S1C33 Family Products overview

Products	CPU Core			Display		Clock frequency		Supply current			Supply voltage				Memory					I/O			Timer					SIO						A/D converter 10-bit	DMA		USB	SRAMC	SDRAMC	NAND flash C (SLC)	NAND flash C (MLC)	JPEG	Form of delivery		Remarks
	STD	PE	ADV	LCD Controller STN/CSTN (bpp)	LCD Controller TFT (bpp)	High-speed [Hz] (Max.)	Low-speed [Hz] (Max.)	Sleep [A] (Typ.)	Halt [A] (Typ.)	Operating [A] (Typ.) *1	Core [V]	I/O [V] When in unuse of USB	I/O [V] When in use of USB	External bus interface	FLASH [Byte]	ROM [Byte]	RAM [Byte]	VRAM [Byte]		Input port	Output port	I/O port	8-bit	16-bit	PWM	Watchdog timer	Real-time clock	Clock synchronous	UART	SPI	I²C (DCSIO)	I²S	Remote control circuit		HSDMA	IDMA							Package	Chip	
S1C33L00/E00 series	The 32-bit RISC microcontroller has the built-in LCD controller and can greatly contribute to the compact instrumentation design and reduced power consumption in the IC dictionary, PDA and other portable display applications.																																										
S1C33L05	○	–	–	8	–	48M	32.768k	1µ	10m (48MHz)	23m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	16K	40K		13	–	70 *2	6	6	○	–	5	–	–	–	–	5	4	128	FS1.1	○	○	○	–	–	QFP21-176	○	
S1C33L15	–	○	–	16	24	90M	32.768k	1µ	3.5m (48MHz)	40m (45MHz)	1.65 to 1.95	2.7 to 3.6	–	2.3 to 3.6	–	–	20K	80K		–	–	96 *2/3	4	4	○	○	6	4	4 *4	2	○	–	2	14	–	○	○	○	○	–	PFBGA12U-180	○	
S1C33L17	–	○	–	16	16	66M	32.768k	1µ	6.3m (66MHz)	22m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	10K	12K		5	–	86 *2/3	–	4	○	○	3	1	–	2	–	5	4	128	FS2.0	○	○	○	○	–	TQFP24-144 PFBGA12U-180	○	
S1C33L19	–	○	–	16	16	66M	32.768k	1µ	3.2m (48MHz)	22m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	10K	12K		5	–	86 *2/3	–	4	○	○	3	1	–	2	–	5	4	128	FS2.0	○	○	○	○	○	TQFP24-144 PFBGA12U-180	○	
S1C33L26	–	○	–	16	24	60M	32.768k	1.6µ	4.2m (48MHz)	22m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	12K	20K		6	–	71 *2/3	8	2	1	○	○	2	2 *5		1	○	6	–	8	FS2.0	○	○	○	○	–	TQFP15-128 TQFP24-144 PFBGA12U-180	○	Hardware drawing function
S1C33L27	–	○	–	16	24	60M	32.768k	1µ	4.3m (48MHz)	18m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	22.5K	32K		8	–	95 *2/3	6	4	2	○	○	1	4 *5		2	○	8	–	8	FS2.0	○	○	○	○	–	TQFP15-128 TQFP24-144 QFP20-144	○	LCD Dr DMA functions
S1C33E07	–	○	–	16	12	60M	32.768k	1µ	4m (60MHz)	19m (48MHz)	1.65 to 1.95	2.7 to 3.6	3.0 to 3.6	–	–	–	10K	12K		5	–	86 *2/3	–	6	○	○	3	1	1 *4	1	–	5	4	128	FS2.0	○	○	○	–	–	TQFP24-144 PFBGA12U-180	○	
S1C33300/S00/A00 series	S1C33300 series : The general-purpose model S1C33S00 series : The model for amusement equipment. S1C33A00 series : The model that integrates the arithmetic operation accelerator and has the enhanced audio functions.																																									
S1C33301	○	–	–	–	–	50M	32.768k	1µ	10m (50MHz)	22m (50MHz)	1.65 to 1.95	2.7 to 3.6	–	–	–	–	8K	–		13	–	47 *2/3	6	6	○	–	5	–	–	–	–	8	4	128	–	○	–	–	–	–	PFBGA10U-121 QFP15-128	–	High-speed SIO
S1C33S03	–	○	–	–	–	90M	32.768k	1µ	3.5m (48MHz)	103.5m (90MHz)	1.65 to 1.95	2.7 to 3.6	–	2.3 to 3.6	–	–	100K	–		–	–	96 *2/3	4	4	○	○	6	4	4 *4	–	–	–	2	14	–	–	○	○	○	–	TQFP24-144 PFBGA12U-180	–	Graphic LSI Dedicated buses
S1C33A01	–	○	–	–	–	90M	32.768k	1µ	3.5m (48MHz)	103.5m (90MHz)	1.65 to 1.95	2.7 to 3.6	–	2.3 to 3.6	–	–	100K	–		–	–	96 *2/3	4	4	○	○	6	4	4 *4	2	○	–	2	14	–	–	○	○	○	–	TQFP24-144 PFBGA12U-180	–	External LSI dedicated bus Arithmetic accelerator

*1: All peripheral clock = OFF
*2: In common with the bus line
*3: This specification varies depending on the type of package
*4: Each channel consists of two single line bidirectional serial buses
*5: Universal serial interface (Any of UART, SPI and I²C functions can be selected)