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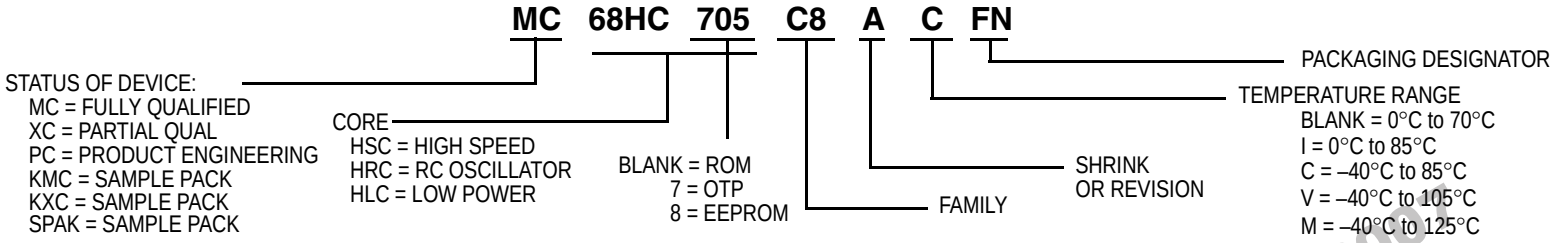
What's New!

Device
MC68HC08AZ60
MC68HC908GR4
MC68HC08GR8
MC68HC08JT8
MC68HC08KX8
MC68HC08MR4
MC68HC908MR8
XC68HC12BC32
XC68HC12D60
XC68HC12D60
MC68HC912DT128A

Device Numbering System for 68HC05



68HC05 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
MC68HC05B6	6K	176	—	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	4.0	C, V, M	56 SDIP (B) 52 PLCC (FN) 64 QFP (FU)	705B16 705B32	Now	SCI has synchronous master SPI-like capability	MC68HC05B6/D
MC68HC05B8	7K	176	—	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	4.0	C, V	56 SDIP (B) 52 PLCC (FN) 64 QFP (FU)	705B16 705B32	Now	SCI has synchronous master SPI-like capability	MC68HC05B6/D
MC68HC05B16	15K	352	—	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	4.0	C, V, M	56 SDIP (B) 52 PLCC (FN) 64 QFP (FU)	705B16 705B32	Now	SCI has synchronous master SPI-like capability	MC68HC05B6/D
MC68HC705B16	—	352	15K	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	2.1	C, V, M	52 PLCC (FN) 64 QFP (FU) 52 CLCC (FS)	—	Now	Use 705B32 as OTP for SDIP. SCI has synchronous master SPI-like capability	MC68HC05B6/D
MC68HC05B32	32K	528	—	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	2.1	PLCC/ QFP: C, V, M SOIC: 0-70°C	56 SDIP (B) 52 PLCC (FN) 64 QFP (FU)	705B32	Now	SCI has synchronous master SPI-like capability	MC68HC05B6/D
XC68HC705B32	—	528	32K	256	16-Bit 2 IC, 2 OC	32	SCI See comment	8-CH 8-Bit	2-CH 8-Bit	Y	3.3, 5.0	2.1	C	56 SDIP (B) 52 PLCC (FN) 64 QFP (FU) 52 CLCC (FS)	—	LTD	SCI has synchronous master SPI-like capability	MC68HC05B6/D
MC68HC05BD5	7.75K	256	—	—	MFT	24	I^2C	—	16-CH 8-Bit	Y	5.0	2.1	0-70°C only	40 DIP (P) 42 SDIP (B)	705BD3	Now	Horizontal & vertical sync signal processor	MC68HC05BD3D/H
MC68HC05C8A	8K	176	—	—	16-Bit 1 IC, 1 OC	31	SCI SPI	—	—	Y	3.3, 5.0	4.0	C, V	40 DIP (P) 42 SDIP (B) 44 PLCC (FN) 44 QFP (FB)	705C8A	Now	KBI (8 pins), 1 high-current pin (20mA) Automotive qual complete	MC68HC05C8A/D
MC68HC705C8A	—	304	8K	—	16-Bit 1 IC, 1 OC	31	SCI SPI	—	—	Y	3.3, 5.0	4.0	C, V, M	40 DIP (P) 40 CDIP (S) 42 SDIP (B) 44 PLCC (FN) 44 QFP (FB) 44 CLCC (FS) 64 QFP (FU)	—	Now	KBI (8 pins), 1 high-current pin (20mA), high-speed option (4-MHz bus) available as MC68HSC705C8A Sample pack part numbers: KMC705C8ACP/S/B KMC705C8ACFB/FN/FS/FU	MC68HC705C8A/D

68HC05 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
MC68HC05C9A	16K	352	—	—	16-Bit IC, 1 OC	31	SCI SPI	—	—	Y	3.3, 5.0	4.0	C, V, M	40 DIP (P) 42 SDIP (B) 44 PLCC (FN) 44 QFP (FB)	705C9A	Now	KBI (8 pins), 1 high-current pin (20mA)	MC68HC05C9A/D
MC68HC705C9A	—	352	16K	—	16-Bit 1 IC, 1 OC	31	SCI SPI	—	—	Y	3.3, 5.0	2.1	C	40 DIP (P) 40 CDIP (S) 42 SDIP (B) 44 PLCC (FN) 44 CLCC (FS) 44 QFP (FB)	—	Now	KBI (8 pins), 1 high-current pin (20mA) Sample pack part numbers: KMC705C9ACP/S/B KMC705C9ACFN/FS/FB Automotive qual complete	MC68HC705C9A/D
MC68HC705F32	—	920	32K	256	16-Bit 4 IC, 4 OC, MFT, RTI	Up to 80	SCI SPI	8-CH 8-Bit	3-CH 8-Bit	Y	3.0, 5.0	2.1	0-70°C only	100 LQFP (PU) 80 QFP (FU)	—	Now	DTMF, LCD (4 x 40), KBI (8 pins) Note: FU package is XC qualified only	MC68HC05F32/D
MC68HC05J1A	1.2K	64	—	—	MFT, RTI	14	—	—	—	Y	2.0, 3.3, 5.0	4.0	C, V	20 DIP (P) 20 SOIC (DW)	705J1A	Now	KBI (4 pins), mask selectable pulldowns, 4 high-current pins (8mA)	MC68HC05J1A/D
MC68HC705J1A	—	64	1.2K	—	MFT, RTI	14	—	—	—	Y	3.3, 5.0	4.0	C, V	20 DIP (P) 20 SOIC (DW)	—	Now	KBI (4 pins), programmable pulldowns, 4 high-current pins (8mA), RC option available as MC68HRC705J1A, high-speed option available as MC68HSC705J1A	MC68HC705J1A/D MC68HC705J1AAD/D
MC68HC05J5A	2.5K	128	—	—	16-Bit 1 IC, MFT, RTI	14	—	—	—	Y	2.2, 5.0	2.1	0-70°C only	20 DIP (P) 20 SOIC (DW) 16 DIP (JP) 16 SOIC (JDW)	705J5A	Now	2 high-current pins (25mA), LVR, RC option available	HC05J5AGRS/H
MC68HC705J5A	—	128	2.5K	—	16-Bit 1 IC, MFT, RTI	14	—	—	—	Y	5.0	2.1	0-70°C only	20 DIP (P) 20 SOIC (DW)	—	Now	2 high-current pins (25mA), LVR, RC option available	HC05J5AGRS/H
MC68HC05JB3	2.5K	144	—	—	16-Bit 1 IC, 1 OC, MFT, RTI	19	USB	—	—	Y	5.0	3.0	0-70°C only	20 DIP (JP) 20 SOIC (JDW) 28 DIP (P) 28 SOIC (DW)	705JB3	Now	1.5mbs USB with 3 end-points, low-voltage reset, KBI, 3.3V bandgap reference	HC05JB3GRS/H
XC68HC705JB3	—	144	2.5K	—	16-Bit 1 IC, 1 OC, MFT, RTI	19	USB	—	—	Y	5.0	3.0	0-40°C only	20 DIP (JP) 28 DIP (P) 28 SOIC (DW)	—	Now	1.5mbs USB with 3 end-points, low-voltage reset, KBI, 3.3V bandgap reference	HC05JB3GRS/H
MC68HC05JB4	3.5K	176	—	—	16-Bit 1 IC, 1 OC, MFT, RTI	19	USB	6-CH 8-Bit	—	Y	5.0	3.0	0-70°C only	28 DIP (P) 28 SOIC (DW)	705JB4	Now	1.5mbs USB with 3 end-points, low-voltage reset, KBI, 3.3V bandgap reference	HC05JB4GRS/H
MC68HC705JB4	—	176	3.5K	—	16-Bit 1 IC, 1 OC, MFT, RTI	19	USB	6-CH 8-Bit	—	Y	5.0	3.0	0-40°C only	28 DIP (P) 28 SOIC (DW) 28 CDIP (S)	—	Now	1.5mbs USB with 3 end-points, low-voltage reset, KBI, 3.3V bandgap reference	HC05JB4GRS/H
MC68HC05JJ6	6K	224	—	—	16-Bit 1 IC, 1 OC, MFT, RTI	14	SIOP	4-CH 12-Bit	—	Y	3.3, 5.0	2.1	C	20 DIP (P) 20 SOIC (DW)	705JJ7	Now	2 voltage comparators used as single slope A/D, KBI (8 pins), 6 high-current pins (10mA), mask selectable pulldowns, LVR	HC05JJ6GRS/D

