Vergleich der Pic 16X84 Derivate

Difference	PIC16C84	PIC16F83/F84	PIC16CR83/ CR84	PIC16F84A
Program Memory size	1k x 14	512 x 14 / 1k x 14	512 x 14 / 1k x 14	1k x 14
Data Memory size	36 x 8	36 x 8 / 68 x 8	36 x 8 / 68 x 8	68 x 8
Voltage Range	2.0V - 6.0V (-40°C to +85°C)	2.0V - 6.0V (-40°C to +85°C)	2.0V - 6.0V (-40°C to +85°C)	2.0V - 5.5V (-40°C to +125°C)
Maximum Operating Frequency	10MHz	10MHz	10MHz	20MHz
Supply Current (I_{DD}). See parameter # D014 in the electrical spec's for more detail.	I_{DD} (typ) = 60µA I_{DD} (max) = 400µA (LP osc, F_{OSC} = 32kHz, V_{DD} = 2.0V, WDT disabled)	I_{DD} (typ) = 15µA I_{DD} (max) = 45µA (LP osc, F_{OSC} = 32kHz, V_{DD} = 2.0V, WDT disabled)	I_{DD} (typ) = 15µA I_{DD} (max) = 45µA (LP osc, F_{OSC} = 32kHz, V_{DD} = 2.0V, WDT disabled)	I_{DD} (typ) = 15µA I_{DD} (max) = 45µA (LP osc, F_{OSC} = 32kHz, V_{DD} = 2.0V, WDT disabled)
Power-down Current (I_{PD}). See parameters # D020, D021, and D021A in the electrical spec's for more detail.	I_{PD} (typ) = 26µA I_{PD} (max) = 100µA (V_{DD} = 2.0V, WDT disabled, industrial)	I_{PD} (typ) = 0.4µA I_{PD} (max) = 9µA (V_{DD} = 2.0V, WDT disabled, industrial)	I_{PD} (typ) = 0.4µA I_{PD} (max) = 6µA (V_{DD} = 2.0V, WDT disabled, industrial)	I_{PD} (typ) = 0.4µA I_{PD} (max) = 9µA (V_{DD} = 2.0V, WDT disabled, industrial)
Input Low Voltage (V_{IL}). See parameters # D032 and D034 in the electrical spec's for more detail.	V_{IL} (max) = 0.2V_{DD} (Osc1, RC mode)	V_{IL} (max) = 0.1V_{DD} (Osc1, RC mode)	V_{IL} (max) = 0.1V_{DD} (Osc1, RC mode)	V_{IL} (max) = 0.1V_{DD} (Osc1, RC mode)
Input High Voltage (V_{IH}). See parameter # D040 in the electrical spec's for more detail.	V_{IH} (min) = 0.36V_{DD} (I/O Ports with TTL, 4.5V ≤ V_{DD} ≤ 5.5V)	V_{IH} (min) = 2.4V (I/O Ports with TTL, 4.5V ≤ V_{DD} ≤ 5.5V)	V_{IH} (min) = 2.4V (I/O Ports with TTL, 4.5V ≤ V_{DD} ≤ 5.5V)	V_{IH} (min) = 2.4V (I/O Ports with TTL, 4.5V ≤ V_{DD} ≤ 5.5V)
Data EEPROM Memory Erase/Write cycle time (T_{DEW}). See parameter # D122 in the electrical spec's for more detail.	T_{DEW} (typ) = 10ms T_{DEW} (max) = 20ms	T_{DEW} (typ) = 10ms T_{DEW} (max) = 20ms	T_{DEW} (typ) = 10ms T_{DEW} (max) = 20ms	T_{DEW} (typ) = 4ms T_{DEW} (max) = 10ms

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Port Output Rise/Fall time (TioR, TioF). See parameters #20, 20A, 21, and 21A in the electrical spec's for more detail.	TioR, TioF (max) = 25ns (C84) TioR, TioF (max) = 60ns (LC84)	TioR, TioF (max) = 35ns (C84) TioR, TioF (max) = 70ns (LC84)	TioR, TioF (max) = 35ns (C84) TioR, TioF (max) = 70ns (LC84)	TioR, TioF (max) = 35ns (C84) TioR, TioF (max) = 70ns (LC84)
$\overline{\text{MCLR}}$ on-chip filter. See parameter #30 in the electrical spec's for more detail.	No	Yes	Yes	Yes
PORTA and crystal oscillator values less than 500kHz	For crystal oscillator configurations operating below 500kHz, the device may generate a spurious internal Q-clock when PORTA<0> switches state.	N/A	N/A	N/A
RB0/INT pin	TTL	TTL/ST* (* Schmitt Trigger)	TTL/ST* (* Schmitt Trigger)	TTL/ST* (* Schmitt Trigger)
EEADR<7:6> and I_{DD}	It is recommended that the EEADR<7:6> bits be cleared. When either of these bits is set, the maximum I_{DD} for the device is higher than when both are cleared.	N/A	N/A	N/A
The polarity of the PWRTE bit	PWRTE	$\overline{\text{PWRTE}}$	$\overline{\text{PWRTE}}$	$\overline{\text{PWRTE}}$
Recommended value of R_{EXT} for RC oscillator circuits	R_{EXT} = 3kΩ - 100kΩ	R_{EXT} = 5kΩ - 100kΩ	R_{EXT} = 5kΩ - 100kΩ	R_{EXT} = 3kΩ - 100kΩ
GIE bit unintentional enable	If an interrupt occurs while the Global Interrupt Enable (GIE) bit is being cleared, the GIE bit may unintentionally be re-enabled by the user's Interrupt Service Routine (the `RETFIE` instruction).	N/A	N/A	N/A
Packages	PDIP, SOIC	PDIP, SOIC	PDIP, SOIC	PDIP, SOIC, SSOP