! "#$

%& '' ' %(

))* %& '' ' %

- ,	!
$ -	. %$
$, #	&' /
,	)0 1#
$	2$ 34 , 5 ,,6 6!. 6,!.
-	3$7 -5. -8 9 7 87
4 5	' %
- , #	: %/ < %* %=
-	>3!,1
-.5 , #	:; * %
.! , #	'; * %
9 , <9 9 =	& %9 ? @@9
7 $	! 7 &' *&0 A7 !)*%
5	
5	)0B$? %@B$ < ! =
	,
- $	%0 3C>-
, 7 -	%0 3C>- <&: *&: =
- 6.3	D * @) (%E 0

D F G>3 $5 ! D. ! &' > > 8 $ $ @E(4 . 1 ;

Table 1.6 Specifications (3)

Item	Specification
Flash Memory	• Programming and erasure voltage: VCC = 2.7 to 5.5 V • Programming and erasure endurance: 10,000 times (data flash) 1,000 times (program ROM) • Program security: ROM code protect, ID code check • On-chip debug functions • On-board flash rewrite function • Background operation (BGO) function
Operating Frequency/ Supply Voltage	f(XIN) = 20 MHz (VCC = 2.7 to 5.5 V) f(XIN) = 5 MHz (VCC = 1.8 to 5.5 V)
Current Consumption	Typ. 7 mA (VCC = 5.0 V, f(XIN) = 20 MHz) Typ. 3.6 mA (VCC = 3.0 V, f(XIN) = 10 MHz) Typ. 3.5 #A (VCC = 3.0 V, wait mode (f(XCIN) = 32 kHz)) Typ. 2 #A (VCC = 3.0 V, stop mode) Typ. 1.4 #A (VCC = 3.0 V, power-off mode, timer RE enabled) Typ. 0.02 #A (VCC = 3.0 V, power-off mode, timer RE disabled)
Operating Ambient Temperature	-20 to 85$C (N version) -40 to 85$C (D version) (1)

Note:
1. Specify the D version if D version functions are to be used.

Table 1.9 Product List for R8C/L38M Group Current of Jun 2011

Part No.	Internal ROM Capacity		Internal RAM Capacity	Package Type	Remarks
	Program ROM	Data Flash			
R5F2L387MNFP	48 Kbytes	1 Kbyte ×4	6 Kbytes	PLQP0080KB-A	N Version
R5F2L387MNFA	48 Kbytes	1 Kbyte ×4	6 Kbytes	PLQP0080JA-A	
R5F2L388MNFP	64 Kbytes	1 Kbyte ×4	8 Kbytes	PLQP0080KB-A	
R5F2L388MNFA	64 Kbytes	1 Kbyte ×4	8 Kbytes	PLQP0080JA-A	
R5F2L38AMNFP	96 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080KB-A	
R5F2L38AMNFA	96 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080JA-A	
R5F2L38CMNFP	128 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080KB-A	
R5F2L38CMNFA	128 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080JA-A	
R5F2L387MDFP	48 Kbytes	1 Kbyte ×4	6 Kbytes	PLQP0080KB-A	D Version
R5F2L387MDFA	48 Kbytes	1 Kbyte ×4	6 Kbytes	PLQP0080JA-A	
R5F2L388MDFP	64 Kbytes	1 Kbyte ×4	8 Kbytes	PLQP0080KB-A	
R5F2L388MDFA	64 Kbytes	1 Kbyte ×4	8 Kbytes	PLQP0080JA-A	
R5F2L38AMDFP	96 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080KB-A	
R5F2L38AMDFA	96 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080JA-A	
R5F2L38CMDFP	128 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080KB-A	
R5F2L38CMDFA	128 Kbytes	1 Kbyte ×4	10 Kbytes	PLQP0080JA-A	