68HC05 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
XC68HC705JJ7	—	224	6K + 64-Bit PEP	—	16-Bit 1 IC, 1 OC, MFT, RT	14	SIOP	4-CH 12-Bit	—	Y	3.3, 5.0	2.1	C	20 DIP (P) 20 SOIC (DW) 20 CDIP (S)	—	Now	2 voltage comparators used as single slope A/D, KBI (8 pins), 6 high-current pins (10mA), programmable pull-downs, LVR	HC705JJ7GRS/D
MC68HC05JP6	6K	224	—	—	16-Bit 1 IC, 1 OC, MFT, RT	22	SIOP	4-CH 12-Bit	—	Y	3.3, 5.0	2.1	C	28 DIP (P) 28 SOIC (DW)	705JP7	Now	2 voltage comparators used as single slope A/D, KBI (8 pins), 6 high-current pins (10mA), mask selectable pulldowns, LVR	HC05JJ6GRS/D
XC68HC705JP7	—	224	6K + 64-Bit PEP	—	16-Bit 1 IC, 1 OC, MFT, RTI	22	SIOP	4-CH 12-Bit	—	Y	3.3, 5.0	2.1	C	28 DIP (P) 28 SOIC (DW) 28 CDIP (S)	—	Now	2 voltage comparators used as single slope A/D, KBI (8 pins), 6 high-current pins (10mA), programmable pull-downs, LVR	HC705JJ7GRS/D
MC68HC05K3	0.9K	64	—	16 PEEP	MFT, RTI	10	—	—	—	Y	3.3, 5.0	2.1	C	16 SOIC (DW) 20 SSOP (SD)	805K3	Now	Personality EEPROM, RTI, KBI	MC68HC05K3/D
MC68HC705KJ1	—	64	1.2K	—	MFT, RTI	10	—	—	—	Y	3.3, 5.0	4.0	C	16 DIP (P) 16 SOIC (DW)	—	Now	KBI (4 pins), programmable pulldowns (10 pins), 4 high-current pins (10mA). RC option available as MC68HRC705KJ1. High-speed standard. 32kHz low-power version available as MC68HLC705KJ1.	MC68HC705KJ1/D
MC68HC05L16	16K	512	—	—	16-Bit 1 IC, 1 OC, 8-Bit 1 IC, 1 OC, RTI	39	SIOP	—	—	—	2.2, 3.3, 5.0	2.1	C	80 QFP (FU)	705L16	Now	LCD with 4x39 segments, KBI (8 pins), dual oscillators, 8 high-current pins, programmable pullups, open drain	HC05L16GRS/D
MC68HC705L16	—	512	16K	—	16-Bit 1 IC, 1 OC, 8-Bit 1 IC, 1 OC, RTI	39	SIOP	—	—	—	3.3, 5.0	2.1	C	80 QFP (FU)	—	Now	LCD with 4x39 segments, KBI (8 pins), dual oscillators, 8 high-current pins, programmable pullups, open drain	HC05L16GRS/D
MC68HC05L25	6K	176	—	—	16-Bit Event, Timebase	20	SPI	2-CH 8-Bit	—	Y	3.3, 5.0	2.1	C	52 LQFP (PB) 32 LQFP (FA)	705L26	Now	24x4 or 25x3 LCD	HC05L25GRS/D
MC68HC05LJ5	1.2K	64	—	—	MFT, RTI	14	—	—	—	Y	5.0	2.1	0-70°C only	16 DIP (P)	705J5A	Now	RC option available	HC05LJ5GRS/H
MC68HC05P4A	4K	176	—	—	16-Bit 1 IC, 1 OC	21	SIOP	—	—	Y	3.3, 5.0	2.1	C, V	28 DIP (P) 28 SOIC (DW)	705P6A	Now	KBI, 2 high-current pins. Not recommended for electrically noisy environments, EMC sensitive. Halt mode not available.	MC68HC05P4A/D
MC68HC05P6	4.5K	176	—	—	16-Bit 1 IC, 1 OC	21	SIOP	4-CH 8-Bit	—	Y	3.3, 5.0	2.1	C, V, M	28 DIP (P) 28 SOIC (DW) 32 LQFP (FB)	705P6A	Now		MC68HC05P6/D MC68HC05P6AD/D
MC68HC705P6A	—	176	4.5K	—	16-Bit 1 IC, 1 OC	21	SIOP	4-CH 8-Bit	—	Y	3.3, 5.0	2.1	C	28 DIP (P) 28 SOIC (DW) 28 CDIP (S) 28 SSOP (SD)	—	Now	KBI (8 pins), 2 high-current pins (15mA). Umbrella OTP for P1A, P4A, P6, and P9A Automotive qual complete	HC705P6AGRS/D

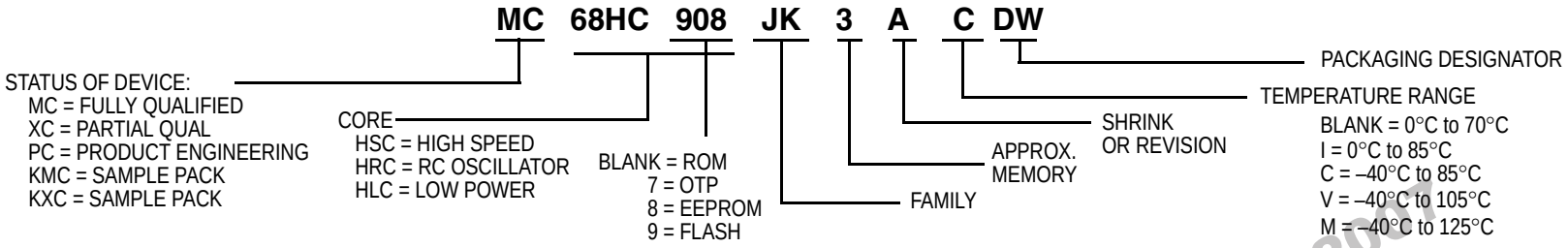
68HC05 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
MC68HC05SR3	3.75K	192	—	—	8-Bit	32	—	4-CH 8-Bit	—	—	3.3, 5.0	2.1	C	40 DIP (P) 44 QFP (FB) 42 SDIP (B)	705SR3	Now	LED drive, LVR, KBI	MC68HC05SR3D/H
MC68HC705SR3	—	192	3.75K	—	8-Bit	32	—	4-CH 8-Bit	—	—	3.3, 5.0	2.1	C	40 DIP (P) 40 CDIP (S) 44 QFP (FB) 42 SDIP (B)	—	Now	LED drive, KBI, LVR. OTP for both HC05SU3A & HC05SR3	MC68HC05SR3D/H
MC68HC05SU3A	3.75K	192	—	—	8-Bit	32	—	—	—	—	5.0	2.1	0-70°C only	40 DIP (P)	705SR3	Now	KBI, LED drive	MC68HC05SU3A/H
MC68HC05X4	4K	176	—	—	16-Bit 1 IC, 1 OC, MFT, RTI	16	CAN	—	—	Y	5.0	2.1	C	28 SOIC (DW)	705X4 (limited)	Now	CAN 2.0A (not B)	MC68HC05X4/D
XC68HC705X4	—	176	4K	—	16-Bit 1 IC, 1 OC, MFT, RTI	16	CAN	—	—	Y	5.0	2.1	C	28 SOIC (DW)	—	Now	CAN 2.0A (not B)	MC68HC05X4/D

68HC05 Reference Manuals

M68HC05AG/AD	Applications Guide
M68HC05TB/D	Understanding Small Microcontrollers Text Book

