

Renesas General-Purpose ICs Status List

Power Management Linear ICs / General-Purpose Linear ICs / General-Purpose Logic ICs

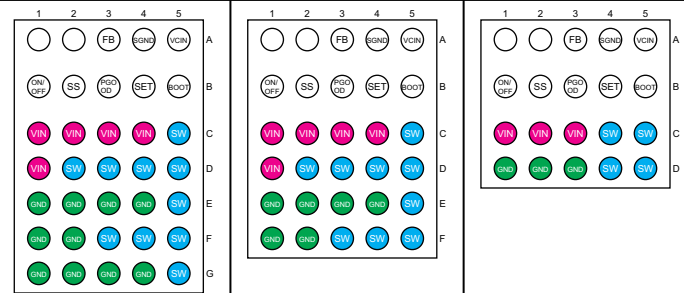
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Introduction of step-down DC/DC converter ICs(POL converter ICs) mini-POL "RAA20770X Series"

Features

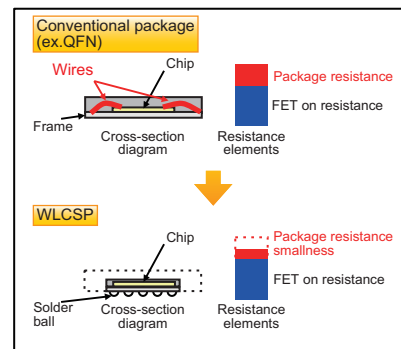
- Many functions for protection and easy design
 - Built-in Over current protection, Over voltage protection, and Thermal Shutdown.
 - Capable safety and easy design with a few external components.
 - According to the applications, switching frequency and output voltage are adjustable using external components.
- 6 products are line-up by within or not 5V LDO and 3 kinds of current capacity.

Line-up

Current capacitance	15A		10A		5A	
Part No.	RAA207700	RAA207703	RAA207701	RAA207704	RAA207702	RAA207705
Function	no LDO	built-in 5V LDO	no LDO	built-in 5V LDO	no LDO	built-in 5V LDO
Input voltage range	3.0 V to 16.0 V					
Maximum rated current	15A		10A		5A	
Maximum switching frequency	2.0MHz					
Component	High-side MOSFET, Low-side MOSFET, Control IC					
Pin arrangement						
Package	CSP 35-pin 2.7 mm × 3.9 mm		CSP 30-pin 2.7 mm × 3.4 mm		CSP 20-pin 2.7 mm × 2.4 mm	

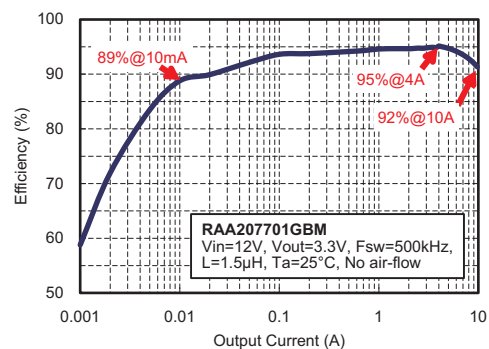
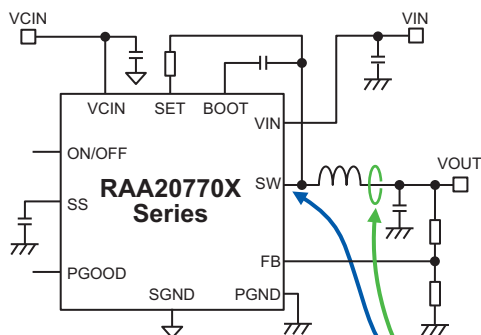
● Adopting Wafer-level Chip-size package(WLCSP)

- Owing to wireless design, the resistance and space of package are significantly reduced.
- About 75% reduced the size of package compare to the conventional 6×6mm QFN.
- The thermal resistance from package surface to junction is very small about 1 deg C/W. Therefore it is very high heat dissipation to use heat sink and air-flow.

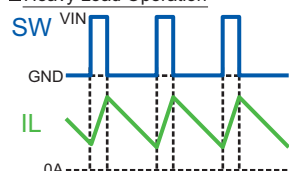


● Constant on-time control for PWM

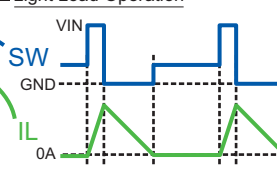
- On light load, the switching frequency is slowed down for power loss reduction.
- Achieve fast transient response and smoothly change of the switching frequency according to the load current.
- Through light load to heavy load, achieve top-level high efficiency in the market.