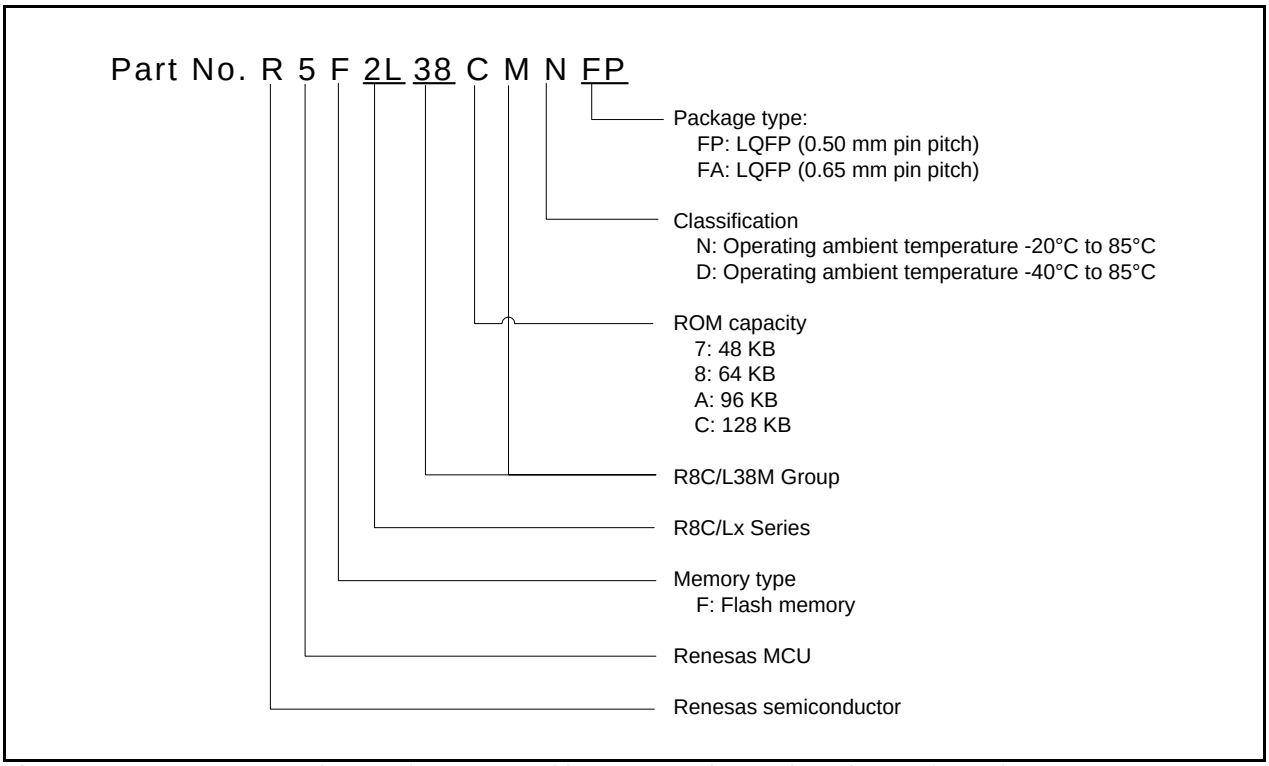


Figure 1.3 Correspondence of Part No., with Memory Size and Package of R8C/L38M Group

Table 1.10 Product List for R8C/L3AM Group Current of Jun 2011

Part No.	Internal ROM Capacity		Internal RAM Capacity	Package Type	Remarks
	Program ROM	Data Flash			
R5F2L3A7MNFP	48 Kbytes	1 Kbyte %&	6 Kbytes	PLQP0100KB-A	N Version
R5F2L3A7MNFA (D)	48 Kbytes	1 Kbyte %&	6 Kbytes	PRQP0100JD-B	
R5F2L3A8MNFP	64 Kbytes	1 Kbyte %&	8 Kbytes	PLQP0100KB-A	
R5F2L3A8MNFA (D)	64 Kbytes	1 Kbyte %&	8 Kbytes	PRQP0100JD-B	
R5F2L3AAMNFP	96 Kbytes	1 Kbyte %&	10 Kbytes	PLQP0100KB-A	
R5F2L3AAMNFA (D)	96 Kbytes	1 Kbyte %&	10 Kbytes	PRQP0100JD-B	
R5F2L3ACMNFP	128 Kbytes	1 Kbyte %&	10 Kbytes	PLQP0100KB-A	
R5F2L3ACMNFA (D)	128 Kbytes	1 Kbyte %&	10 Kbytes	PRQP0100JD-B	
R5F2L3A7MDFP	48 Kbytes	1 Kbyte %&	6 Kbytes	PLQP0100KB-A	D Version
R5F2L3A7MDFA (D)	48 Kbytes	1 Kbyte %&	6 Kbytes	PRQP0100JD-B	
R5F2L3A8MDFP	64 Kbytes	1 Kbyte %&	8 Kbytes	PLQP0100KB-A	
R5F2L3A8MDFA (D)	64 Kbytes	1 Kbyte %&	8 Kbytes	PRQP0100JD-B	
R5F2L3AAMDFP	96 Kbytes	1 Kbyte %&	10 Kbytes	PLQP0100KB-A	
R5F2L3AAMDFA (D)	96 Kbytes	1 Kbyte %&	10 Kbytes	PRQP0100JD-B	
R5F2L3ACMDFP	128 Kbytes	1 Kbyte %&	10 Kbytes	PLQP0100KB-A	
R5F2L3ACMDFA (D)	128 Kbytes	1 Kbyte %&	10 Kbytes	PRQP0100JD-B	