Device Numbering System for 68HC08



68HC08 Family

Device	ROM (Bytes)	RAM (Bytes)	FLASH or OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Freq (MHz)	Temp.	Package Options	OTP or FLASH	Avail.	Comments	Documentation
MC68HC08AB16A	16K	512	—	512	4-CH + 4-CH 16-Bit IC, OC, or PWM	51	SCI SPI	8-CH 8-Bit	See Timer	Y	5.0	8.0	C, M	64 QFP (FU)	908AB32	Now	Programmable interrupt timer module	MC68HC08AB16A/D
MC68HC908AB32	—	1K	32K FLASH	512	4-CH + 4-CH 16-Bit IC, OC, or PWM	51	SCI SPI	8-CH 8-Bit	See Timer	Y	5.0	8.0	C, V, M	64 QFP (FU)	—	Now	Programmable interrupt timer module Sample pack part numbers: KMC908AB32CFU/MFU/VFU	MC68HC908AB32/D
MC68HC908AS60	MC908AS60A is a pin-compatible replacement.																	
MC908AS60A	—	2K	60K FLASH	1K	6-CH + 2-CH 16-Bit IC, OC, or PWM	40/ 50	SCI SPI	15-CH 8-Bit	See Timer	Y	5.0	8.4	C, V, M	64 QFP (FU) 52 PLCC (FN)	—	Now	J1850; MC908AS60A is pin-for-pin compatible replacement for MC68HC908AS60.	MC68HC908AZ60A/ D
XC68HC08AZ32	32K	1K	—	512	4-CH + 2-CH 16-Bit IC, OC, or PWM	40/ 50	SCI SPI CAN	8-CH or 15-CH 8-Bit	See Timer	Y	5.0	8.4	C, V, M	64 QFP (FU) 52 PLCC (FN)	908AZ60 A	Now	CAN 2.0A & 2.0B	MC68HC08AZ32/D
MC68HC908AZ60	MC908AZ60A is a pin-compatible replacement.																	
MC908AZ60A	—	2K	60K FLASH	1K	6-CH + 2-CH 16-Bit IC, OC, or PWM	50	SCI SPI CAN	15-CH 8-Bit	See Timer	Y	5.0	8.4	C, V, M	64 QFP (FU)	—	Now	MC908AZ60A is pin-for-pin compatible replacement for MC68HC908AZ60. CAN 2.0A & 2.0B	MC68HC908AZ60A/ D
MC68HC08AZ60	60K	2K	—	1K	6-CH + 2-CH 16-Bit IC, OC, or PWM	48	SCI SPI CAN	15-CH, 8-Bit	See Timer	Y	5.0	8.4	C, V, M	64 QFP (FU)	908AZ60	Now	CAN 2.0A & 2.0B	MC68HC08AZ60/D
MC68HC08BD24	24K	512	—	—	2-CH 16-Bit IC, OC, or PWM	32	I^2C DDC12AB	6-CH, 8-Bit	16-CH, 8-Bit	Y	5.0	6.0	I	42 SDIP (B) 44 QFP (FB)	908BD48	Now	For use in digital monitor systems; sync signal processor	MC68HC08BD24/D
MC68HC908BD48	—	1024	48K FLASH	—	2-CH 16-Bit IC, OC, or PWM	32	USB, I^2C DDC12AB	6-CH, 8-Bit	16-CH, 8-Bit	Y	5.0	6.0	I	42 SDIP (B) 44 QFP (FB) 28 DIP (P)	—	Now	For use in digital monitor systems; sync signal processor	MC68HC908BD48/D
MC68HC08GP32	32K	512	—	—	Dual 2-CH 16-Bit IC, OC, or PWM	33	SCI SPI	8-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, V, M	44 QFP (FB) 42 SDIP (B)	908GP32	Now	32-kHz PLL, timebase module, low-voltage inhibit with selectable trip points.	MC68HC908GP32/H

68HC08 Family

Device	ROM (Bytes)	RAM (Bytes)	FLASH or OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Freq (MHz)	Temp.	Package Options	OTP or FLASH	Avail.	Comments	Documentation
MC68HC908GP32	—	512	32K FLASH	—	Dual 2-CH 16-Bit IC, OC, or PWM	33	SCI SPI	8-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C	40 DIP (P) 44 QFP (FB) 42 SDIP (B)	—	Now	32-kHz PLL, timebase module, low-voltage inhibit with selectable trip points. Sample pack part numbers: KMC908GP32CFB, KMC908GP32CP, KMC908GP32CB	MC68HC908GP32/H
MC68HC908GR4	—	384	4K FLASH	—	2-CH + 1-CH 16-Bit IC, OC, or PWM	21	SCI SPI	6-CH 8 Bit	See Timer	Y	3.0, 5.0	8.0	C	28 DIP (P) 32 QFP (FA) 28 SOIC (DW)	—	Now	28-/32-pin 4K FLASH version of the 908GP32. 32-kHz PLL, timebase module, all pins 10mA, programmable pullups on all I/O, extra 2-CH A/D in 32 QFP	MC68HC908GR8/D
MC68HC908GR8	—	384	7.5K FLASH	—	2-CH + 1-CH 16-Bit IC, OC, or PWM	21	SCI SPI	4-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C	28 SOIC (DW) 28 DIP (P) 32 QFP (FA)	—	Now	28-/32-pin 8K FLASH version of 908GP32, has timebase module	MC68HC908GR8/D
MC68HC08GR8	7.5K	384	—	—	2-CH + 1-CH 16-Bit IC, OC, or PWM	21	SCI SPI	6-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C	28 DIP (P) 32 QFP (FA)	908GR8	Now	28-/32-pin ROM version of GP32, time-base module, all pins 10mA, programmable pullups on all I/O	MC68HC908GR8/D
MC68HC08JB1	5.5K	128	—	—	2-CH 16-Bit IC, OC, or PWM	13	USB PS/2	—	See Timer	Y	5.0	3.0	0-70°C only	20 DIP (P) 20 SOIC (JDW)	908JB8	Now	Supports both USB and PS/2; 1.5Mbps USB with 2 endpoints, low voltage reset, keyboard interrupt, 3.3V bandgap reference	MC68HC08JB1/D
MC68HC908JB8	—	256	8K FLASH	—	2-CH 16-Bit IC, OC, or PWM	Up to 37	USB	—	See Timer	Y	5.0	3.0	0-70°C only	20 DIP (P) 28 SOIC (DW) 44 QFP (FB)	—	Now	Complies with USB 1.1 spec for low-speed USB (1.5Mbps) On-chip 3.3V regulator	MC68HC908JB8/D
MC68HC08JB8	8K	256	—	—	2-CH 16-Bit IC, OC, or PWM	Up to 37	USB	—	See Timer	Y	4.0–5.5	3.0	0–70°C only	20 PDIP (JP) 20 SOIC (JDW) 28 SOIC (ADW) 44 QFP (FB)	908JB8	Now	Complies with USB 1.1 spec for low-speed USB (1.5Mbps), LVI	MC68HC908JB8/D
MC68HC908JK1	—	128	1.5K FLASH	—	2-CH 16-Bit IC, OC, or PWM	15	—	12-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, M	20 DIP (P) 20 SOIC (DW)	—	Now	RC oscillator option, LVR with selectable trip points, 6-pin LED drive Sample pack part number: see MC68HC908JK3	MC68HC908JL3/H
MC68HC908JK3	—	128	4K FLASH	—	2-CH 16-Bit IC, OC, or PWM	15	—	12-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, M	20 DIP (P) 20 SOIC (DW)	—	Now	RC oscillator option, LVR with select-able trip points, 6-pin LED drive Sample pack part numbers: KMC908JK3CP, KMC908JK3CDW, KMCR908JK3CP, KMCR908JK3CDW	MC68HC908JL3/H
MC68HC08JK3	4K	128	—	—	2-CH 16-Bit IC, OC, or PWM	15	—	12-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, M	20 DIP (P) 20 SOIC (DW)	908JK3	Now	RC oscillator option: 68HRC08JK3, LVR with selectable trip points, 6-pin LED drive	MC68HC08JL3/H
MC68HC908JL3	—	128	4K FLASH	—	2-CH 16-Bit IC, OC, or PWM	23	—	12-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, M	28 DIP (P) 28 SOIC (DW) 48 LQFP (FA)	—	Now	RC oscillator option, LVR with selectable trip points, 6-pin LED drive Sample pack part numbers: KMC908JL3CP, KMC908JL3CDW, KMCR908JL3CP, KMCR908JL3CDW	MC68HC908JL3/H
MC68HC08JL3	4K	128	—	—	2-CH 16-Bit IC, OC, or PWM	23	—	12-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, M	28 DIP (P) 28 SOIC (DW) 48 LQFP (FA)	908JL3	Now	RC oscillator option: 68HRC08JL3, LVR with selectable trip points, 6-pin LED drive	MC68HC908JL3/H
MC68HC08JT8	8K	256	—	—	2-CH 16-Bit IC, OC, or PWM	Up to 37	—	—	See Timer	Y	2.0–3.6	3.0	0–70°C only	20 PDIP (JP) 20 SOIC (JDW) 28 SOIC (ADW) 44 QFP (FB)	—	Now		MC68HC908JB8/D