■ Heavy Load Operation



■ Light Load Operation



Cut down switching frequency

Index

Part No.	Package	Page	Contact	Part No.	Package	Page	Contact	Part No.	Package	Page	Contact	Part No.	Package	Page	Contact
R2A20133BSP	SOP (PRSP0008DJ-A)	8	PM1	R8A66171DD	PRDP0024AF-A (24P4X-A)	30	RDC	RD74LVC244BFP	SOP (FP-20DAV)	22	LG	RNA51A26FLP	MPAK-5V	14	SL2
R2A20133DSP	SOP (PRSP0008DJ-A)	8	PM1	R8A66171SP	PRSP0024DF-A (24P2X-B)	30	RDC	RD74LVC244BT	TSSOP (TTP-20DAV)	22	LG	RNA51A28FLP	MPAK-5V	14	SL2
R2A20134SP	SOP (PRSP0008DJ-A)	8	PM1	RD3CYD08CM	CMPAK-5	30	LG	RD74LVC245BFP	SOP (FP-20DAV)	22	LG	RNA51A29FLP	MPAK-5V	14	SL2
R2A20150NP	QFN (PWQN0016KB-A)	20	PM2	RD3CYD08VS	VSON (TNP-5DV)	30	LG	RD74LVC245BT	TSSOP (TTP-20DAV)	22	LG	RNA51A30FLP	MPAK-5V	14	SL2
R2A20150SA	TSSOP (TTP-16DAV)	20	PM2	RD3ST24US	SSOP (TTP-8DBV)	30	LG	RD74LVC273BFP	SOP (FP-20DAV)	22	LG	RNA51A31FLP	MPAK-5V	14	SL2
R2A20152NS	SON (PWSN0008KA-A)	19	PM2	RD5CYD08CM	CMPAK-5	30	LG	RD74LVC273BT	TSSOP (TTP-20DAV)	22	LG	RNA51A44FLP	MPAK-5V	14	SL2
R2A20152SP	SOP (PRSP0008DE-C)	19	PM2	RD5CYD08CM	CMPAK-5	30	LG	RD74LVC32BFP	SOP (FP-14DAV)	22	LG	RNA51A45FLP	MPAK-5V	14	SL2
R2A20154NS	SON (PWSN0008KA-A)	19	PM2	RD15LD74A	DIP (DP-20NEV)	30	LG	RD74LVC32BT	TSSOP (TTP-14DV)	22	LG	RNA51A46FLP	MPAK-5V	14	SL2
R2A20154SP	SOP (PRSP0008DE-C)	19	PM2	RD30LDT3595	SSOP (36P2R-D)	30	LG	RD74LVC373BFP	SOP (FP-20DAV)	22	LG	RNA51B14FLP	MPAK-5V	14	SL2
R2A20158NP	QFN (PWQN0020KB-A)	19	PM2	RD74LVC00BFP	SOP (FP-14DAV)	22	LG	RD74LVC373BT	TSSOP (TTP-20DAV)	22	LG	RNA51B27FLP	MPAK-5V	14	SL2
R2A20162NS	SON (PWSN0008KA-A)	19	PM2	RD74LVC00BT	TSSOP (TTP-14DV)	22	LG	RD74LVC374BFP	SOP (FP-20DAV)	22	LG	RNA51B50FLP	MPAK-5V	14	SL2
R2A20162SA	TSSOP (TTP-8DAV)	19	PM2	RD74LVC02BFP	SOP (FP-14DAV)	22	LG	RD74LVC374BT	TSSOP (TTP-20DAV)	22	LG	RNA52A10MM	MMPAK-8	14	SL2
R2A20162SP	SOP (PRSP0008DE-C)	19	PM2	RD74LVC02BT	TSSOP (TTP-14DV)	22	LG	RD74LVC540BFP	SOP (FP-20DAV)	22	LG	RNA53A27FUS	SSOP-8 (TTP-8DBV)	14	SL2
R2A20164NP	QFN (PWQN0016KB-A)	19	PM2	RD74LVC04BFP	SOP (FP-14DAV)	22	LG	RD74LVC540BT	TSSOP (TTP-20DAV)	22	LG	RNA53A30FUS	SSOP-8 (TTP-8DBV)	14	SL2
R2A20164SA	TSSOP (TTP-16DAV)	19	PM2	RD74LVC04BT	TSSOP (TTP-14DV)	22	LG	RD74LVC541BFP	SOP (FP-20DAV)	22	LG	RNA55A125FLP	MMPAK-5V	14	SL2
R2A20166NP	QFN (PWQN0016KB-A)	19	PM2	RD74LVC08BFP	SOP (FP-14DAV)	22	LG	RD74LVC541BT	TSSOP (TTP-20DAV)	22	LG	RNA51951AFP	SOP (PRSP0008DE-C)	14	SL2
R2A20166SA	TSSOP (TTP-16DAV)	19	PM2	RD74LVC08BT	TSSOP (TTP-14DV)	22	LG	RD74LVC573BFP	SOP (FP-20DAV)	22	LG	RNA51951AP	DIP (DP-8FV)	14	SL2
R2A20168NP	QFN (PWQN0016KB-A)	19	PM2	RD74LVC125BFP	SOP (FP-14DAV)	22	LG	RD74LVC573BT	TSSOP (TTP-20DAV)	22	LG	RNA51951AUP	UPAK	14	SL2
R2A20168SA	TSSOP (TTP-16DAV)	19	PM2	RD74LVC125BT	TSSOP (TTP-14DV)	22	LG	RD74LVC574BFP	SOP (FP-20DAV)	22	LG	RNA51951BFP	SOP (PRSP0008DE-C)	14	SL2
R2A20168SP	SOP (FP-16DAV)	19	PM2	RD74LVC126BFP	SOP (FP-14DAV)	22	LG	RD74LVC574BT	TSSOP (TTP-20DAV)	22	LG	RNA51951BP	DIP (DP-8FV)	14	SL2
R2A20169NP	QFN (PWQN0020KB-A)	19	PM2	RD74LVC126BT	TSSOP (TTP-14DV)	22	LG	RD74LVC74BFP	SOP (FP-14DAV)	22	LG	RNA51951BUP	UPAK	14	SL2
R2A20169SA	TSSOP (TTP-20DAV)	19	PM2	RD74LVC138BFP	SOP (FP-16DAV)	22	LG	RD74LVC74BT	TSSOP (TTP-14DV)	22	LG	RNA51953AFP	SOP (PRSP0008DE-C)	14	SL2
R2A20169SP	SOP (FP-20DAV)	19	PM2	RD74LVC138BT	TSSOP (TTP-16DAV)	22	LG	RD151TS3312ARP	SOP (FP-8DCV)	30	LG	RNA51953BFP	SOP (PRSP0008DE-C)	14	SL2
R2A20178NP	QFN (PWQN0024KD-A)	19	PM2	RD74LVC139BFP	SOP (FP-16DAV)	22	LG	RD151TS3313ARP	SOP (FP-8DCV)	30	LG	RNA51955AFP	SOP (PRSP0008DE-C)	14	SL2
R2J20071ANS	DFN (PUSN0010KC-A)	9	PM2	RD74LVC139BT	TSSOP (TTP-16DAV)	22	LG	RD151TS3314ARP	SOP (FP-8DCV)	30	LG	RNA51955AP	DIP (DP-8FV)	14	SL2
R2S20030NP	SOP (28PJW)	13	PM2	RD74LVC14BFP	SOP (FP-14DAV)	22	LG	RD151TS3315ARP	SOP (FP-8DCV)	30	LG	RNA51955BFP	SOP (PRSP0008DE-C)	14	SL2
R2S20040LG	TFLGA (49F0G)	10	PM2	RD74LVC14BT	TSSOP (TTP-14DV)	22	LG	RD151TS3316ARP	SOP (FP-8DCV)	30	LG	RNA51955BP	DIP (DP-8FV)	14	SL2
R8A66150SP	SOP (20P2X-C)	20	RDC	RD74LVC16240BT	TSSOP (TTP-48DBV)	22	LG	RD151TS3322ARP	SOP (FP-8DCV)	30	LG	RNA51957AFP	SOP (PRSP0008DE-C)	14	SL2
R8A66151SP	SOP (32P2X-A)	20	RDC	RD74LVC16244BT	TSSOP (TTP-48DBV)	22	LG	RD151TS3323ARP	SOP (FP-8DCV)	30	LG	RNA51957BFP	SOP (PRSP0008DE-C)	14	SL2
R8A66152SP	SOP (20P2X-C)	20	RDC	RD74LVC16245BT	TSSOP (TTP-48DBV)	22	LG	RD151TS3324ARP	SOP (FP-8DCV)	30	LG	RNA51958AFP	SOP (PRSP0008DE-C)	14	SL2
R8A66153FP	LQFP (64P6X-B)	20	RDC	RD74LVC16373BT	TSSOP (TTP-48DBV)	22	LG	RD151TS3325ARP	SOP (FP-8DCV)	30	LG	RNA51958BFP	SOP (PRSP0008DE-C)	14	SL2
R8A66154SP	SOP (16P2X-E)	20	RDC	RD74LVC16374BT	TSSOP (TTP-48DBV)	22	LG	RD151TS3326ARP	SOP (FP-8DCV)	30	LG	RNA62782LP	MMPAK-5V	14	SL2
R8A66155SP	SOP (24P2X-B)	20	RDC	RD74LVC240BFP	SOP (FP-20DAV)	22	LG	RNA50C27A	MMPAK-8	14	SL2				
R8A66156SP	SSOP (36P2X-B)	20	RDC	RD74LVC240BT	TSSOP (TTP-20DAV)	22	LG	RNA50C27AUS	SSOP-8 (TTP-8DBV)	14	SL2				

< CONTACT >

Symbol	Contact
SL2, SL3: Standard Linear ICs	Power Devices Marketing & Production Planning Dept. Analog & Power Devices Marketing & Production Planning Div. Sales Management Unit Renesas Electronics Corporation.
PM1, PM2: Power Management Linear ICs	Technical Segment Marketing Department 3rd General Purpose Systems Div. Marketing Unit Renesas Electronics Corporation.

< CONTACT >

Symbol	Contact
RDC	DTV SoC Design Dept. Home Multimedia Business Div. SoC Business Unit Renesas Electronics Corporation.
LG: General- Purpose Logic ICs	Power Devices Marketing & Production Planning Dept. Analog & Power Devices Marketing & Production Planning Div. Sales Management Unit Renesas Electronics Corporation.

* Please see the website below for inquiries of products.
<http://www.renesas.com/inquiry>
 Also, please fill out the blanks on the form on the website and enter the symbol of contacting

ICs for PFC Power Supply

Part No.	V _{in} (V) max.	I _{CC} (mA) max.	F _{max} (kHz) max.	T _{opr} [T _{jopr}] (°C)	Package	Status	Function	Remarks
R2A20104FP	24	7.5	400	-40 to +150	LQFP (FP-40EV)	○	CT sensing, Frequency modulation, synchronization in/output	CCM Interleaved PFC
R2A20104SP	24	7.5	400	-40 to +150	SOP (FP-20DAV)	○	CT sensing, Frequency modulation, synchronization in/output	CCM Interleaved PFC
R2A20112ASP	24	6.3	-	-40 to +150	SOP (FP-16DAV)	○	DUVP, ON/OFF Timer	CRM Interleaved PFC
R2A20113ASP	24	2.6	-	-40 to +150	SOP (PRSP0008DJ-A)	○	DUVP, Off Time control	CRM Single PFC
R2A20114AFP	24	7.5	-	-40 to +150	LQFP (FP-40EV)	○	Shunt resistor sensing, Frequency Modulation, Phase drop	CCM Interleaved PFC
R2A20114ASP	24	7.5	-	-40 to +150	SOP (FP-20DAV)	○	Shunt resistor sensing, Frequency Modulation	CCM Interleaved PFC
R2A20115SP	24	4.4	400	-40 to +150	SOP (FP-16DAV)	○	Constant power Limiter	CCM Single PFC
R2A20131SP	24	4	300	-40 to +150	SOP (FP-16DAV)	○	Load tracing boost, Brownout	CCM Single PFC
R2A20132SP	24	7.5	-	-40 to +150	SOP (FP-20DAV)	○	Phase drop, Off Time control, DUVP	CRM Interleaved PFC
R2A20133ASP	24	2.6	-	-40 to +150	SOP (PRSP0008DJ-A)	○	2nd OVP (latch), Off Time control	CRM Single PFC
R2A20133BSP	24	2.6	-	-40 to +150	SOP (PRSP0008DJ-A)	○	2nd OVP (Non latch), Off Time control	CRM Single PFC
R2A20133DSP	24	2.6	-	-40 to +150	SOP (PRSP0008DJ-A)	○	Delay time adjustment, OVP2, DUVP	CRM Single PFC
R2A20134SP	24	3.3	200	-40 to +150	SOP (PRSP0008DJ-A)	○	LED lighting controller	LED lighting controller

