

## H8 Family

**H8 Value Series** Renesas Value Series Microcontrollers are low-cost embedded solutions with a 16-bit high performance CPU with up to 128KB of flash memory and high integration of on-chip peripherals.

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D	D/A	Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each		
													1	25	100
ROMless	External ROM	—	4K	8-ch. 10-bit	2-ch. 8-bit	2 USART, IrDA, Smart Card	4/3/—	47	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	HD6413008FBL25NF-ND	5.10	4.08	3.45
			8K	8-ch. 10-bit	2-ch. 8-bit	3 USART, Smart Card	2/6/—	95	25MHz/3.0 - 3.6V	-20°C - 75°C	128-QFP	DF2327BVFBL25V-ND	10.00	8.99	7.97
Flash	128K	—	4K	8-ch. 10-bit	2-ch. 8-bit	2 USART, IrDA, Smart Card	4/3/—	79	25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	DF3024FBL25V-ND	7.98	6.39	5.39
			4K	8-ch. 10-bit	2-ch. 8-bit	2 USART, IrDA, Smart Card	4/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF30282F25V-ND	9.55	8.58	7.61
												HD64F3062BFL25L-ND	7.98	6.39	5.39

## H8 Tiny Series

The H8/Tiny series of MCUs provide 16-bit performance and high peripheral integration ideal for many 8-bit applications.