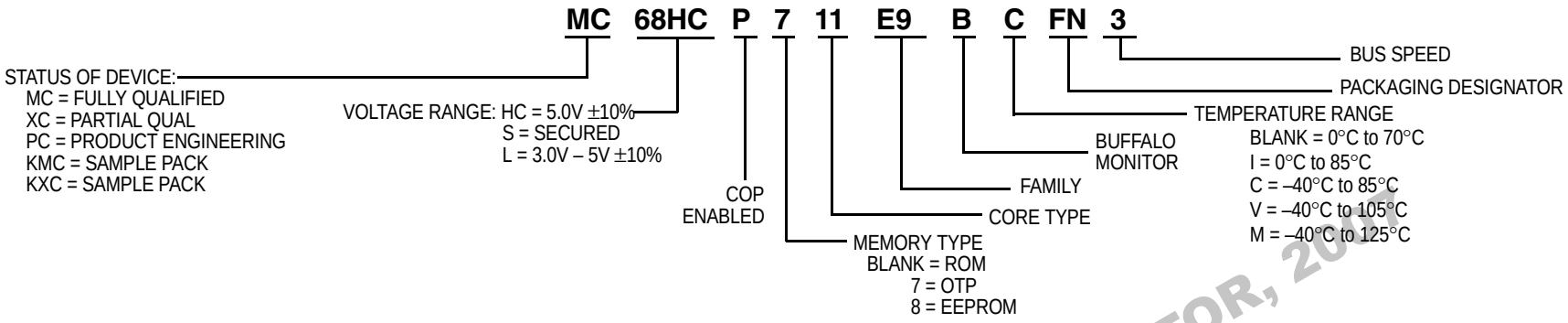
68HC08 Family

Device	ROM (Bytes)	RAM (Bytes)	FLASH or OTP (Bytes)	EEPROM (Bytes)	Timer	I/O	Serial	A/D	PWM	COP	Operating Voltage (V)	Max Bus Freq (MHz)	Temp.	Package Options	OTP or FLASH	Avail.	Comments	Documentation
MC68HC08KH12	12K	384	—	—	2-CH 16-Bit IC, OC, or PWM	42	USB	—	See Timer	Y	3.3 V	6.0	0–70°C only	64 QFP (FU)	708KH12	Now	PC keyboard/hub 12mbs USB (1 up, 4 down) 5 LED direct drive port pins	MC68HC08KH12/H
MC68HC908KX2	—	192	2K FLASH	—	2-CH 16-Bit IC, OC, or PWM	13	SCI	4-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, V, M	16 DIP (P) 16 SOIC (DW)	—	Now	Internal clock generator (ICG) Sample pack part numbers: KMC908KX2CDW, KMC908KX2CP	MC68HC908KX8/D
MC68HC908KX8	—	192	8K FLASH	—	2-CH 16-Bit IC, OC, or PWM	13	SCI	4-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, V, M	16 DIP (P) 16 SOIC (DW)	—	Now	Internal clock generator (ICG) Sample pack part numbers: KMC908KX8CDW, KMC908KX8CP	MC68HC908KX8/D
MC68HC08KX8	8K	192	—	—	2-CH 16-Bit IC, OC, or PWM	11	SCI	4-CH 8-Bit	See Timer	Y	3.0, 5.0	8.0	C, V, M	16 DIP (P) 16 SOIC (DW)	908KX8	Now	Internal oscillator, 5 I/O w/ 15mA source/15mA sink	MC68HC908KX8/D
MC68HC908LD60	—	1K	60K FLASH	—	2-CH 16-Bit IC, OC, or PWM	39	I^2C, DDC12AB	6-CH 8-Bit	8-CH 8-Bit	Y	3.3	6.0	C	64 QFP (FU)	—	Now	For use in digital monitor systems.	MC68HC908LD60/D
MC68HC908LD64	—	2K	60K FLASH	—	2-CH 16-Bit IC, OC, or PWM	39	I^2C, DDC12AB, USB w/ hub	6-CH 8-Bit	8-CH 8-Bit	Y	3.3	6.0	C	64 QFP (FU)	—	Now	For use in digital monitor systems. USB 1.1, composite hub w/ embedded functions. Sync signal processor, on-screen display (OSD) module.	MC68HC908LD64/D
MC68HC08MR4	4K	192	—	—	2-CH + 2-CH 16-Bit IC, OC, or PWM	14	SCI	4- to 7-CH 10-Bit	6-CH 12-Bit	Y	5.0	8.0	C, V	32 LQFP (FA) 28 PDIP (DW) 28 SOIC (CP)	908MR8	Samples now		MC68HC908MR8/D
MC68HC908MR8	—	256	8K FLASH	—	2-CH + 2-CH 16-Bit IC, OC, or PWM	14	SCI	4- to 7-CH 10-Bit	6-CH 12-Bit	Y	5.0	8.0	C, V	32 LQFP (FA) 28 PDIP (DW) 28 SOIC (CP)	—	Samples now		MC68HC908MR8/D
MC68HC908MR16	—	768	16K FLASH	—	4-CH + 2-CH 16-Bit IC, OC, or PWM	44	SCI SPI	10-CH 10-Bit	See Timer + 6-CH 12-Bit	Y	5.0	8.0	C, V	64 QFP (FU) 56 SDIP (B)	—	Now	PWM for 3-phase motor control Sample pack part numbers: KMC908MR16VFU/VB	MC68HC908MR32/D
MC68HC908MR32	—	768	32K FLASH	—	4-CH + 2-CH 16-Bit IC, OC, or PWM	44	SCI SPI	10-CH 10-Bit	See Timer + 6-CH 12-Bit	Y	5.0	8.0	C, V	64 QFP (FU) 56 SDIP (B)	—	Now	PWM for 3-phase motor control Sample pack part numbers: KMC908MR32VFU/VB	MC68HC908MR32/D
MC68HC908RF2	—	128	2K FLASH	—	2-CH 16-Bit IC, OC, or PWM	12	—	—	See Timer	Y	1.8–3.6	4.0	C	32 QFP (FA)	—	Now	Integrated RF transmitter in package, internal clock generator (ICG), LVI	MC68HC908RF2/D
MC68HC908RK2	—	128	2K FLASH	—	2-CH 16-Bit IC, OC, or PWM	14	—	—	See Timer	Y	1.8–3.6	4.0	C	20 SSOP (SD)	—	Now	Internal clock generator (ICG), LVI	MC68HC908RK2/D
MC68HC908SR12	—	512	12K FLASH	—	Dual 2-CH 16-Bit, IC, OC, or PWM	Up to 31	I^2C, SCI	14-CH 10-Bit	See Timer + 3-CH, 8-Bit (125 kHz)	Y	3.0, 5.0	8.0	C, M	48 QFP (FA) 42 SDIP (B)	—	Now	RC oscillator, 32-kHz PLL, internal oscillator options, 8 keyboard interrupts, TBM, temperature sensor, current detect with amplifier, I^2C supports SMBus version 1.0/1.1.	MC68HC908SR12/D

68HC08 Reference Manuals

CPU08RM/AD	HC08 CPU Reference Manual
TIM08RM/AD	HC08 Timer Reference Manual

68HC11 FAMILY
Device Numbering System for 68HC11



68HC11 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer[a]	I/O S.C.	I/O EXP	Serial	A/D	PWM	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
MC68HC11D0	—	192	—	—	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	16	SCI SPI	—	—	3.0, 5.0	3.0	C, V, M	40 PDIP (P) 44 QFP (FB) 44 PLCC (FN)	711D3	Now	64K external address bus, 3V 2MHz version (MC68L11D0) Sample pack part numbers: KMC11D0CFN3, KMC11D0CP3, KMC11D0CFB3	MC68HC11D3/D
MC68HC11D3	4K	192	—	—	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	32	16	SCI SPI	—	—	3.0, 5.0	3.0	C, V, M	40 PDIP (P) 44 QFP (FB) 44 PLCC (FN)	711D3	Now	64K external address bus, 3V 2MHz version (MC68L11D3)	MC68HC11D3/D
MC68HC711D3	—	192	4K	—	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	32	16	SCI SPI	—	—	5.0	3.0	C, V, M	40 PDIP (P) 44 QFP (FB) 44 PLCC (FN)	—	Now	64K external address bus, 3MHz available in C temperature range only Sample pack part numbers: KMC711D3CFB3, KMC711D3CFN3/MFN3, KMC711D3CP3/MP3	MC68HC711D3/D
MC68HC11E0	—	512	—	—	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	22	SCI SPI	8-CH 8-Bit	—	3.0, 5.0	3.0	C, V, M	52 PLCC (FN) 64 QFP (FU) 52 LQFP (PB)	711E9	Now	3V 2MHz version (MC68L11E0) Sample pack part numbers: KMC11E0CFN3/VFN3/MFN3, KMC11E0CFU3, KMC11D0CP3	MC68HC11E/D
MC68HC11E1	—	512	—	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	22	SCI SPI	8-CH 8-Bit	—	3.0, 5.0	3.0	C, V, M	52 PLCC (FN) 64 QFP (FU) 52 LQFP (PB)	711E9	Now	3V 2MHz version (MC68L11E1) Sample pack part numbers: KMC11E1CFN3/VFN3/MFN3, KMC11E1CFU3, KMC11E1CP3	MC68HC11E/D
MC68HC11E20	20K	768	—	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	38	22	SCI SPI	8-CH 8-Bit	—	5.0	3.0	C, V, M	52 PLCC (FN) 64 QFP (FU)	711E20	Now	Enhanced baud rate for 3MHz operation Automotive qual complete	MC68HC11E/D
MC68HC711E20	—	768	20K	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	38	22	SCI SPI	8-CH 8-Bit	—	5.0	4.0	C, V, M	52 PLCC (FN) 64 QFP (FU)	—	Now	Enhanced baud rate for 3MHz operation Sample pack part numbers: KMC711E20MFN3, KMC711E20CFN4, KMC711E20CFU4	MC68HC11E/D

a. All 68HC11 MCUs incorporate a COP watchdog timer.