ICs for Insulated SW Power Supply

Part No.	V _N (V)		I _{CC} (mA) max.	I _{OUT} (mA) max.	f _{osc} (kHz)		P _T (mW)	T _{case} (°C)		T _{stg} (°C)		Package	Status	Function	Remarks
	max.	max.			min.	max.		min.	max.	min.	max.				
HA16107FP	30	27.8	20	200	1	600	-	-20	85	-55	125	SOP (FP-16DA)	○	Timer latch fail safe, voltage mode both forward and flyback method available	Switching regulator
HA16107P	30	27.8	20	200	1	600	-	-20	85	-55	125	DIP (DP-16)	○	Timer latch fail safe, voltage mode both forward and flyback method available	Switching regulator
HA16108FP	30	27.8	20	200	1	600	-	-20	85	-55	125	SOP (FP-16DA)	○	ON/OFF timer latch fail safe, voltage mode both forward and flyback method available	Switching regulator
M51995AFP	-	-	15	-	-	500	-	-30	85	-	-	SOP (20P2N-A)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51995AP	-	-	15	-	-	500	-	-30	85	-	-	DIP (16P4)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51995FP	-	-	21	-	-	500	-	-30	85	-	-	SOP-20 (20P2N-A)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51995P	-	-	21	-	-	500	-	-30	85	-	-	DIP-16 (16P4)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51996AFP	-	-	11	-	-	500	-	-30	85	-	-	SOP (16P2N-A)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51996AP	-	-	11	-	-	500	-	-30	85	-	-	DIP (14P4)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51996FP	-	-	17	-	-	500	-	-30	85	-	-	SOP-16 (16P2N-A)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51996P	-	-	17	-	-	500	-	-30	85	-	-	DIP-14 (14P4)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M51998P	-	-	12	-	-	500	-	-20	85	-	-	DIP (14P4)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M62213FP	-	-	13	-	-	700	-	-20	85	-	-	SOP (10P2N-A)	○	Switching Regulator Control (Voltage Mode type AC/DC)	Primary control MOSFET drive
M62235P	-	-	5	-	-	-	-	-30	85	-	-	DIP (14P4)	○	Switching power supply secondary side control	1 system output voltage detection/ 2system overvoltage (overcurrent)detection
M62281FP	-	-	13	-	-	700	-	-20	85	-	-	SOP (10P2N-A)	○	Switching Regulator Control (Current Mode type AC/DC)	Primary control MOSFET drive
M62281P	-	-	13	-	-	700	-	-20	85	-	-	DIP (14P4)	○	Switching Regulator Control (Current Mode type AC/DC)	Primary control MOSFET drive
M62283FP	-	-	13(typ)	-	-	700	-	-20	85	-	-	SOP-10 (10P2N-A)	○	Current mode type AC/DC output peak current ±1A	Primary side control 500kHz MOSFET drive
R2A20121SP	20	-	10	-	-	2MHz	-	-40	125	-55	150	TSSOP-20 (TTP-20DAV)	○	Synchronous phase shift full-bridge control IC	Switching regulator
R2A20124AFP	20	11.9	11.5	50	-	200	-	-40	125	-55	150	LQFP-40 (FP-40EV)	○	Synchronous phase shift full-bridge control IC	Switching regulator
R2A20124ASP	20	11.9	11.5	50	-	200	-	-40	125	-55	150	SOP-20 (FP-20DAV)	○	Synchronous phase shift full-bridge control IC	Switching regulator
μPC1099GS	24	24	-	1200 (Peak)	50	500	694	-20	85	-55	150	SOP-16 (7.62mm(300))	○	Switching Regulator Control (AC/DC)	Primary side control
μPC1909GS	24	24	-	1200 (Peak)	50	500	694	-20	85	-55	150	SOP-16 (7.62mm(300))	○	Switching Regulator Control (AC/DC)	Primary side control
μPC494GS	40	40	-	250	1	300	650	-20	85	-65	150	SOP-16 (7.62mm(300))	○	Switching Regulator Control (wide use)	-

ICs for DC/DC Converter Power Supply

Part No.	V _{IN} (V)	V _{OUT} (V)	I _{CC} (mA)	I _{OUT} (mA)	f _{OSC} (kHz)		P _T (mW)	T _{oaa} (°C)		T _{sig} (°C)		Package	Status	Function	Remarks
	max.	max.	max.	max.	min.	max.	min.	max.	min.	max.					
HA16114FP	40	38.4	11	100	0.001	600	680	-40	125	-55	125	SOP (FP-16DA)	○	1 ch step down/negative output DC/DC	Switching regulator
HA16114P	40	38.4	11	100	0.001	600	680	-40	125	-55	125	DIP (DP-16)	○	1 ch step down/negative output DC/DC	Switching regulator
HA16116FP	40	38.4	15.7	100	0.001	600	680	-40	125	-55	125	SOP (FP-20DA)	○	2 ch step down/negative output DC/DC	Switching regulator
HA16120FP	40	38.4	11	100	0.001	600	680	-40	125	-55	125	SOP (FP-16DA)	○	1 ch step up DC/DC	Switching regulator
HA16121FP	40	38.4	15.7	100	0.001	600	680	-40	125	-55	125	SOP (FP-20DA)	○	2 ch step up/step down/negative output DC/DC	Switching regulator
M5291FP	2.5 to 40	-	1.4	-	-	100	440	-20	75	-55	125	SOP (8P2S-A)	○	DC/DC Converter	-
M5291P	2.5 to 40	-	1.4	-	-	100	625	-20	75	-55	125	DIP (8P4)	○	DC/DC Converter	-
M62211FP	2.5 to 35	-	3	-	-	500	440	-20	85	-40	150	SOP (10P2N-A)	○	DC/DC Converter	Possible to trigger synchronous, Built-in load short circuit protection
M62212FP	2.5 to 18	-	1.3	-	-	300	440	-20	85	-40	125	SOP (8P2S-A)	○	DC/DC Converter	Built-in load short circuit protection
M62215FP	8.6 to 25	-	8	-	-	500	440	-20	85	-40	150	SOP (10P2N-A)	○	Multifunction power DC/DC	2 input priority control
M62220FP	4 to 15	-	0.9	-	-	110 (Fixed)	440	-20	85	-40	125	SOP (8P2S-A)	○	3.3V fixed step down output DC/DC Converter	Built-in oscillator
M62290FP	6 to 15	-	1.1	-	-	120 (Fixed)	440	-20	85	-40	125	SOP (8P2S-A)	○	5.0V fixed step down output DC/DC Converter	Built-in oscillator
M62291GP	6 to 15	-	0.57	-	-	120 (Fixed)	200	-20	85	-40	125	SOT-25 (5P2X-A)	○	5.0V fixed step down output DC/DC Converter	Built-in oscillator
M62292FP	4 to 15	-	1.5	-	-	110 (Fixed)	440	-20	85	-40	125	SOP (8P2S-A)	○	2ch fixed step down DC/DC with reset	3.3V/1.8V 2ch fixed output
R2A20010NP	1.4 to 4.5	-	10	-	-	1 MHz	-	-20	85	-	-	QFN (PVQN0048LA-A)	○	8ch DC/DC Converter	Power MOS FET built-in
R2A20016NP	1.5 to 5.5	-	7.5	-	-	2 MHz	-	-20	85	-	-	QFN (PWQN0040LC-A)	○	7ch DC/DC Converter	Power MOS FET built-in
M62292FP	4 to 15	-	1.5	-	-	110 (Fixed)	440	-20	85	-40	125	SOP (8P2S-A)	○	2ch fixed step down DC/DC with reset	3.3V/1.8V 2ch fixed output
R2A20010NP	1.4 to 4.5	-	10	-	-	1 MHz	-	-20	85	-	-	QFN (PVQN0048LA-A)	○	8ch DC/DC Converter	Power MOS FET built-in
R2A20016NP	1.5 to 5.5	-	7.5	-	-	2 MHz	-	-20	85	-	-	QFN (PWQN0040LC-A)	○	7ch DC/DC Converter	Power MOS FET built-in
R2J20071ANS	1.7 to 10	-	1	-	-	-	-	-20	85	-	-	DFN (PUSN0010KC-A)	○	Strobe charger IC	Built-in IGBT driver
μPC1100GS	40	40	-	25	1	500	694	-20	85	-55	150	SOP-16 (7.62mm(300))	○	DC/DC Converter	-
μPC1150GS	20	41	-	25	1	500	694	-20	85	-55	150	SOP-16 (7.62mm(300))	○	DC/DC Converter	-
μPC1933GR	20	20	-	20	20	800	480	-20	85	-55	150	SOP-8 (5.72mm(225))	○	DC/DC Converter	Low voltage