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D	D/A	Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each			
													1	25	100	
Flash	16K	—	2K	4-ch. 10-bit	—	2 USART	1/1/—	34	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36012FPV-ND	8.38	6.71	5.66	
												48-QFN	DF36012FTV-ND	8.38	6.71	5.66
												48-LQFP	DF36012FXV-ND	8.38	6.71	5.66
												48-LQFP	DF36012FYV-ND	8.38	6.71	5.66
												64-LQFP	DF36012GFPV-ND	8.64	6.92	5.84
												64-LQFP	HD64F36012GFP-ND	8.64	6.92	5.84
												64-LQFP	HD64F36012GFPJ-ND	9.70	7.76	6.55
												48-QFN	DF36012GFTV-ND	8.64	6.92	5.84
												48-LQFP	DF36012GFXV-ND	8.64	6.92	5.84
												48-LQFP	DF36012GFYV-ND	8.64	6.92	5.84
	32K	—	2K	4-ch. 10-bit	—	2 USART	1/1/—	34	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36014FPV-ND	8.64	6.92	5.84	
												64-LQFP	DF36014GFPV-ND	8.88	7.11	6.00
												48-QFN	DF36014GFYV-ND	8.88	7.11	6.00
												64-LQFP	HD64F36014FPJE-ND	8.86	7.98	7.08
												64-LQFP	DF36014FPJV-ND	9.82	7.86	6.63
												48-LQFP	DF36014FPV-ND	8.60	7.73	6.85
												64-LQFP	HD64F36014GFP-ND	8.88	7.11	6.00
												48-QFN	DF36014GFTV-ND	8.88	7.11	6.00
												48-LQFP	DF36014GFYV-ND	8.88	7.11	6.00
												48-QFN	DF36014FTV-ND	8.64	6.92	5.84
	16K	—	2K	4-ch. 10-bit	—	3 USART	1/1/—	34	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36022FPV-ND	8.64	6.92	5.84	
												48-QFN	DF36022FTV-ND	8.64	6.92	5.84
												48-LQFP	DF36022FXV-ND	8.64	6.92	5.84
												48-LQFP	DF36022FYV-ND	8.64	6.92	5.84
												64-LQFP	DF36022GFPV-ND	8.88	7.11	6.00
												48-QFN	DF36022GFT-ND	8.88	7.11	6.00
												48-LQFP	DF36022GFYV-ND	8.88	7.11	6.00
												64-LQFP	DF36024FPV-ND	8.88	7.11	6.00
												48-QFN	DF36024FTV-ND	8.88	7.11	6.00
												48-LQFP	DF36024FYV-ND	8.88	7.11	6.00
	32K	—	2K	4-ch. 10-bit	—	3 USART	1/1/—	34	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36024GFPV-ND	9.14	7.32	6.17	
												48-LQFP	DF36024GFYV-ND	9.14	7.32	6.17
												48-LQFP	DF36024FXV-ND	8.88	7.11	6.00
												64-LQFP	DF36024GFYV-ND	9.14	7.32	6.17
												48-QFN	DF36024GFTV-ND	9.14	7.32	6.17
				64-LQFP		DF36034FZV-ND						9.34	8.39	7.44		
				64-LQFP		DF36034GFZV-ND						9.55	8.58	7.61		
				64-QFP		DF36034GHV-ND						9.55	8.58	7.61		
				64-QFP		DF36034HV-ND						9.34	8.39	7.44		
				56K		—						3K	8-ch. 10-bit	—	1 USART, 1 SSU*, 1 CAN	2/2/—
	64-LQFP	DF36037GV-ND	9.97		8.96		7.95									
	64-QFP	DF36037GHV-ND	9.97		8.96		7.95									
	64-QFP	DF36037HV-ND	9.75		8.76		7.77									
	80-QFP	DF36049GHV-ND	9.73		8.76		7.77									