68HC11 Family

Device	ROM (Bytes)	RAM (Bytes)	EPROM/ OTP (Bytes)	EEPROM (Bytes)	Timer[a]	I/O S.C.	I/O EXP	Serial	A/D	PWM	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	OTP	Avail.	Comments	Documentation
MC68HC11E9	12K	512	—	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	38	22	SCI SPI	8-CH 8-Bit	—	3.0, 5.0	3.0	C, V, M	52 PLCC (FN) 64 QFP (FU) 52 LQFP (FB) 48 DIP (P)	711E9	Now	3V 2MHz version (MC68L11E9)	MC68HC11E/D
MC68HC711E9	—	512	12K	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	38	22	SCI SPI	8-CH 8-Bit	—	5.0	3.0	C, V, M	52 PLCC (FN) 64 QFP (FU)	—	Now	EEPROM block protect Secure version (MC68S711E9) Sample pack part number: KMC711E9CFN4	MC68HC11E/D
MC68HC11F1	—	1K	—	512	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	30	SCI SPI	8-CH 8-Bit	—	3.0, 5.0	5.0	C, V, M	68 PLCC (FN) 80 LQFP (PU)	—	Now	64K ext. addr. bus, 4 prog. chip sel, non-mux address/data bus, 3V 3MHz version (MC68L11F1) Sample pack part numbers: KMC11F1CPU4, KMC11F1CPU5, KMC68L11F1CPU3, KMC11F1CFN3/4/5	MC68HC11F1/D
MC68HC11K0	—	768	—	—	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	37	SCI+ SPI	8-CH 8-Bit	4-CH 8-Bit or 2-CH 16-Bit	3.0, 5.0	2.0, 3.0, 4.0, 5.0	C, V, M	84 PLCC (FN) 80 QFP (FU)	—	Now	Non-mux bus, extended memory map, 4 chip selects, 3V 3MHz version (MC68L11K0) Sample pack part number: KMC11K0CFN3/4	MC68HC11K4/D
MC68HC11K1	—	768	—	640	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	37	SCI+ SPI	8-CH 8-Bit	4-CH 8-Bit or 2-CH 16-Bit	3.0, 5.0	5.0	C, V, M	84 PLCC (FN) 80 QFP (FU)	—	Now	Non-mux bus, extended memory map, 4 chip selects, 3V 3MHz version (MC68L11K1) Sample pack part numbers: KMC68L11K1FU2, KMC11K1CFN3/4	MC68HC11K4/D
MC68HC11K4	24K	768	—	640	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	62	37	SCI+ SPI	8-CH 8-Bit	4-CH 8-Bit or 2-CH 16-Bit	3.0, 5.0	5.0	C, V, M	84 PLCC (FN) 80 QFP (FU)	711K4 (limited)	Now	Non-mux bus, extended memory map, 4 chip selects, 3V 3MHz version (MC68L11K4) Automotive qual complete	MC68HC11K4/D
MC68HC11KW1	—	768	—	640	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	—	55	SCI+ SPI	10-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	4.0	C	100 LQFP (PU)	—	Now	4MHz non-mux bus, 2 extra timers, 4 chip selects extended, memory map up to 1Mbyte	MC68HC11KW1/D
MC68HC11P1	—	1K	—	640	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	62	37	Triple SCI SPI	8-CH 8-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	4.0	C	84 PLCC (FN)	711P2 (limited)	Now	64K external address bus, MI-bus interface, PLL clock circuitry	MC68HC11P2/D
MC68HC11P2	32K	1K	—	640	16-Bit, 3/4IC, 4/5OC, RTI, pulse accumulator	62	37	Triple SCI SPI	8-CH 8-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	4.0	C	84 PLCC (FN)	711P2 (limited)	Now	64K external address bus, MI-bus interface, PLL clock circuitry	MC68HC11P2/D

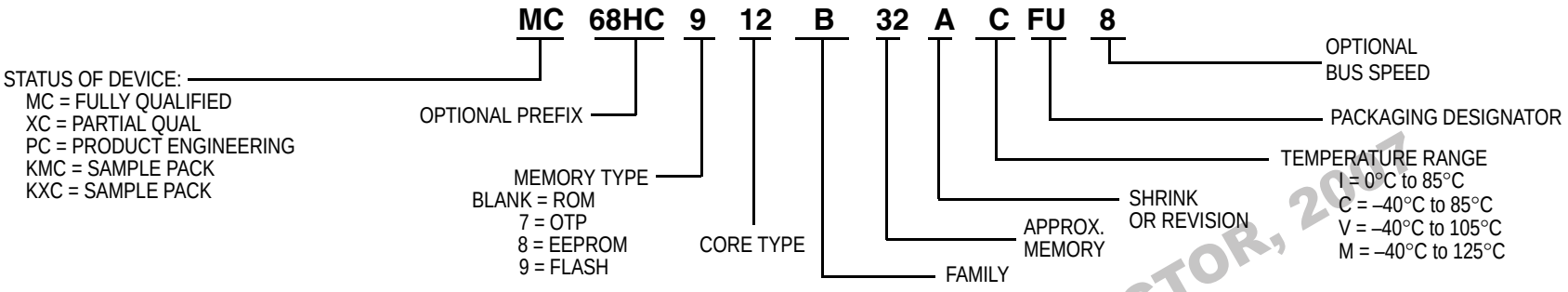
a. All 68HC12 MCUs incorporate a COP watchdog timer.

68HC11 Reference Manual

M68HC11RM/D 68HC11 Reference Manual

68HC12 FAMILY

Device Numbering System for 68HC12



68HC12 Family

Device	ROM (Bytes)	RAM (Bytes)	EEPROM (Bytes)	FLASH (Bytes)	Timer[a]	I/O	Serial	A/D	PWM	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	Avail.	Comments	Documentation
XC68HC812A4	—	1K	4K	—	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 91	Dual SCI SPI	8-CH 8-Bit	—	3.3, 5.0	8.0 5.0	C	112 LQFP (PV) 100 LQFP (PV)	Now	Non-muxed bus, 7 programmable chip selects, KBI (24 pins), PLL, BDM, 5Mbyte external memory, 3.0–3.6V 5MHz version (XC68C812A4) Sample pack part numbers: KXC68C812A4PV5, KXC812A4CPV8	MC68HC812A4/D
MC68HC912B32	—	1K	768	32K	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 63	SCI, SPI J1850	8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C, V, M	80 QFP (FU)	Now	J1850, muxed bus, BDM Sample pack part numbers: KMC912B32CFU/VFU/MFU	MC68HC912B/D
XC912BC32	—	1K	768	32K	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 63	SCI, SPI CAN	8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	4.5–5.5	8.0	C, V, M	80 QFP (FU)	Now	MSCAN CAN 2.0B, BDM Sample pack part number: KXC912BC32CFU8	MC68HC912B/D
XC68HC12BC32	32K	1K	768	—	8-CH 16-Bit	Up to 63	SCI, SPI	8-CH 10-Bit	4-CH 8-Bit	5.0	8.0	C, V, M	80 QFP (FU)	Now	Part equipped with CAN 2.0A/B	MC68HC912B32TS/D
MC68HC12BE32	32K	1K	768	—	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 63	SCI, SPI J1850	8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C	80 QFP (FU)	Now	BDM, enhanced timer Evaluation device with on-chip monitor: XC12BE32DCFU8 Sample pack part number: KXC12BE32DCFU8	MC68HC912B/D
XC68HC912D60	MC912D60A is a pin-compatible replacement.															
MC912D60A	—	2K	1K	60K	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 66 i/o and 18 i	Dual SCI SPI, CAN	8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C, V, M	80 QFP (FU) 112 LQFP (PV)	Now	Replaces the XC68HC912D60 with 5-V FLASH voltage and a different programming algorithm.	MC68HC912D60/D
XC68HC12D60	60K	2K	1K	—	8-CH 16-Bit	Up to 66 i/o and 18 i	Dual SCI SPI	Dual 8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C, V, M	80 QFP (FU) 112 LQFP (PV)	Now	Part equipped with CAN 2.0A/B	MC68HC912D60/D

a. All 68HC12 MCUs incorporate a COP watchdog timer.

68HC12 Family

Device	ROM (Bytes)	RAM (Bytes)	EEPROM (Bytes)	FLASH (Bytes)	Timer[a]	I/O	Serial	A/D	PWM	Operating Voltage (V)	Max Bus Frequency (MHz)	Temp.	Package Options	Avail.	Comments	Documentation
MC912DG128	MC912DG128A is a pin-compatible replacement.															
MC912DG128A	—	8K	2K	128K	8-CH 16-Bit IC or OC RTI, pulse accumulator	Up to 67 i/o and 18 i	Dual SCI SPI, CAN	8-CH or 16-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C, V, M	112 LQFP (PV)	Now	Replaces the XC912DG128 with 5-V FLASH voltage and a different programming algorithm.	MC68HC912DG128/D
MC68HC912DT128A	—	8K	2K	128K	8-CH 16-Bit	Up to 66 i/o and 18 i	Dual SCI, SPI	Dual 8-CH 10-Bit	4-CH 8-Bit or 2-CH 16-Bit	5.0	8.0	C, V, M	112 LQFP (PV)	Now	Part equipped with 3xCAN 2.0A/B	MC68HC912DT128/D

a. All 68HC12 MCUs incorporate a COP watchdog timer.