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)

 Ordering Condition ◆: Large order only

System Power Management ICs

■ ICs for CRT synchronous deflection control

Function	Part No	Power-supply voltage (V)	Output Voltage (V)	Output Current (mA)	Circuit Current (mA)	Reference Voltage (V)	Over-Voltage Detection Voltage (V)	Features	Package	Status	Remarks
Synchronous Bias Control IC	M62501FP	15	15	100	20	5	5	1ch output	SOP (16P2S)	O	PWM output is synchronized with an external signal Wide PWM control frequency of 15kHz to 150kHz Built-in soft start function Built-in low-voltage output malfunction prevention circuit (UVLO) Start $V_{cc} > 9V$, Stop $V_{cc} < 6V$ Built-in OVP and UVP circuits

■ ICs for OA equipment Power supply

Function	Part No	Power-supply voltage (V)	Power Consumption (25°C) (mA)	Output Voltage (V)	Output Current (mA)	Circuit Current (mA)	Reference Voltage (V)	Over-Voltage Detection Voltage (V)	Features	Package	Status	Remarks
2ch Reg. + 2ch Reset	M62510GP	-0.3 to 9.0	735	3.3	200	3.5	-	-	-	SSOP (16P2X-A)	O	For OA equipments such as printer and CD-ROM

■ ICs for CCD image sensor Vertical Drive

Function	Part No	Power-supply voltage (V)	Supply voltage VL (V)	Supply voltage VH (V)	Output Voltage (V)	Output Current (mA)	Circuit Current (mA)	Reference Voltage (V)	Over-Voltage Detection Voltage (V)	Features	Package	Status	Remarks
14-channel vertical driver for CCD	R2S20040LG	GND-0.3 to +7.0	GND to -10	VL +27	-	-	2.2	-	-	-	TFLGA (49F0G)	SPL	For CCD area image sensor

Shunt Regulators

Part No.	V _{KA} (V)	I _{Off} (μ A)	V _{ref} (V)	I _K (mA)		P _T (mW)	Topa (°C)		Package	Status
	max.	max.		min.	max.		min.	max.		
HA17431GLP	40	1	2.5 \pm 1%	-50	100	150	-40	85	MPAK-5V	O
HA17431GLPA	40	1	2.5 \pm 0.5%	-50	100	150	-40	85	MPAK-5V	O
HA17431GLTP	40	1	2.5 \pm 1%	-50	100	150	-40	85	MPAKV (MPAK(T))	Δ
HA17431GLTPA	40	1	2.5 \pm 0.5%	-50	100	150	-40	85	MPAKV (MPAK(T))	Δ
HA17431GP	40	1	2.5 \pm 1%	-50	100	500	-40	85	TO-92V (TO-92 (1))	O
HA17431GPA	40	1	2.5 \pm 0.5%	-50	100	500	-40	85	TO-92V (TO-92 (1))	O
HA17431GUP	40	1	2.5 \pm 1%	-50	100	800	-40	85	UPAKV	O
HA17431HLP	36	1	2.5 \pm 1%	-50	50	150	-20	85	MPAK-5V	O
HA17431HLTP	36	1	2.5 \pm 1%	-50	50	150	-20	85	MPAKV (MPAK(T)V)	O
HA17431HP	36	1	2.5 \pm 1%	-50	50	500	-20	85	TO-92V (TO-92 (1))	O
HA17431HUP	36	1	2.5 \pm 1%	-50	50	800	-20	85	UPAKV	Δ
HA17431PA	40	1	2.495 \pm 2.2%	-100	150	800	-20	85	TO-92MODV	O
HA17431PNA	40	1	2.495 \pm 2.2%	-100	150	500	-20	85	TO-92V (TO-92 (1))	O
HA17431UA	40	1	2.495 \pm 2.2%	-100	150	800	-20	85	UPAKV	O
HA17431VLP	16	1	2.5 \pm 1%	-50	50	150	-20	85	MPAK-5V	O
HA17431VLTP	16	1	2.5 \pm 1%	-50	50	150	-20	85	MPAKV (MPAK(T)V)	O
HA17431VP	16	1	2.5 \pm 1%	-50	50	500	-20	85	TO-92V (TO-92 (1))	O
HA17431VUP	16	1	2.5 \pm 1%	-50	50	800	-20	85	UPAKV	Δ
HA17432GUP	40	1	2.5 \pm 1%	-50	100	800	-40	85	UPAKV	Δ
HA17432HLTP	36	1	2.5 \pm 1%	-50	50	150	-20	85	MPAKV (MPAK(T)V)	O
HA17432HUP	36	1	2.5 \pm 1%	-50	50	800	-20	85	UPAKV	O
HA17432UA	40	1	2.495 \pm 2.2%	-100	150	800	-20	85	UPAKV	O
HA17432VLTP	16	1	2.5 \pm 1%	-50	50	150	-20	85	MPAKV (MPAK(T)V)	Δ
HA17432VUP	16	1	2.5 \pm 1%	-50	50	800	-20	85	UPAKV	Δ
HA17L431ALP	16	1	1.24 \pm 1%	-30	50	150	-20	85	MPAK-5V	O
HA17L431ALTP	16	1	1.24 \pm 1%	-30	50	150	-20	85	MPAKV (MPAK(T)V)	O
HA17L431AP	16	1	1.24 \pm 1%	-30	50	500	-20	85	TO-92V (TO-92 (1))	O
HA17L431UP	16	1	1.24 \pm 1.5%	-30	50	800	-20	85	UPAKV	O
HA17L432ALTP	16	1	1.24 \pm 1%	-30	50	150	-20	85	MPAKV (MPAK(T)V)	Δ
HA17L432UP	16	1	1.24 \pm 1.5%	-30	50	800	-20	85	UPAKV	O
μ PC1093G	36	1	2.495 \pm 2%	1	100	480	-20	85	SOP-8 (225mil)	O
μ PC1093T	36	1	2.495 \pm 2%	1	100	400	-20	85	3pin PoMM (SOT-89)	O
μ PC1093TA	36	1	2.495 \pm 2%	1	100	180	-20	85	5pin MM (SOT-457)	O
μ PC1943T	24	1	1.26 \pm 2.4%	1	30	320	-30	85	3pin PoMM (SOT-89)	O
μ PC1944GR	24	1	1.26 \pm 2.4%	1	30	385	-30	85	SOP-8 (225mil)	O
μ PC1944T	24	1	1.26 \pm 2.4%	1	30	320	-30	85	3pin PoMM (SOT-89)	O
μ PC1945TA	5	1	1.26 \pm 2%	-	12	90	-20	85	5pin MM (SOT-457)	O