	80-QFP	DF36049HV-ND	9.53		8.58		7.61									
	80-QFP	HD64F36049H-ND	9.53		8.58		7.61									
	64-LQFP	DF36054FZV-ND	9.55		8.58		7.61									
	64-LQFP	DF36054GFZV-ND	9.75		8.76		7.77									
	64-QFP	DF36054GHV-ND	9.75		8.76		7.77									
	56K	—	3K	8-ch. 10-bit	—	2 USART, 1 SSU*, 1 CAN	2/2/—	53	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36057FZV-ND	9.97	8.96	7.95	
												64-LQFP	DF36057GFZV-ND	10.17	9.14	8.10
												64-QFP	DF36057GHV-ND	10.17	9.14	8.10
												64-QFP	DF36057HV-ND	9.97	8.96	7.95
												64-LQFP	DF36064GFPV-ND	5.29	4.76	4.22
												64-QFP	DF36064GHV-ND	6.34	5.08	4.28
												64-LQFP	DF36074GFZV-ND	5.66	5.09	4.51
												64-QFP	DF36074GHV-ND	5.95	5.34	4.74
												64-QFP	DF36074GHVW-ND	7.92	6.34	5.35
												56K	—	4K	8-ch. 10-bit	—
	64-QFP	DF36077GHV-ND	7.62	6.10	5.15											
	128K	—	6K	8-ch. 10-bit	1-ch. 14-bit	2 USART, 1 I2C	2/2/—	55	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36079GFZV-ND	9.68	7.75	6.54	
	56K	—	4K	8-ch. 10-bit	—	2 USART, 1 I2C	2/2/—	53	18MHz/3.0 - 3.6V	-20°C - 75°C	64-LQFP	DF36087FPV-ND	8.66	7.80	6.92	
	64-QFP	DF36087HV-ND	8.68	7.80	6.92											
	32K	—	2K	8-ch. 10-bit	—	1 USART, 1 I2C	3/1/—	39	20MHz/4.5 - 5.5V	-20°C - 75°C	64-LQFP	DF36094GFZV-ND	9.66	7.73	6.53	
	128K	—	5K	16-ch. 10-bit	—	3 USART, 1 I2C	2/3/—	87	20MHz/3.0 - 5.5V	-20°C - 75°C	100-QFP	DF36108PV-ND	10.60	9.53	8.45	
												100-QFP	DF36108FV-ND	10.82	9.72	8.62
												100-LQFP	DF36108HV-ND	10.82	9.72	8.62
												100-LQFP	DF36108HV-ND	10.60	9.53	8.45
	32K	—	2K	8-ch. 10-bit	—	I2C, 2 USART	2/1/—	29	16MHz/4.0 - 5.5V	-20°C - 75°C	64-LQFP	HD64F3664FPV-ND	9.50	7.60	6.42	
	8K	—	2K	4-ch. 10-bit	—	1 USART	1/1/—	30	16MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	HD64F3670FPV-ND	5.42	4.34	3.38	
												48-LQFP	HD64F3670FXV-ND	5.42	4.34	3.38
												48-LQFP	HD64F3670FYV-ND	5.42	4.34	3.38
												64-LQFP	HD64F3672FPV-ND	5.06	4.05	3.42
	16K	—	2K	4-ch. 10-bit	—	1 USART	1/1/—	30	16MHz/3.0 - 5.5V	-20°C - 75°C	48-LQFP	HD64F3672FXV-ND	5.06	4.05	3.42	
												48-LQFP	HD64F3672FYV-ND	5.06	4.05	3.42
												64-LQFP	HD64F3684FPV-ND	9.90	7.92	6.69
												64-LQFP	HD64F3684FV-ND	8.46	7.62	6.76
	32K	—	4K	8-ch. 10-bit	—	2 USART, 1 I2C	2/2/—	53	20MHz/3.0 - 5.5V	-20°C - 75°C	64-QFP	HD64F3684GHV-ND	8.48	7.62	6.76	
												64-QFP	HD64F3684HV-ND	9.90	7.92	6.69
												64-LQFP	DN3687FPV-ND	9.97	8.96	7.95
												64-LQFP	HD64F3687FPV-ND	8.66	7.80	6.92
	56K	—	4K	8-ch. 10-bit	—	2 USART, 1 I2C	2/2/—	53	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	HD64F3687GFPV-ND	8.88	8.00	7.09	
												64-QFP	HD64F3687GHV-ND	8.90	8.00	7.09