68HC12 Reference Manual

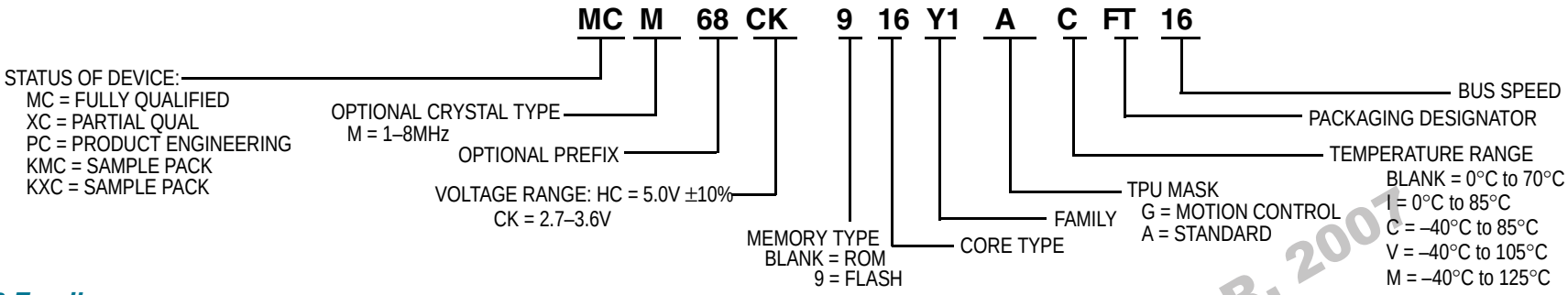
CPU12RM/AD	HC12 CPU Reference Manual

DSP56800 FAMILY

DSP56800 Family General Purpose 16-Bit Fixed Point

Part	Performance	Program ROM/ RAM/ FLASH	Data ROM/ RAM/ FLASH	Peripherals	Package Pins	Comments
DSP56F801FA80	80 MHz	— / 1K / 8K	— / 1K / 2K	SCI, SPI, ADC, PWM, Quad Timer	48-pin LQFP	MCU friendly instruction set, OnCE for debug, on-chip relaxation oscillator, 2K BootFLASH, up to 11 GPIO. Order 2-unit sample pack as SPAK56801FA80. MOQ of 250.
DSP56F803BU80	80 MHz	— / 512 / 32K	— / 2K / 4K	CAN, SCI, SPI, ADC, PWM, Quadrature Decoder, Quad Timer	100-pin LQFP	MCU friendly instruction set, OnCE for debug, 2K Boot Flash, external memory expansion available, up to 16 GPIO. Order 2-unit sample pack as SPAK56F803BU80. S, MOQ of 90.
DSP56F805FV80	80 MHz	— / 512 / 32K	— / 2K / 4K	CAN, SCIs, SPI, ADC, PWMs, Quadrature Decoders, Quad Timers	144-pin LQFP	MCU friendly instruction set, OnCE for debug, 2K Boot Flash, external memory expansion available, up to 32 GPIO. SPAK56F805FV80. S, MOQ of 60.
DSP56F807PY80 (LQFP) DSP56F807VF80 (MAPBGA)	80 MHz	— / 2K / 60K	— / 2K / 8K	CAN, SCIs, SPI, ADCs, PWMs, Quadrature Decoders, Quad Timers	160-pin LQFP 160 MAPBGA	MCU friendly instruction set, OnCE for debug, 2K Boot Flash, external memory expansion available, up to 32 GPIO. MOQ of 60 for LQFP. SPAK56F807PY80 or SPAK56F807VF80. MOQ of 24 for MAPBGA.
DSP56F826BU80 (LQFP)	80 MHz	— / 512 / 32K	— / 4K / 2K	SCI, SPI, SSI, TOD, Quad Timer	100-pin LQFP	MCU friendly instruction set, OnCE for debug, 2K Boot Flash, external memory expansion available, up to 48 GPIO. SPAK56F826BU80. MOQ of 90.
DSP56F827FG80 (LQFP)	80 MHz	— / 1K / 64K	— / 4K / 4K	SCI, SPI, SSI, TOD, ADC, Quad Timer	128-pin LQFP	MCU friendly instruction set, OnCE for debug, external memory expansion available, up to 52 GPIO. SPAK56F826FG80. MOQ of 60.

Device Numbering System for 68HC16



68HC16 Family

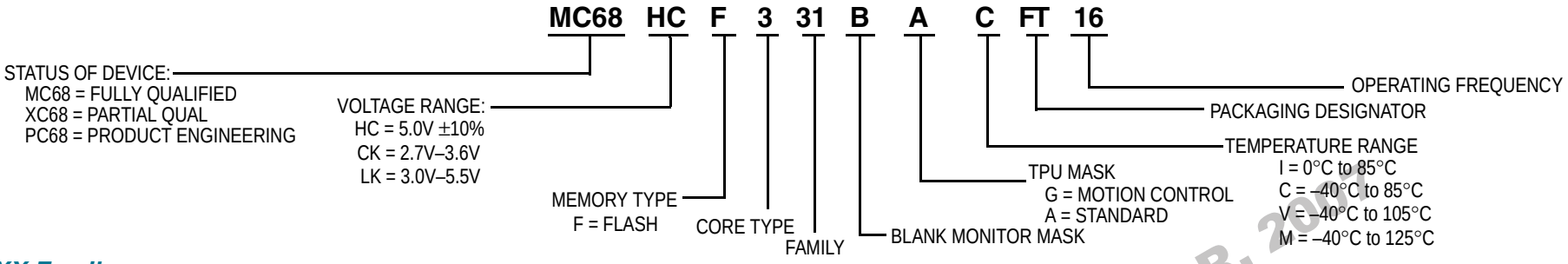
Device	ROM (Bytes)	RAM (Bytes)	FLASH (Bytes)	Device Integration	Timer	Serial	Analog	Operating Voltage (V)	Operating Frequency (MHz)	Temp.	Package Options	FLASH	Avail.	Comments	Documentation
MC68HC16R1	48K	2K	—	SCIM2	CTM7	Dual SCI, SPI	8-CH 10-Bit	5.0	16	C, V, M	132 PQFP(FC)	HC916R1	Now		MC68HC16R1PP/D (MC68HC16R1/916R1UM/AD on Web only)
68HC916X1 (XCM916X1)	—	2K	48K+2K	SCIM	GPT	SCI, queued SPI	6-CH 10-Bit	5.0	16	C	120 QFP(TH)	—	Now		MC68HC916X1TS/D
MC68HC16Y1 (MCM16Y1BA)	48K	2K	—	SCIM	GPT, TPU	Dual SCI, SPI	8-CH 10-Bit	5.0	16	C, V, M	160 QFP(FT)	HC916Y1	Now		MC68HC16Y1UM/AD
68HC916Y1 (MCM916Y1)	—	2K+2K	48K+2K	SCIM	GPT, TPU	Dual SCI, SPI	8-CH 10-Bit	5.0	16	C	160 QFP(FT)	—	Now	Sample pack part numbers: KMCM916Y1ACFT16 KMCM916Y1GCFT16	MC68HC16Y1UM/AD
MC68HC916Y3	—	4K	96K+4K	SCIM2	GPT, TPU2	Dual SCI, queued SPI	8-CH 10-Bit	5.0	16	C	160 QFP(FT)	—	Now		MC68HC916Y3PP/D (MC68HC16Y3/916Y3UM/AD on Web only)
MC68HC16Z1	—	1K	—	SIM	GPT	SCI, queued SPI	8-CH 10-Bit	5.0	16, 20, 25	C, V, M	132 PQFP(FC) 144 LQFP(PV)	—	Now	2.7V–3.6V 16MHz version (MC68CK16Z1 in PV package only)	MC68HC16ZUM/AD
MC68HC16Z4	—	1K	—	SIML	GPT	Dual SCI, SPI	8-CH 10-Bit	5.0	16	C	144 LQFP(PV)	—	Now	2.7V–3.6V 16MHz version (MC68CK16Z4) Sample pack part number: KMC16Z4CPV16	MC68HC16ZUM/AD

68HC16 Reference Manuals

CPU16RM/AD	HC16 CPU Reference Manual
SIMRM/AD	System Integration Module Reference Manual
TPURM/AD	Timer Processor Unit Reference Manual
GPTRM/AD	General-Purpose Timer Reference Manual
QSMRM/AD	Queued Serial Module Reference Manual
ADCRM/AD	Analog-to-Digital Converter Reference Manual
CTMRM/AD	Configurable Timer Module Reference Manual
MCCIRM/AD	Multi-Channel Communication Interface Reference Manual
SCIMRM/AD	Single-Chip Integration Module Reference Manual

