUPLY (+5V)
IF in
REMOCON
KEY AD2
KEY AD1
3.3kΩ
3.3kΩ
DcRef (VDD)
MODE
OPEN / CLOSE
DISC-CHANGER
POWER
TAPE
TUNER / BAND
CD
AUX
DISC1
DISC2
DISC3
PLAY / PAUSE
STOP
DOWN / R-SKIP
LIP / F-SKIP
MEMORY
STROBE
SD
SCK
OPEN / CLOSE MOTOR (−)
OPEN / CLOSE MOTOR (+)
UP / DOWN MOTOR (−)
UP / DOWN MOTOR (−)
GND
VCC
ROULETE MOTOR (+)
ROULETE MOTOR (−)
POWER
N.C
N.C
N.C