(D): Under development

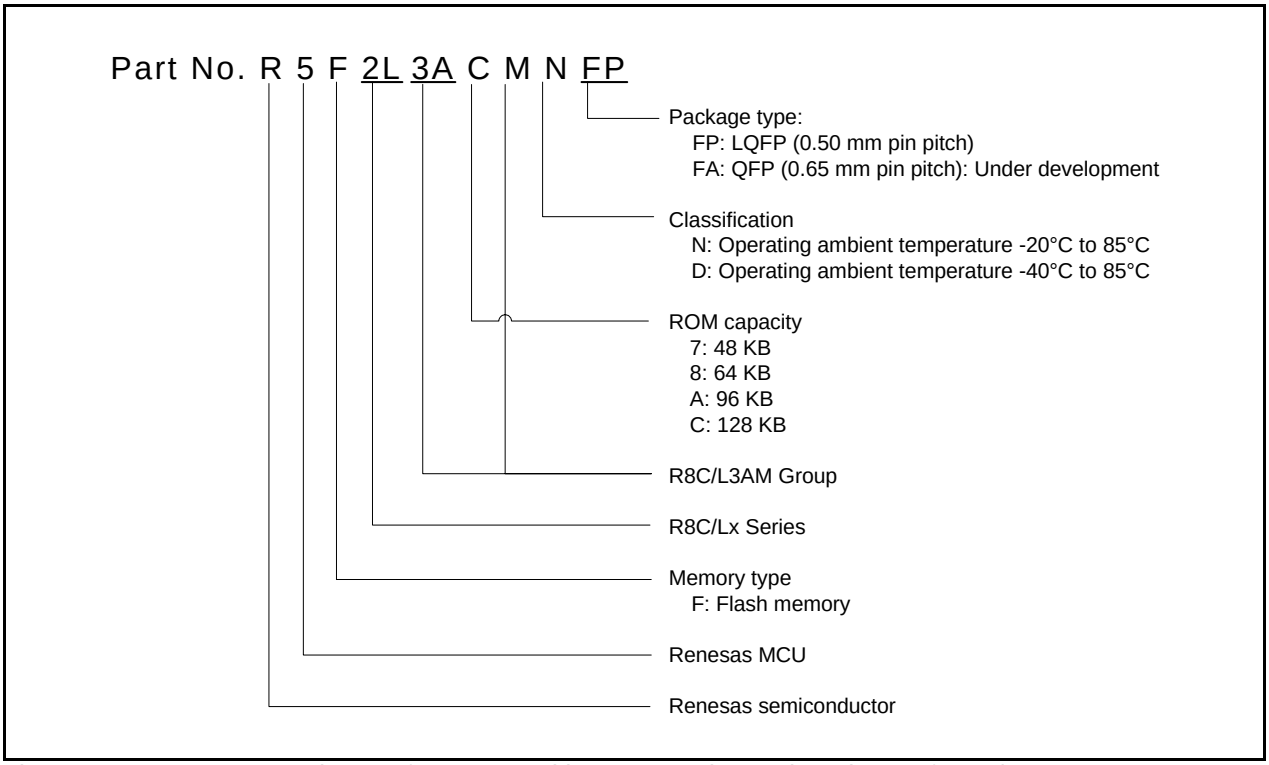


Figure 1.4 Correspondence of Part No., with Memory Size and Package of R8C/L3AM Group

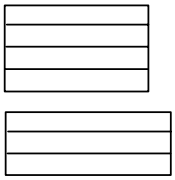
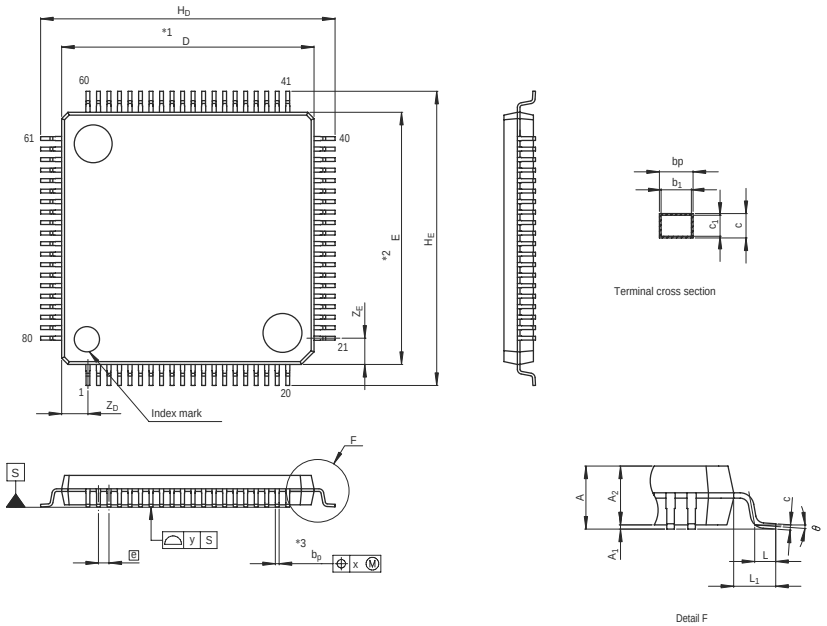