683XX FAMILY

Device Numbering System for 683XX Family



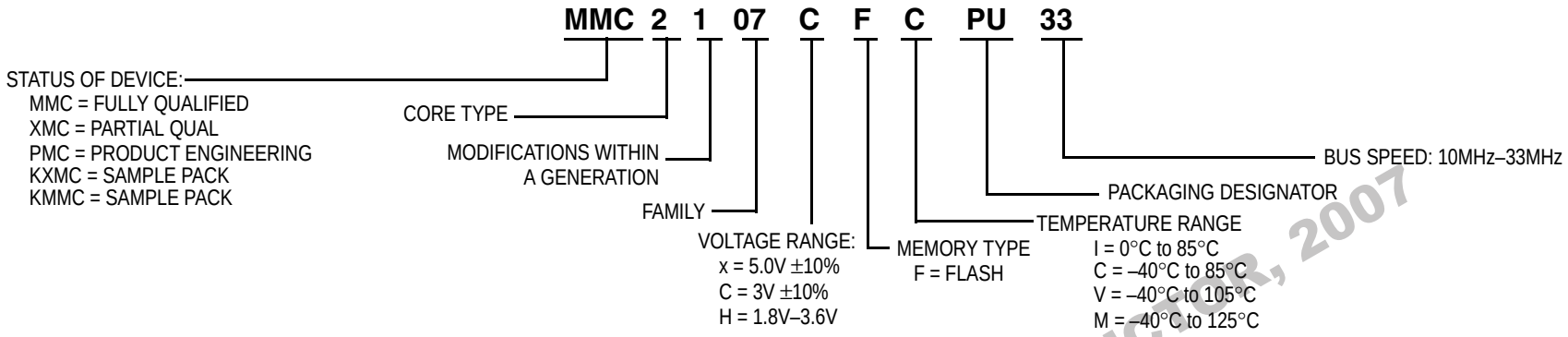
683XX Family

Device	ROM (Bytes)	RAM (Bytes)	FLASH (Bytes)	Device Integration	Timer	Serial	A/D	Operating Voltage (V)	Operating Frequency (MHz)	Temp.	Package Options	Avail.	Comments	Documentation
MC68331	—	—	—	SIM	GPT	SCI, queued SPI	—	5.0	16, 20, 25	C, V, M	132 PQFP 144 LQFP	Now	2.7V–3.6V 16MHz version (MC68CK331) Sample pack part numbers: KMC68331CPV25, KMC68331CFC20, KMC68331CFC2	MC68331UM/AD MC68CK331EC16/D
MC68332	—	2K	—	SIM	TPU	SCI, queued SPI	—	5.0	16, 20, 25	C, V, M	132 PQFP 144 LQFP	Now	3.0V–3.6V 16MHz version (MC68LK332) Sample pack part numbers: KMC68332ACFC20, KMC68332AMPV20	MC68332UM/AD MC68LK332EC16/D
MC68336	—	4K+3.5K	—	SIM	TPU CTM4	SCI, queued SPI	Queued 16-CH 10-Bit	5.0	20, 25	V, M	160 QFP	Now		MC68336/376PP/D MC68336/376UM/AD
MC68376	8K	4K+3.5K	—	SIM	TPU CTM4	TOUCAN, SCI, queued SPI	Queued 16-CH 10-Bit	5.0	20, 25	V, M	160 QFP	Now		MC68336/376PP/D MC68336/376UM/AD

683xx Reference Manuals

CPU32RM/AD	CPU32 Reference Manual
SIMRM/AD	System Integration Module Reference Manual
TPURM/AD	Timer Processor Unit Reference Manual
GPTRM/AD	General-Purpose Timer Reference Manual
QSMRM/AD	Queued Serial Module Reference Manual
ADCRM/AD	Analog-to-Digital Converter Reference Manual
CTMRM/D	Configurable Timer Module Reference Manual

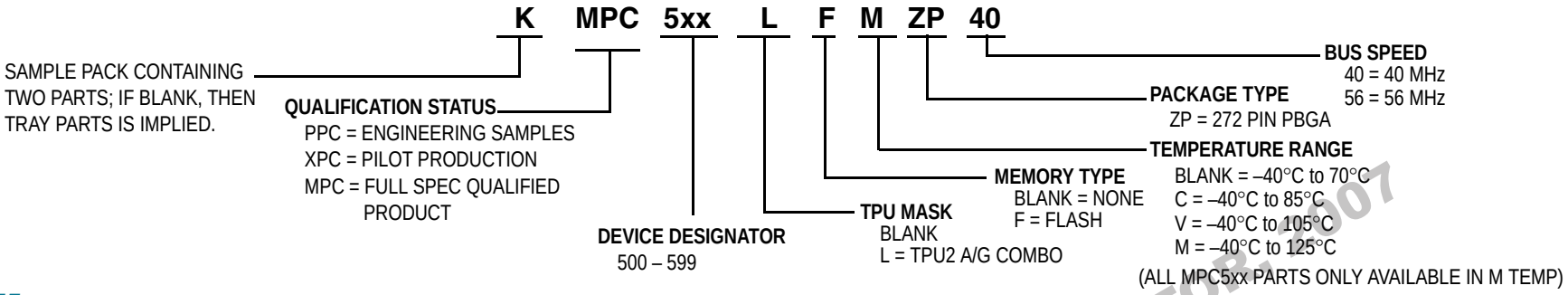
Device Numbering System for MMC2XXX



MMC2XXX Family

Device	ROM (Bytes)	RAM (Bytes)	FLASH (Bytes)	Timer	PWM	Serial	A/D	Operating Voltage (V)	Operating Frequency (MHz)	Temp.	Package Options	Avail.	Comments	Documentation
M•CORE MMC2001	256K	32K	—	Time-of-day, periodic interrupt timer, COP	6-CH 10-Bit	Dual UART Interval SPI	—	1.8–3.6	33	C	144 LQFP	Samples Now	ROM includes debugger, peripheral device drivers, and a monitor; external bus interface with 22 address/16 data and 4 chip selects, OnCE debug module, KBI (16 pins) Sample part number: KMMC2001HCPV33B	MMC2001RM/D M•CORERM/AD
M•CORE MMC2107	—	8K	128K	dual 4-channel 16-bit capture/ compare, PWM capability, watchdog	See Timer	Dual SCI, SPI	Queued 8-CH 10-Bit	2.7–3.6	33	C	100 LQFP 144 LQFP	Now	PLL clock, 32 source interrupt controller, periodic interrupt timer, external bus interface with 23 address, 16/32 data and 4 chip select lines, OnCE debug module Sample part numbers: KMMC2107CFCPU33 (100 LQFP), KMMC2107CFCPV32 (144 LQFP).	MMC2107/D M•CORERM/AD

MPC5XX FAMILY
Device Numbering System for MPC5xx

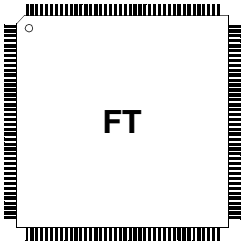


MPC555

Device	ROM (Bytes)	RAM (Bytes)	FLASH (Bytes)	Device Integration	Timer	Serial	MUX	A/D	PWM	Operating Voltage	Operating Frequency (MHz)	Temp.	Package Options	Comments	Documentation
MPC555	0	26K + 6K for TPU	448K	USIU	50-channel timer system: 2 TPU3 + MIOS1	QSMCM (2 SCI + QSPI) + 2 TOUCAN	2 x TOUCAN	2 QADC64 (10-Bit A/D with 64 result registers each) 32 channels on chip	8 x PWM	3.3Vdc for core, 5.0Vdc for FLASH	40.0	CM	272 PBGA	Production available now.	MPC555UM/AD TPURM/AD RCPURM/AD

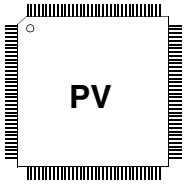
PACKAGE OPTIONS
(Actual size)

208/160-Lead QFP



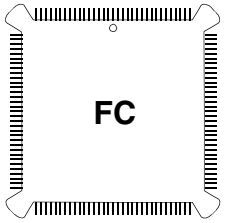
.65 mm Pitch
28 mm x 28 mm Body

144-Lead LQFP



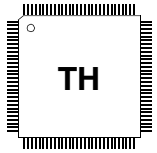
.5 mm Pitch
20 mm x 20 mm Body

132-Lead PQFP



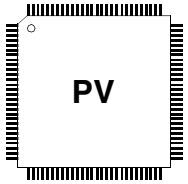
25 mil/06.35 mm Pitch
0.950 in x 0.950 in Body
(Nominal, w.o. Bumpers)

120-Lead QFP/LQFP



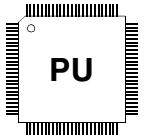
.5 mm Pitch
16 mm x 16 mm Body

112-Lead LQFP



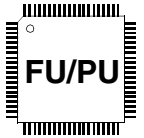
.65 mm Pitch
20 mm x 20 mm Body

100-Lead LQFP



.5 mm Pitch
14 mm x 14 mm Body

80-Lead QFP/LQFP

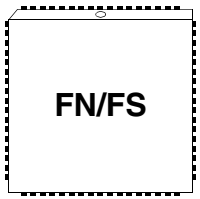


.65 mm Pitch
14 mm x 14 mm Body

84-Lead PLCC/CLCC

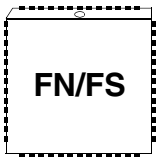
50 mil/1.27 mm Pitch
1.15 in x 1.15 in Body

