

## CMOS 4-BIT MICROCONTROLLER

**TMP47C452BN**  
**TMP47C452BF**

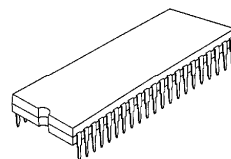
The 47C452B is a high performance 4-bit single chip microcomputer based on the TLCS-47 CMOS series. And the 47C452B has a built-in large-capacity RAM for repertory dial and DTMF generator, which is suitable for application in telephones. The 47C452B is also capable of operation with low voltage such as those supplied by telephone line.

PART No.	ROM	RAM	PACKAGE	OTP version
TMP47C452BN	4096 × 8-bit	768 × 4-bit	SDIP42-P-600-1.78	TMP47P452VN
TMP47C452BF			QFP44-P-1414-0.80D	TMP47P452VF

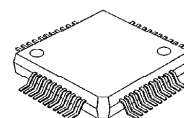
## FEATURES

- ◆4-bit single chip microcomputer
- ◆Instruction execution time : 16.7  $\mu$ s (at 480kHz)
- ◆Low voltage operation : 2.2V min.
- ◆90 basic instructions
- ◆Table look-up instructions
- ◆Subroutine nesting : 15 levels max.
- ◆6 interrupt sources (External : 2, Internal : 4)  
All sources have independent latches each, and multiple interrupt control is available
- ◆I/O port (35 pins)
  - Input 2ports 5pins
  - I/O 7ports 27pins
  - Output 1port 3pins
- ◆Interval Timer (22 stages)
- ◆Two 12-bit Timer/Counters  
Timer, event counter, and pulse width measurement mode
- ◆Serial Interface with 4-bit buffer  
External/internal clock, leading/trailing edge shift mode
- ◆DTMF (Dual Tone Multi Frequency) output
  - DTMF output with one instruction
  - Single tone output function
- ◆RAM for repertory dial : 768 × 4-bit max.
- ◆BEEP output function
- ◆Hold function
  - Battery/Capacitor back-up
  - Hold function controlled by port K0
- ◆Real Time Emulator : BM47215B

SDIP42-P-600-1.78


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