3 Terminal Regulators

I _{OUT} (A)	Part No.	V _{IN} (V)	V _{OUT} (V)	P _T (W)	Topa (°C)		Package	Status
		max.			min.	max.		
0.05	μPC305G2	40	4.5 to 30	0.44	0	70	SOP-8 (225mil)	○
0.1	HA178L05	-	5	0.8	-40	85	TO-92MODV	○
	HA178L05A	-	5	0.8	-40	85	TO-92MODV	○
	HA178L05PA	-	5	0.8	-40	85	TO-92MODV	○
	HA178L05UA	-	5	0.8	-40	85	UPAKV	○
	HA178L08A	-	8	0.8	-40	85	TO-92MODV	○
	HA178L08UA	-	8	0.8	-40	85	UPAKV	○
	HA178L15A	-	15	0.8	-40	85	TO-92MODV	Δ
	HA178L15P	-	15	0.8	-40	85	TO-92MODV	Δ
	HA178L15UA	-	15	0.8	-40	85	UPAKV	○
	HA179L05	-	-5	0.8	-40	85	TO-92MODV	○
	HA179L05P	-	-5	0.8	-40	85	TO-92MODV	Δ
	HA179L05U	-	-5	0.8	-40	85	UPAKV	○
	HA179L15P	-	-15	0.8	-40	85	TO-92MODV	Δ
	HA179L15U	-	-15				UPAKV	Δ
	μPC29L03T	16	3	2	-30	85	3pin PoMM (SOT-89)	○
	μPC29L04T	16	4	2	-30	85	3pin PoMM (SOT-89)	○
μPC29L05T	16	5	2	-30	85	3pin PoMM (SOT-89)	○	
μPC29L33T	16	3.3	2	-30	85	3pin PoMM (SOT-89)	○	
μPC29S10GR	20	10	0.48	-30	85	SOP-8 (225mil)	○	
μPC29S78GR	20	7.8	0.48	-30	85	SOP-8 (225mil)	○	
μPC78L05T	30	5	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L06T	30	6	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L07T	30	7	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L08T	30	8	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L10T	35	10	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L12T	35	12	2	-20	85	3pin PoMM (SOT-89)	○	
μPC78L15T	35	15	2	-20	85	3pin PoMM (SOT-89)	○	
0.3	μPD120N15T1B	6	1.5	2	-40	85	3pin PoMM (SOT-89)	○
	μPD120N15TA	6	1.5	0.51	-40	85	5pin MM (SOT-457)	○
	μPD120N18T1B	6	1.8	2	-40	85	3pin PoMM (SOT-89)	○
	μPD120N18TA	6	1.8	0.51	-40	85	5pin MM (SOT-457)	○
	μPD120N25T1B	6	2.5	2	-40	85	3pin PoMM (SOT-89)	○
	μPD120N25TA	6	2.5	0.51	-40	85	5pin MM (SOT-457)	○
	μPD120N33T1B	6	3.3	2	-40	85	3pin PoMM (SOT-89)	○
	μPD120N33TA	6	3.3	0.51	-40	85	5pin MM (SOT-457)	○
0.5	μPC29M03HB	20	3	10	-30	85	MP-3 (TO-251)	○
	μPC29M03T	20	3	10	-30	85	MP-3Z (TO-252)	○
	μPC29M05AHB	20	5	10	-30	85	MP-3 (TO-251)	○
	μPC29M05AT	20	5	10	-30	85	MP-3Z (TO-252)	○
	μPC29M05HB	20	5	10	-30	85	MP-3 (TO-251)	○
	μPC29M05T	20	5	10	-30	85	MP-3Z (TO-252)	○
	μPC29M06HB	20	6	10	-30	85	MP-3 (TO-251)	○
	μPC29M06T	20	6	10	-30	85	MP-3Z (TO-252)	○
	μPC29M07HB	20	7	10	-30	85	MP-3 (TO-251)	○
	μPC29M07T	20	7	10	-30	85	MP-3Z (TO-252)	○
	μPC29M08HB	20	8	10	-30	85	MP-3 (TO-251)	○
	μPC29M08T	20	8	10	-30	85	MP-3Z (TO-252)	○
	μPC29M09HB	20	9	10	-30	85	MP-3 (TO-251)	○

I _{OUT} (A)	Part No.	V _{IN} (V)	V _{OUT} (V)	P _T (W)	Topa (°C)		Package	Status	
		max.			min.	max.			
0.5	μPC29M09T	20	9	10	-30	85	MP-3Z (TO-252)	○	
	μPC29M10HB	20	10	10	-30	85	MP-3 (TO-251)	○	
	μPC29M10T	20	10	10	-30	85	MP-3Z (TO-252)	○	
	μPC29M12HB	20	12	10	-30	85	MP-3 (TO-251)	○	
	μPC29M12T	20	12	10	-30	85	MP-3Z (TO-252)	○	
	μPC29M33AHB	20	3.3	10	-30	85	MP-3 (TO-251)	○	
	μPC29M33AT	20	3.3	10	-30	85	MP-3Z (TO-252)	○	
	μPC29M33HB	20	3.3	10	-30	85	MP-3 (TO-251)	○	
	μPC29M33T	20	3.3	10	-30	85	MP-3Z (TO-252)	○	
	1	μPC2903HB	20	3	10	-30	85	MP-3 (TO-251)	○
		μPC2903T	20	3	10	-30	85	MP-3Z (TO-252)	○
		μPC2905AHB	20	5	10	-30	85	MP-3 (TO-251)	○
		μPC2905AT	20	5	10	-30	85	MP-3Z (TO-252)	○
		μPC2905BHB	16	5	10	-40	85	MP-3 (TO-251)	○
		μPC2905BT	16	5	10	-40	85	MP-3Z (TO-252)	○
		μPC2905BT1D	16	5	10	-40	85	MP-3ZK (TO-252)	○
μPC2905HB		20	5	10	-30	85	MP-3 (TO-251)	○	
μPC2905T		20	5	10	-30	85	MP-3Z (TO-252)	○	
μPC2906HB		20	6	10	-30	85	MP-3 (TO-251)	○	
μPC2906T		20	6	10	-30	85	MP-3Z (TO-252)	○	
μPC2907HB		20	7	10	-30	85	MP-3 (TO-251)	○	
μPC2907T		20	7	10	-30	85	MP-3Z (TO-252)	○	
μPC2908HB		20	8	10	-30	85	MP-3 (TO-251)	○	
μPC2908T		20	8	10	-30	85	MP-3Z (TO-252)	○	
μPC2909HB		20	9	10	-30	85	MP-3 (TO-251)	○	
μPC2909T	20	9	10	-30	85	MP-3Z (TO-252)	○		
μPC2910HB	20	10	10	-30	85	MP-3 (TO-251)	○		
μPC2910T	20	10	10	-30	85	MP-3Z (TO-252)	○		
μPC2912HB	20	12	10	-30	85	MP-3 (TO-251)	○		
μPC2912T	20	12	10	-30	85	MP-3Z (TO-252)	○		
μPC2918BHB	16	1.8	10	-40	85	MP-3 (TO-251)	○		
μPC2918BT	16	1.8	10	-40	85	MP-3Z (TO-252)	○		
μPC2918BT1D	16	1.8	10	-40	85	MP-3ZK (TO-252)	○		
μPC2918HB	20	1.8	10	-30	85	MP-3 (TO-251)	○		
μPC2918T	20	1.8	10	-30	85	MP-3Z (TO-252)	○		
μPC2925BHB	16	2.5	10	-40	85	MP-3 (TO-251)	○		
μPC2925BT	16	2.5	10	-40	85	MP-3Z (TO-252)	○		
μPC2925BT1D	16	2.5	10	-40	85	MP-3ZK (TO-252)	○		
μPC2925HB	20	2.5	10	-30	85	MP-3 (TO-251)	○		
μPC2925T	20	2.5	10	-30	85	MP-3Z (TO-252)	○		
μPC2926HB	20	2.6	10	-30	85	MP-3 (TO-251)	○		
μPC2926T	20	2.6	10	-30	85	MP-3Z (TO-252)	○		
μPC2933AHB	20	3.3	10	-30	85	MP-3 (TO-251)	○		
μPC2933AT	20	3.3	10	-30	85	MP-3Z (TO-252)	○		
μPC2933BHB	16	3.3	10	-40	85	MP-3 (TO-251)	○		
μPC2933BT	16	3.3	10	-40	85	MP-3Z (TO-252)	○		
μPC2933BT1D	16	3.3	10	-40	85	MP-3ZK (TO-252)	○		
μPC2933HB	20	3.3	10	-30	85	MP-3 (TO-251)	○		
μPC2933T	20	3.3	10	-30	85	MP-3ZK (TO-252)	○		

3 Terminal Regulators

I _{OUT} (A)	Part No.	V _{IN} (V)	V _{OUT} (V)	P _T (W)	Topa (°C)		Package	Status	I _{OUT} (A)	Part No.	V _{IN} (V)	V _{OUT} (V)	P _T (W)	Topa (°C)		Package	Status
		max.			min.	max.					min.			max.			
1	μPD12115T1F	6	1.5	10	-40	85	5pin MP-3ZK (TO-252)	○	1.5	μPD121W25AT1F	6	2.5	10	-40	85	5pin MP-3ZK (TO-252)	○
1.5	μPD121W00AT1F	6	1.8 to 3.3	10	-40	85	5pin MP-3ZK (TO-252)	○	2	μPD121W33AT1F	6	3.3	10	-40	85	5pin MP-3ZK (TO-252)	○
	μPD121W18AT1F	6	1.8	10	-40	85	5pin MP-3ZK (TO-252)	○		μPD121A10T1F	6	1	10	-20	85	5pin MP-3ZK (TO-252)	○

Output Voltage Precision & Grade

Grade	HA178Lxx Series	HA179Lxx Series
Standard	±8%	±4%
A Grade	±5%	—

Note) Part No. with suffix "P" means telecommunication industrial use; others are for consumer use.