68-Lead PLCC/CLCC



50 mil/1.27 mm Pitch
0.950 in x 0.950 in Body

52-Lead PLCC/CLCC

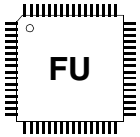


50 mil/1.27 mm Pitch
0.750 in x 0.750 in Body

44-Lead PLCC/CLCC

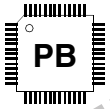
50 mil/1.27 mm Pitch
0.650 in x 0.650 in Body

64-Lead QFP



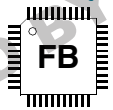
.8 mm Pitch
14 mm x 14 mm Body

52-Lead QFP



.65 mm Pitch
10 mm x 10 mm Body

44-Lead QFP



.8 mm Pitch
10 mm x 10 mm Body

32-/48-Lead QFP

.8 mm/.5 mm Pitch
7 mm x 7 mm Body

28-Lead SOIC

50 mil/1.27 mm Pitch
18.0 mm x 7.5 mm Body

20-Lead SOIC

50 mil/1.27 mm Pitch
12.8 mm x 7.5 mm Body

16-Lead SOIC

50 mil/1.27 mm Pitch
10.35 mm x 7.5 mm Body

28-Lead SSOP

25.6 mil/.65 mm Pitch
5.28 mm x 10.19 mm Body

20-Lead SSOP

17 mil/.65 mm Pitch
5.3 mm x 7.2 mm Body

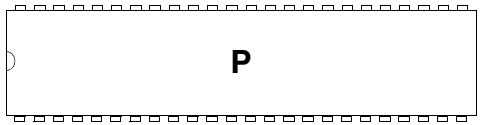
— Package Designators —

B — Shrink DIP (70 mil spacing)
DW — Small Outline (Wide-Body SOIC)
FA — 7 x 7 mm Quad Flat Pack (QFP)
FB — 10 x 10 mm Quad Flat Pack (QFP)
FC — Plastic Quad (Gull Wing)
FE — CQFP (windowed) — Samples Only
FG — 14 x 20 mm Plastic Quad Flat Pack (PQFP)
FN — Plastic Quad (PLCC)
FS — CLCC (windowed) — Samples Only
FT — 28 x 28 mm Quad Flat Pack (QFP)
FU — 14 x 14 mm Quad Flat Pack (QFP)
FZ — CQFP (windowed) — Samples Only
K — Cersdip (windowed) — Samples Only
L — Ceramic Sidebraze
P — Dual in-Line Plastic
PB — 10 x 10 mm Quad Flat Pack (QFP)
PU — 14 x 14 mm Low-Profile Quad Flat Pack (LQFP)
PV — 20 x 20 mm Low-Profile Quad Flat Pack (LQFP)
RC — Pin Grid Array, Gold Lead Finish
S — Cerdip (windowed) — Samples Only
SD — Shrink Small Outline Package (SSOP)
VF — 1.6 mm Thick MAPBGA
ZP — Plastic Ball Grid Array (PBGA)
ZU — Tape Ball Grid Array, 352 and 480 Lead

PACKAGE OPTIONS (continued)

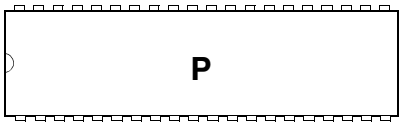
(Actual size)

48-Pin Plastic DIP



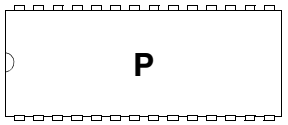
100 mil/2.54 mm Pitch
2.45 in x .55 in Body
(100 mil x 600 mil pin centers)

40-Pin Plastic DIP



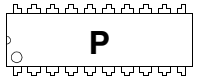
100 mil/2.54 mm Pitch
2.05 in x .55 in Body
(100 mil x 600 mil pin centers)

28-Pin DIP



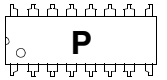
100 mil/2.54 mm Pitch
1.45 in x .55 in Body
(100 mil x 600 mil pin centers)

20-Pin Plastic DIP



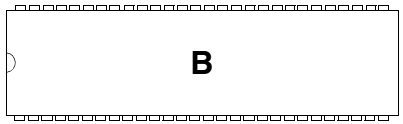
100 mil/2.54 mm Pitch
.97 in x .29 in Body
(100 mil x 300 mil pin centers)

16-Pin Plastic DIP



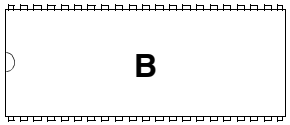
100 mil/2.54 mm Pitch
.75 in x .25 in Body
(100 mil x 300 mil pin centers)

56-Pin Plastic SDIP



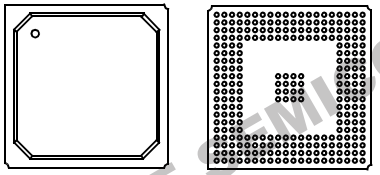
70 mil/1.778 mm Pitch
2.05 in x .55 in Body
(70 mil x 600 mil pin centers)

42-Pin Plastic SDIP



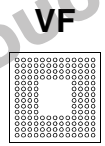
70 mil/1.778 mm Pitch
1.45 in x .55 in Body
(70 mil x 600 mil pin centers)

272-Ball PBGA



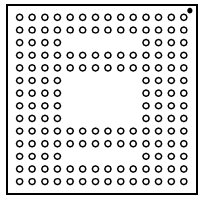
1.27 mm Pitch
27.0 mm x 27.0 mm Body

144-Ball Grid Array (BGA)



.8 mm Ball Pitch
12 mm x 12 mm x 1.6 mm

Plastic Ball Grid Array (MAPBGA)



160-pin / Case No. 1268

— Definitions —

ADC — Analog-to-Digital Converter
BDM — Background Debug Mode
Brick — 5 Full Trays and 1 Cover Tray
C — –40°C to +85°C Operating Temperature Range
CAN — Controller Area Network
COP — Computer Operating Properly (Watchdog Timer)
CTM — Configurable Timer Module (Various Hardware Options)
DTMF — Dual-Tone Multi-Frequency
EBI — External Bus Interface
FPU — Floating Point Unit
GPT — General-Purpose Timer Module (4 IC, 5 OC, 2 PWM)
IC — Input Capture
I^2C — Inter-Integrated Circuit
i/o — Bidirectional Input and Output Port Pins
i — Input-Only Port Pins
I — 0°C–80°C Operating Temperature Range
ICG — Internal Clock Generator
ISPI — Interval Serial Peripheral Interface
KBI — Keyboard Interrupt
LCD — Liquid Crystal Display
LED — Light-Emitting Diode
LTD — Limited Availability
LVI — Low-Voltage Inhibit
LVR — Low-Voltage Reset
M — –40°C to +125°C Operating Temperature Range
MC — Fully Qualified Production
MCCI — Multi-Channel Communication Interface (2 SCI, SPI)
MCU — Microcontroller Unit
MFT — Multi-Function Timer
MMU — Memory Management Unit
MPQ — Minimum Purchase Quantity
MPU — Microprocessor Unit
MUX — Multiplexed
o — Output-Only Port Pins
OC — Output Compare
PC — Pre-Qualification, Engineering Samples Only
PEEP — Personality EEPROM
PEP — Personality EPROM
PLL — Phase-Locked Loop
POQ — Purchase Order Quantity (Box)
PWM — Pulse-Width Modulation
QADC — Queued Analog-to-Digital Converter (10-Bit)
QSM — Queued Serial Module (SCI + QSPI)
QSPI — Queued SPI
RTI — Real-Time Interrupt
SCI — Serial Communication Interface
SCI+ — Enhanced SCI
SCIM — Single-Chip Integration Module
SIM — System Integration Module
SIML — Low-Power System Integration Module
SIOP — Simple Serial I/O Port
SOQ — Sample Order Quantity
SPI — Serial Peripheral Interface
SPI+ — Enhanced SPI
SRAM — Standby RAM Module
TBM — Timebase Module
TPU — Time Processor Unit (16 Programmable Channels)
TPURAM — Standby RAM Module with TPU Emulation Capability
UART — Universal Asynchronous Receiver/Transmitter
USB — Universal Serial Bus
V — –40°C to +105°C Operating Temperature Range
XC — Initial Production Qualification, Not Fully Characterized

— Package Acronymns —

CDIP — Ceramic Dual In-Line Package
CLCC — Ceramic Leaded Chip Carrier
CQFP — Ceramic Quad Flat Pack
DIP — Dual In-line Package
LQFP — Low-Profile Quad Flat Pack
MAPBGA — Mold Array Process Ball Grid Array
PBGA — Plastic Ball Grid Array
PLCC — Plastic Leaded Chip Carrier
PQFP — Plastic Quad Flat Pack
QFP — Quad Flat Pack
SDIP — Shrink Dual In-line Package
SOIC — Small Outline Integrated Package
SSOP — Shrink Small Outline Package

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