• RoHS Compliant \*SSU = SPI

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**C**

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D	D/A	Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/ Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each			
													1	25	100	
Flash	56K	—	4K	8-ch. 10-bit	—	2 USART, 1 I <sup>2</sup> C	2/2/—	53	20MHz/3.0 - 5.5V	-20°C - 75°C	64-QFP	HD64F3687H-ND	8.66	7.80	6.92	
												32-OFP	DF36902GFHV-ND◆	5.42	4.34	3.38
													DF36902GTPAFV-ND◆	5.42	4.34	3.38
	8K	—	1.5K	4-ch. 10-bit	—	1 USART, 1 I <sup>2</sup> C	2/1/—	22	12MHz/3.0 - 5.5V	-20°C - 75°C	32-SOP	DF36912GFHV-ND◆	5.06	4.05	3.42	
												DF36912GTPAFV-ND◆	5.06	4.05	3.42	
												64-LQFP	DN3694GFVPV-ND◆	8.93	8.03	7.12
	32K	—	2K	8-ch. 10-bit	—	1 USART, 1 I <sup>2</sup> C	2/1/—	35	20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	HD64F3694FPV-ND	9.38	7.51	6.34	
												HD64F3694FV-ND◆	9.38	7.51	6.34	
												48-QFN	HD64F3694FTV-ND◆	9.38	7.51	6.34
												48-LQFP	HD64F3694FXV-ND◆	9.38	7.51	6.34
												48-LQFP	HD64F3694FYV-ND◆	9.38	7.51	6.34
												64-LQFP	HD64F3694GFVPV-ND◆	9.66	7.73	6.53
												48-QFN	HD64F3694GFTV-ND◆	9.66	7.73	6.53
												48-LQFP	HD64F3694GFYV-ND◆	9.66	7.73	6.53
												48-LQFP	HD64F3694GFVX-ND◆	9.66	7.73	6.53
64-LQFP	HD64F3694GH-ND	9.66	7.73	6.53												
64-QFP	HD64F3694GHV-ND◆	9.66	7.73	6.53												
64-QFP	HD64F3694HV-ND◆	9.38	7.51	6.34												

**H8 Super Low Power**

H8/300L and H8/300H Super Low Power series of MCUs are designed for optimum power consumption and fit in applications where battery life is critical. A built-in LCD controller is included on large packages (64-100 pins).