Charger ICs

ICs for Battery Protection

Function	Part No.	Supply voltage (V)	Supply Current (mA)	Package	Status	Remarks
Li-ion battery protection for 4cell and monitoring charge/discharge current	M61041FP	30	0.15	SSOP (16P2X)	○	Built-in linear regulator Vreg=5.2V over current detection circuit
	M61042FP	30	0.15	SSOP (16P2X)	○	Built-in linear regulator Vreg=3.3V over current detection circuit
Li-ion battery protection for 3 cell and monitoring charge/discharge current	M61043FP	30	0.15	SSOP (16P2X)	○	Built-in linear regulator Vreg=5.2V over current detection circuit
	M61044FP	30	0.15	SSOP (16P2X)	○	Built-in linear regulator Vreg=3.3V over current detection circuit

ICs for Battery Charger Control

Function	Part No.	Supply voltage (V)	Supply Current (mA)	Package	Status	Remarks
Constant current/voltage control	M62237FP	2.5 to 15	0.8	SOP (8P2S-A)	○	High precision ref. voltage 1.25V ±1%
Charge control	M62242FP	5.3 to 15	2	SOP (16P2E-A)	○	1 system output SW
Charge control for Li-ion battery	M62244FP	3.0 to 6.5	5	SOP (20P2F-A)	○	Built-in charge timer (5min., 1hr., 4hrs.)
	M62245FP	3.0 to 6.5	5	SOP (16P2N-A)	○	Constant current/ constant voltage control
	M62253AGP	5.0 to 15	7	SOP (16P2E-A)	○	Constant current/ constant voltage control
	R2A20035SP	2.8 to 5.5	3.5	SOP (20P2F-A)	○	Constant current/ constant voltage control
	R2S20030NP	4.75 to 6	1.6	SOP (28PJW)	○	Built-in FET SW, current detection circuit, small PKG.
	R2A20050ANS	4.0 to 5.8	4.5	DFN (PUSN0010KA-A)	○	Constant current/ constant voltage control

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)
 Δ: Long delivery date(Lead time: 3 months)

Ordering Condition ◆: Large order only

Reset ICs (Voltage Detectors)

■ Single-Function Reset ICs

Function	Part No.	Delay Circuit	Detection Type	Detection Voltage (V)	Reset Level	Output Format	Circuit Current (μA)	Minimum Supply Voltage for Operation (V)			Package	Status
								RL2.2K	RL100K	RL470K		
CMOS Single	RNA51A26FLP	External delay capacitance	Power supply voltage	2.6	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A28FLP	External delay capacitance	Power supply voltage	2.8	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A29FLP	External delay capacitance	Power supply voltage	2.9	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A30FLP	External delay capacitance	Power supply voltage	3	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A31FLP	External delay capacitance	Power supply voltage	3.1	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A44FLP	External delay capacitance	Power supply voltage	4.4	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A45FLP	External delay capacitance	Power supply voltage	4.5	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51A46FLP	External delay capacitance	Power supply voltage	4.6	Low reset type	Open drain	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51B14FLP	External delay capacitance	Power supply voltage	1.4	Low reset type	CMOS	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51B27FLP	External delay capacitance	Power supply voltage	2.7	Low reset type	CMOS	0.7	-	-	1.1	MPAK-5V	Δ
	RNA51B50FLP	External delay capacitance	Power supply voltage	5	Low reset type	CMOS	0.7	-	-	1.1	MPAK-5V	Δ
Single	RNA51951AFP	Built-in 200μs	Power supply voltage	4.25	Low reset type	With fixed current load	450	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51951AP	Built-in 200μs	Power supply voltage	4.25	Low reset type	With fixed current load	450	0.67	0.55	-	DIP (DP-8FV)	○
	RNA51951AUP	Built-in 200μs	Power supply voltage	4.25	Low reset type	With fixed current load	450	0.67	0.55	-	UPAK	○
	RNA51951BFP	Built-in 200μs	Power supply voltage	4.25	Low reset type	Open collector	420	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51951BP	Built-in 200μs	Power supply voltage	4.25	Low reset type	Open collector	420	0.67	0.55	-	DIP (DP-8FV)	○
	RNA51951BUP	Built-in 200μs	Power supply voltage	4.25	Low reset type	Open collector	420	0.67	0.55	-	UPAK	○
	RNA51953AFP	External delay capacitance	Power supply voltage	4.25	Low reset type	With fixed current load	450	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51953BFP	External delay capacitance	Power supply voltage	4.25	Low reset type	Open collector	420	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51955AFP	Built-in 200μs	Input voltage	1.25	Low reset type	With fixed current load	390	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51955AP	Built-in 200μs	Input voltage	1.25	Low reset type	With fixed current load	390	0.67	0.55	-	DIP (DP-8FV)	○
	RNA51955BFP	Built-in 200μs	Input voltage	1.25	Low reset type	Open collector	360	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51955BP	Built-in 200μs	Input voltage	1.25	Low reset type	Open collector	360	0.67	0.55	-	DIP (DP-8FV)	○
	RNA51957AFP	External delay capacitance	Input voltage	1.25	Low reset type	With fixed current load	390	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51957BFP	External delay capacitance	Input voltage	1.25	Low reset type	Open collector	360	0.67	0.55	-	SOP (PRSP0008DE-C)	○
	RNA51958AFP	External delay capacitance	Input voltage	1.25	High reset type	With fixed current load	390	-	-	-	SOP (PRSP0008DE-C)	○
RNA51958BFP	External delay capacitance	Input voltage	1.25	High reset type	Open collector	360	-	-	-	SOP (PRSP0008DE-C)	○	
Single & Long delay	RNA62782LP	Built-in 100ms	Power supply voltage	4.0	Low reset type	Open drain	400	0.9	-	-	MPAK-5V	○
	RNA55A125FLP	External delay resistance	Input voltage	1.25	Low reset type	Open drain	50	0.9	-	-	MPAK-5V	○

■ Application Specified Reset ICs

Function	Part No.	Delay Circuit	Delay Time (ms)	Detection Type	Detection Voltage (V)	Reset Level	Operating Power-supply voltage Range (V)	Output Current (mA)	Output Format	I _{DD} (μA) Typ.	I _{DD} (μA) Max.	Package	Status	Function/Feature
Dual Power Supply Control and Detection	RNA50C27AUS	External CR	93 (Cext=0.1μF, Rext=1MΩ)	Supply voltage (3.3V)	2.7	Low reset type	2.7 to 4.6	25	CMOS/ Open drain	3	11	SSOP-8 (TTP-8DBV)	Δ	<ul style="list-style-type: none"> 3.3V/1.8V power supply control Delay time can be changed Reset out : CMOS or Open drain can be selected
	RNA50C27A	External CR	93 (Cext=0.1μF, Rext=1MΩ)	Supply voltage (3.3V)	2.7	Low reset type	2.7 to 4.6	25	CMOS/ Open drain	3	11	MMPAK-8	Δ	<ul style="list-style-type: none"> 3.3V/1.8V power supply control Delay time can be changed Reset out : CMOS or Open drain can be selected
CMOS Dual	RNA52A10MM	Ch1 : - Ch2 : External CR	11 (CD=0.3μF, RD=39kΩ)	Input voltage	1	Low reset type	1.4 to 6	30	Open drain	1.1	19	MMPAK-8	○	<ul style="list-style-type: none"> Low voltage detection(1.0V₁) Manual reset available(ch2)
Single Reset + Reference Output	RNA53A27FUS	External R	50(SO=Low) 100(SO=Hi)	Supply voltage (3.3V)	2.745	Low reset type	2.7 to 4.6	10	Open drain	100 (2.8: Sleep mord)	200 (5.6: Sleep mord)	SSOP-8 (TTP-8DBV)	○	<ul style="list-style-type: none"> Reference voltage output(3.05V±0.8%) Delay time 50/100ms(Adjustable by resistance) Manual reset Sleep mode
	RNA53A30FUS	External R	50(SO=Low) 100(SO=Hi)	Supply voltage (3.3V)	3.049	Low reset type	2.7 to 4.6	10	Open drain	100 (2.8: Sleep mord)	200 (5.6: Sleep mord)	SSOP-8 (TTP-8DBV)	○	<ul style="list-style-type: none"> Reference voltage output(3.05V±0.8%) Delay time 50/100ms(Adjustable by resistance) Manual reset Sleep mode

