

4-BIT MICROCONTROLLERS

TLCS-470 Series (CMOS)

FEATURES

Higher Performance Versions of TLCS-47 Series

- (1) Software compatible
- (2) Architecturally compatible

Memory Capacity

- (3) Max. 8K byte ROM and max. 512-nibble RAM
- (4) EPROM built-in type available
- (5) One-time PROM built-in type available

Basic Functions

- (6) 92 instructions; min. execution time 1.3 μ s (at 6 MHz)
- (7) Dual clock system (low power consumption available)
- (8) Watchdog timer
- (9) 8-bit serial interface (simultaneous signal transmission/reception)

Additional Functions

Devices with the following on-chip functions are available:

- (1) VFT driver (16 \times 8 or 16 \times 12)
- (2) LCD driver (32 \times 4)
- (3) LED driver (8)
- (4) Many inputs/outputs
- (5) D/A conversion (pulse width modulation) output circuit
- (6) 4-bit A/D conversion input circuit
- (7) A/D converter (8 bits \times 8 ch)
- (8) Remote-controlled circuit
- (9) High-speed timer/counter
- (10) Display ON screen
- (11) EEPROM

4-BIT MICROCONTROLLER – TLCS-470 CMOS SERIES

PART NUMBER	FUNCTIONS	ROM (bit)	RAM (bit)	I/O (bit)	MINIMUM CYCLE TIME (μ S)	SUPPLY VOLTAGE (V)	PACKAGE
TMP47C800N TMP47C800F	STANDARD (LED DRIVER)	8192 \times 8	512 \times 4	36	1.3 (244)	4.5–6.0	42-PIN SDIP 44-PIN PQFP
TMP47P800N TMP47P800F		OTP 8192 \times 8					42-PIN CERDIP WITH WINDOW
TMP47P800E		EPROM 8192 \times 8					80-PIN PQFP
TMP47C620F	LCD DRIVER	6144 \times 8	384 \times 4	28	1.9	4.5–6.0	42-PIN SDIP 44-PIN PQFP
TMP47C820F	HIGH SPEED TIMER/COUNTER	8192 \times 8	512 \times 4				
TMP47P820F	OTP 8192 \times 8						
TMP47CE820F	ON-CHIP EEPROM 64 \times 8BIT	8192 \times 8					
TMP47C434N TMP47C434F	DISPLAY ON SCREEN CIRCUIT D/A CONVERSION (PWM) OUTPUT 3-BIT A/D CONVERSION INPUT REMOTE CONTROL PRE-PROCESSING LED DRIVER	4096 \times 8	256 \times 4	28	2.2 (244)	4.5–5.5	42-PIN SDIP 44-PIN PQFP
TMP47C634N TMP47C634F		6144 \times 8	384 \times 4	30			42-PIN SDIP
TMP47C834N		8192 \times 8	512 \times 4	41			54-PIN SDIP
TMP47P834N		OTP 8192 \times 8					
TMP47C635N		6144 \times 8	384 \times 4	52			
TMP47C850N	BEEP OUTPUT	8192 \times 8	512 \times 4	36	2.7–6.0	4.5–6.0	64-PIN SDIP
TMP47C856F			1024 \times 4				80-PIN PQFP
TMP47C858F	DTMF GENERATOR, LCD DRIVER		512 \times 4				100-PIN PQFP
TMP47C660N TMP47C660F	8-BIT A/D CONVERTER	6144 \times 8	384 \times 4	56	1.3 (244)	4.5–6.0	64-PIN SDIP 64-PIN PQFP
TMP47C860N TMP47C860F	REMOTE CONTROL PRE-PROCESSING LED DRIVER	8192 \times 8	512 \times 4				
TMP47P860N TMP47P860F	OTP 8192 \times 8						
TMP47P860E		EPROM 8192 \times 8					64-PIN SDIC WITH WINDOW
TMP47C662N	VFT DRIVER PULSE GENERATOR	6144 \times 8	384 \times 4	55	1.3 (244)	4.5–6.0	64-PIN SDIP
TMP47C862N		8192 \times 8	512 \times 4				
TMP47C670N TMP47C670F	VFT DRIVER	6144 \times 8	384 \times 4	53	1.3 (244)	4.5–6.0	64-PIN SDIP 64-PIN PQFP
TMP47C870N TMP47C870F	D/A CONVERSION (PWM) OUTPUT	8192 \times 8	512 \times 4				
TMP47P870N TMP47P870F	4-BIT A/D CONVERSION INPUT	OTP 8192 \times 8					
TMP47P870E	REMOTE CONTROL PRE-PROCESSING	EPROM 8192 \times 8					