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D	D/A	Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/ Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each					
													1	25	100			
Flash	16K	—	1K	4-ch. 10-bit	—	1 USART	2/2/0	50	4MHz/2.2 - 3.6V	-20°C - 75°C	64-LQFP	DF38002FP4V-ND◆	8.27	7.43	6.59			
												64-QFP	DF38002H4V-ND◆	9.86	7.89	6.66		
													DF38002H10WV-ND◆	9.08	8.16	7.24		
	32K	—	1K	4-ch. 10-bit	—	1 USART	2/2/0	50	4MHz/2.2 - 3.6V	-20°C - 75°C	64-LQFP	DF38004FP4V-ND◆	8.68	7.80	6.92			
												DF38004H4V-ND◆	8.68	7.80	6.92			
												64-LQFP	DF38004FP10V-ND◆	8.66	7.80	6.92		
				8-ch. 10-bit	—	1 USART	4/2/0	66	10MHz/2.7 - 3.6V	80-QFP	HD64F38024D-ND◆	11.44	10.28	9.12				
											HD64F38024H-ND	12.46	9.97	8.42				
											80-QFP	HD64F38024RDV-ND◆	10.54	9.47	8.40			
											80-QFP	HD64F38024RHV-ND◆	9.57	8.60	7.63			
											80-TQFP	HD64F38024RW-ND◆	11.46	9.17	7.74			
											80-TQFP	HD64F38024RWIV-ND◆	10.54	9.47	8.40			
	10MHz/2.7 - 3.6V	-20°C - 75°C	80-TQFP	HD64F38024RWV-ND◆	9.57	8.60	7.63											
				80-TQFP	HD64F38024WV-ND◆	11.44	10.28	9.12										
				80-QFP	HD64F38024RFV-ND◆	9.57	8.60	7.63										
52K	—	2K	8-ch. 10-bit	—	3 USART, 1rDA, 1 I <sup>2</sup> C	2/4/0	63	4.2MHz/1.8 - 3.6V	-20°C - 75°C	80-QFP	DF38076RH4V-ND◆	11.33	10.20	9.05				
											85-TFLGA	DF38076RLP4V-ND◆	12.33	11.10	9.85			
											80-TQFP	DF38076RW4V-ND◆	11.36	10.20	9.05			
			10MHz/2.7 - 3.6V	-20°C - 75°C	80-QFP	DF38076RH10V-ND◆	11.57	10.40	9.22									
						80-QFP	DF38076RH10WV-ND◆	12.74	11.45	10.15								
						85-TFLGA	DF38076RLP10V-ND◆	12.58	11.30	10.02								
						85-TFLGA	DF38076RLP10WV-ND◆	13.84	12.44	11.03								
						80-TQFP	DF38076RW10V-ND◆	11.57	10.40	9.22								
						80-TQFP	DF38076RW10WV-ND◆	12.74	11.45	10.15								
			4.2MHz/1.8 - 3.6V	-20°C - 75°C	80-QFP	DF38086RH4V-ND◆	12.66	11.40	10.11									
						85-TFLGA	DF38086RLP4V-ND◆	13.66	12.30	10.91								
						80-TQFP	DF38086RW4V-ND◆	12.69	11.40	10.11								
			10MHz/2.7 - 3.6V	-20°C - 75°C	80-QFP	DF38086RH10V-ND◆	12.91	11.60	10.29									
						80-QFP	DF38086RH10WV-ND◆	14.21	12.77	11.32								
						85-TFLGA	DF38086RLP10V-ND◆	13.91	12.50	11.08								
85-TFLGA	DF38086RLP10WV-ND◆	13.76				12.84	11.93											
80-TQFP	DF38086RW10V-ND◆	12.91				11.60	10.29											
80-TQFP	DF38086RW10WV-ND◆	14.21				12.77	11.32											
128K	—	4K	8-ch. 10-bit	—	4 USART, 1rDA, 1 I <sup>2</sup> C	4/4/0	83	10MHz/1.8 - 3.6V	-20°C - 75°C	100-LQFP	DF38099FP10V-ND◆	14.25	12.80	11.35				
16K	—	1K	4-ch. 10-bit	—	1 USART	2/2/0	49	20MHz/2.7 - 5.5V	-20°C - 75°C	64-LQFP	DF38102FPV-ND◆	8.47	7.61	6.75				
											64-QFP	DF38102HV-ND◆	8.47	7.61	6.75			
												64-QFP	DF38102HWV-ND◆	9.30	8.36	7.41		
32K	—	1K	4-ch. 10-bit	—	1 USART	2/2/0	49	20MHz/2.7 - 5.5V	-20°C - 75°C	64-LQFP	DF38104FPV-ND◆	9.80	8.81	7.81				
											64-LQFP	DF38104FV-ND◆	8.88	8.00	7.09			
												64-QFP	DF38104HV-ND◆	8.88	8.00	7.09		
16K	—	1K	8-ch. 10-bit	—	1 USART	4/2/0	65	20MHz/2.7 - 5.5V	-20°C - 75°C	80-TQFP	DF38122WV-ND◆	9.35	8.40	7.45				
											80-QFP	DF38124HV-ND◆	9.80	8.81	7.81			
												80-QFP	DF38124HV-ND◆	10.77	9.68	8.58		
32K	—	1K	8-ch. 10-bit	—	1 USART	4/2/0	65	20MHz/2.7 - 5.5V	-20°C - 75°C	80-TQFP	DF38124WV-ND◆	9.80	8.81	7.81				
											80-TQFP	DF38124WV-ND◆	10.77	9.68	8.58			
												80-TQFP	DF38124WV-ND◆	10.77	9.68	8.58		
60K	—	2K	8-ch. 10-bit	—	2 USART	4/2/0	64	16MHz/2.7 - 5.5V	-20°C - 75°C	80-QFP	DF38324HV-ND◆	10.17	9.14	8.10				
											80-QFP	DF38324HV-ND◆	11.04	9.92	8.80			
												80-TQFP	DF38324WV-ND◆	10.17	9.14	8.10		
											16MHz/2.7 - 5.5V	-20°C - 75°C	80-QFP	DF38327HV-ND◆	10.82	9.72	8.62	
														80-QFP	DF38327HV-ND◆	11.91	10.70	9.49
														80-TQFP	DF38327WV-ND◆	10.82	9.72	8.62
32K	—	2K	12-ch. 10-bit	—	3 USART	4/2/0	84	16MHz/2.7 - 5.5V	-20°C - 75°C	100-QFP	DF38344HV-ND◆	11.02	9.90	8.78				
											100-QFP	DF38344HV-ND◆	12.24	11.00	9.75			
												100-TQFP	DF38344WV-ND◆	12.14	10.91	9.67		
60K	—	2K	12-ch. 10-bit	—	3 USART	4/2/0	84	16MHz/2.7 - 5.5V	-20°C - 75°C	100-TQFP	DF38344XV-ND◆	11.02	9.90	8.78				
											100-TQFP	DF38344XV-ND◆	12.14	10.91	9.67			
												100-QFP	DF38347HV-ND◆	11.65	10.49	9.30		
											16MHz/2.7 - 5.5V	-20°C - 75°C	100-QFP	DF38347HV-ND◆	12.83	11.52	10.22	
														100-TQFP	DF38347WV-ND◆	11.67	10.49	9.30
														100-TQFP	DF38347WV-ND◆	12.83	11.52	10.22
100-TQFP	DF38347XV-ND◆	11.67	10.49	9.30														