Operational Amplifiers (CMOS)

Configuration	Part No.	V _{DD} (V)		I _{DD} /ch (μA)	V _{IO} (mV)	SR (V/μs)	T _{OPA} (°C)		Package	Status	Remarks
		min.	max.	typ.	max.	min.	max.				
Single	HA1630S01CM	1.8	5.5	15	4	0.125	-40	85	CMPAK-5V	○	Output full swing Standard
	HA1630S01LP	1.8	5.5	15	4	0.125	-40	85	MPAK-5V	○	Output full swing Standard
	HA1630S02CM	1.8	5.5	50	4	0.5	-40	85	CMPAK-5V	○	Output full swing Standard
	HA1630S02LP	1.8	5.5	50	4	0.5	-40	85	MPAK-5V	○	Output full swing Standard
	HA1630S03CM	1.8	5.5	100	4	1	-40	85	CMPAK-5V	○	Output full swing Standard
	HA1630S03LP	1.8	5.5	100	4	1	-40	85	MPAK-5V	○	Output full swing Standard
	HA1630S04CM	1.8	5.5	200	4	2	-40	85	CMPAK-5V	○	Output full swing High slew rate
	HA1630S04LP	1.8	5.5	200	4	2	-40	85	MPAK-5V	○	Output full swing High slew rate
	HA1630S05CM	1.8	5.5	400	4	4	-40	85	CMPAK-5V	○	Output full swing High slew rate
	HA1630S05LP	1.8	5.5	400	4	4	-40	85	MPAK-5V	○	Output full swing High slew rate
	HA1630S06CM	1.8	5.5	800	4	8	-40	85	CMPAK-5V	○	Output full swing High slew rate
	HA1630S06LP	1.8	5.5	800	4	8	-40	85	MPAK-5V	○	Output full swing High slew rate
	HA1630S07CM	2.7	5.5	60	6	1	-40	85	CMPAK-5V	○	Output full swing High output drive
	HA1630S07LP	2.7	5.5	60	6	1	-40	85	MPAK-5V	○	Output full swing High output drive
	HA1630S08CM	2.7	5.5	170	6	1.5	-40	85	CMPAK-5V	○	Output full swing High output drive
HA1630S08LP	2.7	5.5	170	6	1.5	-40	85	MPAK-5V	○	Output full swing High output drive	
Dual	HA1630D01MM	1.8	5.5	15	4	0.125	-40	85	MMPAK	○	Output full swing Standard
	HA1630D01T	1.8	5.5	15	4	0.125	-40	85	TSSOP (TTP-8DAV)	○	Output full swing Standard
	HA1630D02MM	1.8	5.5	50	4	0.5	-40	85	MMPAK	○	Output full swing Standard
	HA1630D02T	1.8	5.5	50	4	0.5	-40	85	TSSOP (TTP-8DAV)	○	Output full swing Standard
	HA1630D03MM	1.8	5.5	100	4	1	-40	85	MMPAK	○	Output full swing Standard
	HA1630D03T	1.8	5.5	100	4	1	-40	85	TSSOP (TTP-8DAV)	○	Output full swing Standard
	HA1630D04MM	1.8	5.5	200	4	2	-40	85	MMPAK	○	Output full swing High slew rate
	HA1630D04T	1.8	5.5	200	4	2	-40	85	TSSOP (TTP-8DAV)	○	Output full swing High slew rate
	HA1630D05MM	1.8	5.5	400	4	4	-40	85	MMPAK	○	Output full swing High slew rate
	HA1630D05T	1.8	5.5	400	4	4	-40	85	TSSOP (TTP-8DAV)	○	Output full swing High slew rate
	HA1630D06MM	1.8	5.5	800	4	8	-40	85	MMPAK	○	Output full swing High slew rate
	HA1630D06T	1.8	5.5	800	4	8	-40	85	TSSOP (TTP-8DAV)	○	Output full swing High slew rate
	HA1630D07MM	2.7	5.5	60	6	1	-40	85	MMPAK	○	Output full swing High output drive
	HA1630D07T	2.7	5.5	60	6	1	-40	85	TSSOP (TTP-8DAV)	○	Output full swing High output drive
	HA1630D08MM	2.7	5.5	170	6	1.5	-40	85	MMPAK	○	Output full swing High output drive
HA1630D08T	2.7	5.5	170	6	1.5	-40	85	TSSOP (TTP-8DAV)	○	Output full swing High output drive	
Quad	HA1630Q01T	1.8	5.5	15	4	0.125	-40	85	TSSOP (TTP-14DV)	○	Output full swing Standard
	HA1630Q02T	1.8	5.5	50	4	0.5	-40	85	TSSOP (TTP-14DV)	○	Output full swing Standard
	HA1630Q03T	1.8	5.5	100	4	1	-40	85	TSSOP (TTP-14DV)	○	Output full swing Standard
	HA1630Q04T	1.8	5.5	200	4	2	-40	85	TSSOP (TTP-14DV)	○	Output full swing High slew rate
	HA1630Q05T	1.8	5.5	400	4	4	-40	85	TSSOP (TTP-14DV)	○	Output full swing High slew rate
	HA1630Q06T	1.8	5.5	800	4	8	-40	85	TSSOP (TTP-14DV)	○	Output full swing High slew rate

Notes) Production Status ○: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)
 Ordering Condition ◆: Large order only

Operational Amplifiers (Bipolar)

