

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