◆ RoHS Compliant \*SSU = SPI\*

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## Microcontrollers

### H8 Family H8 Super Low Power (Cont.)

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D		Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each		
													1	25	100
Flash	60K	—	2K	12-ch. 10-bit	—	3 USART	4/2/0	84	16MHz/2.7 - 5.5V	-40°C - 85°C	100-TQFP	DF38347XWV-ND	12.83	11.52	10.22
				8-ch. 10-bit	—	2 USART	4/2/0	64	16MHz/2.7 - 5.5V	-20°C - 75°C	80-QFP	DF38427HV-ND	11.67	10.49	9.30
	16K	—	1K	6-ch. 10-bit	—	1 USART, 1 SSU*, IrDA, 1 I <sup>2</sup> C	3/2/0	19	10MHz/2.7 - 3.6V 4.2MHz/1.8 - 3.6V	-20°C - 75°C -20°C - 75°C	32-QFN 32-QFN	DF38602RFT10V-ND DF38602RFT4V-ND	9.86 9.86	7.89 7.89	6.66 6.66

**H8/300 Series** H8/300H and H8/300L Series of MCUs provide extensive support of customers' system requirements with a high level of peripheral functionality.

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D		Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each			
													1	25	100	
ROMless	—	—	512	8-ch. 10-bit	—	2 UART	—/5/—	38	16MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	D13002F16V-ND	11.72	10.53	9.34	
				8-ch. 10-bit	—	2 UART	—/5/—	50	16MHz/4.5 - 5.5V	-20°C - 75°C	100-TQFP	D13003TF16V-ND	16.32	15.24	14.15	
				8-ch. 10-bit	2-ch. 8-bit	1 Smart Card, 2 SCI	4/3/—	47	25MHz/4.5 - 5.5V 25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	D13008F25V-ND D13008VF25V-ND	9.50 8.33	7.60 7.50	6.42 6.65	
Flash	128K	—	4K	8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	—/3/—	47	25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	D13008VFB25V-ND	5.10	4.08	3.45	
				8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	—/3/—	79	25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	DF3024F25V-ND	12.42	11.16	9.90	
				8-ch. 10-bit	2-ch. 8-bit	2 UART	—/8/—	79	25MHz/3.0 - 3.6V	-20°C - 75°C	100-TQFP	DF3026XBL25V-ND	14.63	13.65	12.68	
	384K	—	16K	8-ch. 10-bit	2-ch. 8-bit	3 UART, Smart Card	—/8/—	79	25MHz/3.0 - 3.6V	-20°C - 75°C	100-TQFP	DF3028X25V-ND	16.70	15.59	14.47	
				8-ch. 10-bit	2-ch. 8-bit	3 UART	—/9/—	79	25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	DF3029F25V-ND	16.58	15.47	14.37	
				8-ch. 10-bit	—	2 UART, Smart Card	—/5/—	63	18MHz/4.5 - 5.5V	-20°C - 75°C	80-QFP	DF3039F18V-ND	20.34	18.99	17.63	
	512K	—	16K	8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	—/5/—	78	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3048BF25V-ND	13.78	12.38	10.98	
				8-ch. 10-bit	—	2 UART, Smart Card	—/5/—	78	25MHz/4.5 - 5.5V	-20°C - 75°C	100-TQFP	DF3048BX25V-ND	14.43	12.96	11.50	
				8-ch. 10-bit	—	2 UART	—/5/—	78	25MHz/3.0 - 3.6V	-20°C - 75°C	100-QFP	DF3048BFV25V-ND	13.78	12.38	10.98	
	Flash	128K	—	4K	8-ch. 10-bit	2-ch. 8-bit	2 UART	—/2/—	78	25MHz/2.7 - 5.5V	-40°C - 85°C	100-QFP	DF3048BF25V-ND	13.62	12.72	11.81
