Toshiba Semiconductor and Storage - TMP86FHDMG(KYZ) Datasheet

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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "Embedded - Microcontrollers"

Details	
Product Status	Obsolete
Core Processor	870/C
Core Size	8-Bit
Speed	16MHz
Connectivity	I²C, SEI, UART/USART
Peripherals	PWM, WDT
Number of I/O	24
Program Memory Size	16KB (16K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	512 x 8
Voltage - Supply (Vcc/Vdd)	2.7V ~ 5.5V
Data Converters	A/D 6x10b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	30-LSSOP (0.220", 5.60mm Width)
Supplier Device Package	30-SSOP
Purchase URL	https://www.e-xfl.com/product-detail/toshiba-semiconductor-and-storage/tmp86fhdmg-kyz

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10.3.6 Programmable Pulse Generate (PPG) Output Mode

Note 1: To change TC1DRA or TC1DRB during a run of the timer, set a value sufficiently larger than the count value of the counter. Setting a value smaller than the count value of the counter during a run of the timer may generate a pulse different from that specified.

Note 2: Do not change TC1CR<TFF1> during a run of the timer. TC1CR<TFF1> can be set correctly only at initialization (after reset). When the timer stops during PPG, TC1CR<TFF1> can not be set correctly from this point onward if the PPG output has the level which is inverted of the level when the timer starts. (Setting TC1CR<TFF1> specifies the timer F/F1 to the level inverted of the programmed value.) Therefore, the timer F/F1 needs to be initialized to ensure an arbitrary level of the PPG output. To initialize the timer F/F1, change TC1CR<TC1M> to the timer mode (it is not required to start the timer mode), and then set the PPG mode. Set TC1CR<TFF1> at this time.

Note 3: In the PPG mode, the following relationship must be satisfied.

TC1DRA > TC1DRB

Note 4: Set TC1DRB after changing the mode of TC1M to the PPG mode.

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                Setting port
LD      (TC1CR), 10000111B      ; Sets the PPG mode, selects the source clock
LDW     (TC1DRA), 007DH         ; Sets the cycle (1 ms ÷ 2^7/fc µs = 007DH)
LDW     (TC1DRB), 0019H         ; Sets the low-level pulse width (200 µs ÷ 2^7/fc = 0019H)
LD      (TC1CR), 10010111B      ; Starts the timer
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