Figure 1.6 Block Diagram of R8C/L36M Group

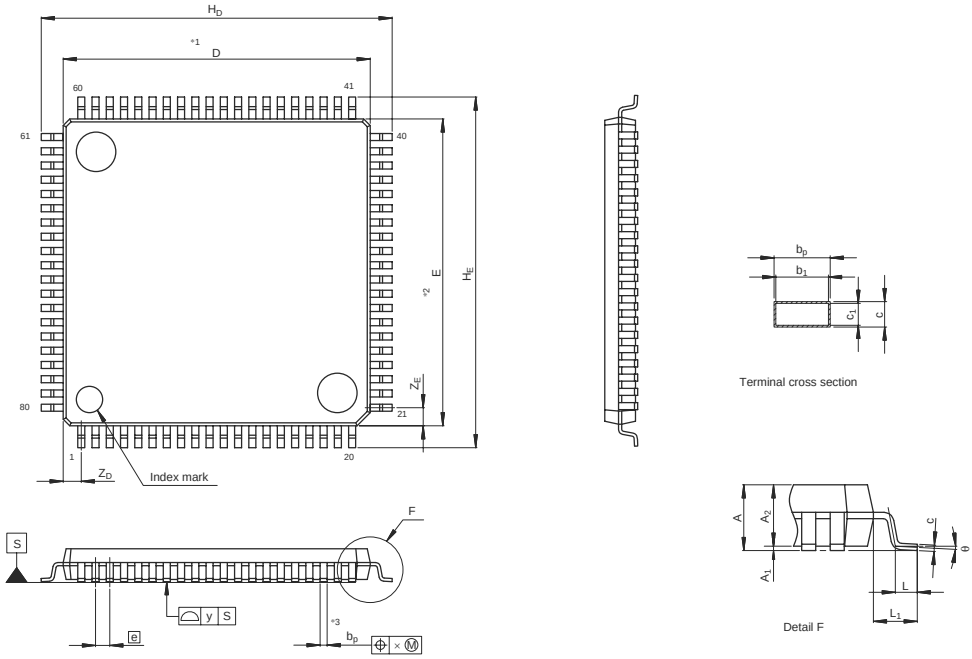
JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
P-LQFP80-12x12-0.50	PLQP0080KB-A	80P6Q-A	0.5g



NOTE)
1. DIMENSIONS "*1" AND "*2" DO NOT INCLUDE MOLD FLASH.
2. DIMENSION "*3" DOES NOT INCLUDE TRIM OFFSET.

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	11.9	12.0	12.1
E	11.9	12.0	12.1
A_2	—	1.4	—
H_D	13.8	14.0	14.2
H_E	13.8	14.0	14.2
A	—	—	1.7
A_1	0	0.1	0.2
b_p	0.15	0.20	0.25
b_1	—	0.18	—
c	0.09	0.145	0.20
c_1	—	0.125	—
θ	0°	—	10°
e	—	0.5	—
x	—	—	0.08
y	—	—	0.08
Z_D	—	1.25	—
Z_E	—	1.25	—
L	0.3	0.5	0.7
L_1	—	1.0	—

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
P-LQFP80-14x14-0.65	PLQP0080JA-A	FP-80W / FP-80WV	0.6g



NOTE)
1. DIMENSIONS "*1" AND "*2" DO NOT INCLUDE MOLD FLASH.
2. DIMENSION "*3" DOES NOT INCLUDE TRIM OFFSET.

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	13.9	14.0	14.1
E	13.9	14.0	14.1
A_2	—	1.4	—
H_D	15.8	16.0	16.2
H_E	15.8	16.0	16.2
A	—	—	1.7
A_1	0.05	0.1	0.15
b_p	0.27	0.32	0.37
b_1	—	0.30	—
c	0.09	0.145	0.20
c_1	—	0.125	—
θ	0°	—	8°
e	—	0.65	—
x	—	—	0.13
y	—	—	0.10
Z_D	—	0.825	—
Z_E	—	0.825	—
L	0.35	0.5	0.65
L_1	—	1.0	—