					8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	—/5/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3052BF25V-ND	21.09	19.69	18.28
					8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	—/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3062BFP250V-ND	9.55	8.58	7.61
		256K	—	8K	8-ch. 10-bit	2-ch. 8-bit	2 UART, Smart Card	4/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3064BF25V-ND	14.83	13.32	11.82
					8-ch. 10-bit	2-ch. 8-bit	3 USART, Smart Card	4/3/—	79	25MHz/3.0 - 5.5V	-20°C - 75°C	100-QFP	DF3067RF20V-ND	20.55	19.18	17.81
					8-ch. 10-bit	2-ch. 8-bit	3 UART, Smart Card	4/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3068F25V-ND	16.70	15.59	14.47
		384K	—	16K	8-ch. 10-bit	2-ch. 8-bit	3 UART, Smart Card	4/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-QFP	DF3069RF25V-ND	16.58	15.47	14.37
					8-ch. 10-bit	2-ch. 8-bit	3 UART, Smart Card	4/3/—	79	25MHz/4.5 - 5.5V	-20°C - 75°C	100-TQFP	DF3069RX25V-ND	17.03	15.89	14.76
					8-ch. 10-bit	—	2 UART, CAN	3/2/—	45	20MHz/4.5 - 5.5V	-20°C - 75°C	64-LQFP	DF36037GFZJEV-ND	12.31	11.06	9.81
		512K	—	16K	8-ch. 10-bit	—	I <sup>2</sup> C, SCI	3/2/—	47	20MHz/4.5 - 5.5V	-20°C - 75°C	64-LQFP	DF36074GFZV-ND	7.54	6.03	5.09
					8-ch. 10-bit	—	I <sup>2</sup> C, SCI	3/2/—	47	16MHz/3.0 - 3.6V	-20°C - 75°C	64-QFP	DF36077LHV-ND	7.20	5.76	4.86
					8-ch. 10-bit	—	I <sup>2</sup> C, SCI	3/2/—	47	20MHz/4.5 - 5.5V	-20°C - 75°C	64-LQFP	DF36078GFZV-ND	8.70	6.96	5.87
		128K	—	6K	8-ch. 10-bit	—	I <sup>2</sup> C, SCI	3/2/—	47	16MHz/3.0 - 3.6V	-20°C - 75°C	64-LQFP	DF36079LHV-ND	9.68	7.75	6.53
					8-ch. 10-bit	—	I <sup>2</sup> C, SCI	3/2/—	47	16MHz/3.0 - 3.6V	-20°C - 75°C	64-QFP	DF36079LHV-ND	9.68	7.75	6.53
					8-ch. 10-bit	—	1 UART, 2 SCI	3/1/—	45	5MHz/2.5 - 5.5V	-20°C - 75°C	64-QFP	HD64F3644DV-ND	11.11	9.98	8.85
	32K	—	1K	8-ch. 10-bit	—	SCI	3/1/—	53	8MHz/2.5 - 5.5V	-20°C - 75°C	80-TQFP	HD64F3644V-ND	10.19	9.15	8.12	
				8-ch. 10-bit	—	SCI	3/1/—	53	8MHz/2.5 - 5.5V	-20°C - 75°C	80-TQFP	HD64F3644PV-ND	12.15	11.34	10.53	
				8-ch. 10-bit	—	SCI	3/1/—	53	8MHz/2.5 - 5.5V	-20°C - 75°C	80-TQFP	HD64F3644V-ND	11.44	10.28	9.11	
	128K	—	4K	8-ch. 10-bit	—	I <sup>2</sup> C, SCI	2/4/—	75	10MHz/2.7 - 3.6V 4.2MHz/1.8 - 3.6V	-20°C - 75°C	100-LQFP	DF38099FP10WV-ND	14.22	13.27	12.33	
				8-ch. 10-bit	—	I <sup>2</sup> C, SCI	2/4/—	75	10MHz/2.7 - 3.6V	-20°C - 75°C	100-LQFP	DF38099FP4V-ND	14.25	12.80	11.35	
				8-ch. 10-bit	—	I <sup>2</sup> C, IRDA, UART	3/1/—	75	5MHz/2.7 - 3.6V	-20°C - 75°C	80-QFP	DF38524HV-ND	7.62	6.10	5.14	
32K	—	4K	8-ch. 10-bit	—	I <sup>2</sup> C, IRDA, UART	3/1/—	75	5MHz/2.7 - 3.6V	-20°C - 75°C	80-QFP	DF38799FP10V-ND	10.60	9.53	8.45		
			8-ch. 10-bit	—	I <sup>2</sup> C, IRDA, UART	2/4/—	75	10MHz/2.7 - 3.6V	-20°C - 75°C	100-LQFP	DF38799FP10WV-ND	11.66	10.47	9.28		

### H8/300 Tiny Series

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D		Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each		
													1	25	100
Flash	32K	—	2K	8-ch. x 10-bit	—	UART, CAN	3/2/—	53	1 - 20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36034FPV-ND	10.86	9.75	8.65
	32K	—	2K	8-ch. x 10-bit	—	UART, CAN	3/2/—	53	1 - 20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36034GFPV-ND	9.55	8.58	7.61
	32K	—	2K	8-ch. x 10-bit	—	UART, CAN	3/2/—	53	1 - 20MHz/3.0 - 5.5V	-20°C - 75°C	64-LQFP	DF36037FPV-ND	11.94	10.73	9.51
	128K	—	6K	8-ch. x 10-bit	—	2 USART, I <sup>2</sup> C	3/2/—	47	20MHz/4.5 - 5.5V	-20°C - 75°C	64-QFP	DF36079GHV-ND	9.68	7.75	6.54
	8K	—	1.5K	4-ch. x 10-bit	—	UART	1/1/—	22	2 - 12MHz/3.0 - 5.5V	-20°C - 75°C	32-LQFP	DF38902GFHSWV-ND	4.48	3.59	2.79

◆ RoHS Compliant \*SSU = SPI\*

### H8S Family

The H8S Family meets the growing demands for system designs requiring the performance of 16-bit microcontrollers with sophisticated peripherals integrated on-chip. The H8S is the leader in memory size capacity with up to 512K on-chip flash. It includes performance speeds as high as 33MHz, extremely low power consumption, and offers a wide selection of peripherals for optimizing system cost, development time, performance, and features.

Memory Type	ROM Bytes	Data Flash Bytes	RAM Bytes	A/D		Serial Communication	Timers 8/16/32	GPIO	Operating Frequency/Supply Voltage	Temperature	Package	Digi-Key Part No.	Price Each		
													1	25	100
ROMless	—	—	—	8K	8-ch. 10-bit	2-ch. 8-bit	2 USART, Smart Card	2/6/—	79	-20°C - 75°C	128-QFP	D12312SVF20V-ND	9.60	7.68	6.48
												D12312SVF25V-ND	9.60	7.68	6.48
												D12312SVTE25V-ND	8.60	7.74	6.87
												D12320VF20V-ND	9.60	7.68	6.48
												D12320VF25V-ND	9.60	7.68	6.48
												D12320VTE20V-ND	8.62	7.74	6.87
				4K	8-ch. 10-bit	2-ch. 8-bit	3 USART, Smart Card	2/6/—	95	-20°C - 75°C	120-TQFP	D12320VTE25V-ND	8.62	7.74	6.87
												D12321VF20V-ND	9.60	7.68	6.48
												D12321VF25V-ND	9.60	7.68	6.48
												D12321VTE20V-ND	8.62	7.74	6.87
												D12321VTE25V-ND	8.62	7.74	6.87
												D12322RVF20V-ND	9.02	8.10	7.19
				8K	8-ch. 10-bit	2-ch. 8-bit	3 USART, Smart Card	2/6/—	95	-20°C - 75°C	128-QFP	D12322RVF25V-ND	8.82	7.92	7.03
												D12322RVTE25V-ND	7.58	6.07	5.12
												D12322RVTE20V-ND	9.62	8.64	7.67
												D12322RVTE25V-ND	9.62	8.64	7.67
												D12324SVF25V-ND	11.00	9.90	8.78
												D12324SVTE20V-ND	11.62	10.44	9.26
				32K	8-ch. 10-bit	2-ch. 8-bit	3 USART, Smart Card	2/6/—	95	-20°C - 75°C	120-TQFP	D12324SVTE25V-ND	11.62	10.44	9.26
												D12332VFC20V-ND	11.87	10.67	9.46
												D12332VFC25V-ND	11.85	10.67	9.46
												D12332VFC20V-ND	11.87	10.67	9.46
												D12332VFC25V-ND	11.85	10.67	9.46
												D12332VFC25V-ND	11.85	10.67	9.46

◆ RoHS Compliant \*SSU = SPI\*

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