Circuits	Part No.	V _{CC} (V)		I _{CC} (mA)	V _{IO} (mV)	SR (V/μs)	T _{opa} (°C)		Package	Status	Remarks
		min.	max.	typ.	max.	min.	max.				
Single	μPC151G2	±7.5	±18	1.5	6	0.5	-40	85	SOP-8 (225ml)	○	General purpose
	μPC4061G2	±2	±18	0.22	10	3	-20	80	SOP-8 (225ml)	○	J-FET input, Micro power
	μPC4071G2	±5	±18	2	10	13	-20	80	SOP-8 (225ml)	○	J-FET input, Low noise
	μPC4081G2	±5	±18	2	15	13	-20	80	SOP-8 (225ml)	○	J-FET input
	μPC4091G2	±5	±18	2.5	2.5	15	-20	80	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC4093G2	±5	±18	2.5	2.5	25	-20	80	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC4250G2	±1	±18	0.0005	5	0.02	-20	80	SOP-8 (225ml)	○	Micro power
	μPC741G2	±7.5	±18	1.5	6	0.5	-20	80	SOP-8 (225ml)	○	General purpose
	μPC802G2	±1	±18	0.0005	5	0.02	-40	85	SOP-8 (225ml)	○	Micro power
	μPC811G2	±5	±18	2.5	2.5	15	-40	85	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC813G2	±5	±18	2.5	2.5	25	-40	85	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC821G2	±5	±18	2	10	13	-40	85	SOP-8 (225ml)	○	J-FET input, Low noise
	μPC831G2	±2	±18	0.22	10	3	-40	85	SOP-8 (225ml)	○	J-FET input, Micro power
Dual	μPC1251G2	3	32	0.7	7	0.3	-40	85	SOP-8 (225ml)	○	Single supply voltage
	μPC1251GR	3	32	0.7	7	0.3	-40	125	TSSOP-8 (5.75mm(225))	○	Single supply voltage
	μPC1251MA	3	32	0.7	7	0.3	-40	85	SOP-8 (225ml)	○	Single supply voltage
	μPC1251MP	3	32	0.7	7	0.3	-40	125	TSSOP-8 (2.8*2.9)	○	Single supply voltage
	μPC1458G2	±7.5	±18	3	6	0.5	-20	80	SOP-8 (225ml)	○	General purpose
	μPC251G2	±7.5	±18	3	6	0.5	-40	85	SOP-8 (225ml)	○	General purpose
	μPC258G2	±4	±18	3	6	1	-40	85	SOP-8 (225ml)	○	Low noise
	μPC358G2	3	32	0.7	7	0.3	-20	80	SOP-8 (225ml)	○	Single supply voltage
	μPC358GR	3	32	0.7	7	0.3	-40	85	TSSOP-8 (5.75mm(225))	○	Single supply voltage
	μPC358MA	3	32	0.7	7	0.3	-40	85	SOP-8 (225ml)	○	Single supply voltage
	μPC358MF	3	32	0.7	7	0.3	-40	85	SOP-8 (3.8*4.9)	○	Single supply voltage
	μPC4062G2	±2	±18	0.4	10	3	-20	80	SOP-8 (225ml)	○	J-FET input, Micro power
	μPC4072G2	±5	±18	4	10	13	-20	80	SOP-8 (225ml)	○	J-FET input, Low noise
	μPC4072MF	±5	±18	4	10	13	-40	85	SOP-8 (3.8*4.9)	○	J-FET input, Low noise
	μPC4082G2	±5	±18	4	15	13	-20	80	SOP-8 (225ml)	○	J-FET input
	μPC4092G2	±5	±18	5	3	15	-20	80	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC4094G2	±5	±18	5	3	25	-20	80	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC4556G2	±4	±18	3	6	5	-20	80	SOP-8 (225ml)	○	Low noise
	μPC4558G2	±4	±18	3	6	1	-20	80	SOP-8 (225ml)	○	Low noise
	μPC4558MF	±4	±18	3	6	1	-40	85	SOP-8 (3.8*4.9)	○	Low noise
	μPC4560G2	±4	±18	4	6	2.8	-20	80	SOP-8 (225ml)	○	Low noise
	μPC4570G2	±4	±18	5	5	7	-20	80	SOP-8 (225ml)	○	Super low noise
	μPC4570GR	±4	±18	5	5	7	-40	85	TSSOP-8 (5.75mm(225))	○	Super low noise
	μPC4570MF	±4	±18	5	5	7	-40	85	SOP-8 (3.8*4.9)	○	Super low noise
	μPC4572G2	±2	±7.5	4.5	5	6	-20	80	SOP-8 (225ml)	○	Super low noise
	μPC4572MF	±2	±7.5	4.5	5	6	-40	85	SOP-8 (3.8*4.9)	○	Super low noise
	μPC4742G2	3	36	4.3	5	7	-20	80	SOP-8 (225ml)	○	Single supply voltage
	μPC4742GR	3	36	4.3	5	7	-40	85	TSSOP-8 (5.75mm(225))	○	Single supply voltage
	μPC4742MF	3	32	4.3	4.5	8.5	-40	85	SOP-8 (3.8*4.9)	○	Single supply voltage
	μPC803G2	±5	±18	4	15	13	-40	85	SOP-8 (225ml)	○	J-FET input
	μPC812G2	10	±18	5	3	15	-40	85	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC814G2	±5	±18	5	3	25	-40	85	SOP-8 (225ml)	○	J-FET input, High accuracy
	μPC822G2	±5	±18	4	10	13	-40	85	SOP-8 (225ml)	○	J-FET input, Low noise
	μPC832G2	±2	±18	0.4	10	3	-40	85	SOP-8 (225ml)	○	J-FET input, Micro power
μPC835MN	±5	±18	1.4	3	5.5	-40	85	TSSOP-8 (3*3)	○	J-FET input, High accuracy	
μPC842G2	3	36	4.3	5	7	-40	85	SOP-8 (225ml)	○	Single supply voltage	
μPC842GR	3	36	4.3	5	7	-40	125	TSSOP-8 (5.75mm(225))	○	Single supply voltage	
μPC842MA	3	36	4.3	5	7	-40	85	SOP-8 (225ml)	○	Single supply voltage	
HA17358A	-	32	0.8	7	0.2	-40	85	DIP (DP-8FV)	○	No error against RF noise	
HA17358AF	-	32	0.8	7	0.2	-40	85	SOP (FP-8DGV)	○	No error against RF noise	
HA17358ARP	-	32	0.8	7	0.2	-40	85	SOP (FP-8DCV)	△	No error against RF noise (JEDEC)	
HA17358AT	-	32	0.8	7	0.2	-40	85	TSSOP (TTP-8DAV)	○	No error against RF noise	
HA17904AFP	-	32	0.8	7	0.2	-40	85	SOP (FP-8DGV)	○	No error against RF noise	
HA17904APS	-	32	0.8	7	0.2	-40	85	DIP (DP-8FV)	○	No error against RF noise	

Operational Amplifiers (Bipolar)

Circuits	Part No.	V _{CC} (V)		I _{CC} (mA)	V _{IO} (mV)	SR (V/μs)	T _{opa} (°C)		Package	Status	Remarks
		min.	max.	typ.	max.	min.	max.				
Dual	HA17904ARP	-	32	0.8	7	0.2	-40	85	SOP (FP-8DCV)	○	No error against RF noise (JEDEC)
	HA17904AT	-	32	0.8	7	0.2	-40	85	TSSOP (TTP-8DAV)	△	No error against RF noise
	HA17458	-	±18	3	6	0.6	-20	75	DIP (DP-8FV)	△	Standard
	HA17458F	-	±18	3	6	0.6	-20	75	SOP (FP-8DGV)	△	Standard
	HA17458FP	-	±18	3	6	0.6	-20	75	SOP (FP-8DGV)	△	Standard
Quad	μPC324G2	3	32	1.2	7	0.3	-20	80	SOP-14	○	Single supply voltage
	μPC324GR	3	32	1.2	7	0.3	-40	85	TSSOP-14	○	Single supply voltage
	μPC324MA	3	32	1.2	7	0.3	-40	85	SOP-14 (225ml)	○	Single supply voltage
	μPC3403G2	3	36	2.8	7	0.8	-20	80	SOP-14	○	Single supply voltage
	μPC4064G2	±2	±18	0.8	10	3	-20	80	SOP-14	○	J-FET input, Micro power
	μPC4074G2	±5	±18	8	10	13	-20	80	SOP-14	○	J-FET input, Low noise
	μPC451G2	3	32	1.2	7	0.3	-40	85	SOP-14	○	Single supply voltage
	μPC451GR	3	32	1.2	7	0.3	-40	125	TSSOP-14	○	Single supply voltage
	μPC451MA	3	32	1.2	7	0.3	-40	85	SOP-14 (225ml)	○	Single supply voltage
	μPC452G2	3	36	2.8	7	0.8	-40	85	SOP-14	○	Single supply voltage
	μPC4574G2	±4	±18	8.5	5	6	-20	80	SOP-14	○	Super low noise
	μPC4574GR	±4	±18	8.5	5	6	-40	85	TSSOP-14	○	Super low noise
	μPC458G2	±4	±18	5	5	1.6	-20	80	SOP-14	○	Low noise
	μPC4741G2	±4	±18	5	5	1.6	-20	80	SOP-14	○	Low noise
	μPC4744G2	3	36	7.5	5	7	-20	80	SOP-14	○	Single supply voltage
	μPC4744GR	3	36	7.5	5	7	-40	85	TSSOP-14	○	Single supply voltage
	μPC824G2	±5	±18	8	10	13	-40	85	SOP-14	○	J-FET input, Low noise
	μPC834G2	±2	±18	0.8	10	3	-40	85	SOP-14	○	J-FET input, Micro power
	μPC844G2	3	36	7.5	5	7	-40	85	SOP-14	○	Single supply voltage
	μPC844GR	3	36	7.5	5	7	-40	125	TSSOP-14	○	Single supply voltage
	μPC844MA	3	36	7.5	5	7	-40	85	SOP-14 (225ml)	○	Single supply voltage
	HA17324A	-	32	0.8	7	0.19	-40	85	DIP (DP-14AV)	○	No error against RF noise
	HA17324AF	-	32	0.8	7	0.19	-40	85	SOP (FP-14DAV)	○	No error against RF noise
	HA17324ARP	-	32	0.8	7	0.19	-40	85	SOP (FP-14DNV)	○	No error against RF noise (JEDEC)
	HA17324AT	-	32	0.8	7	0.19	-40	85	TSSOP (TTP-14DV)	○	No error against RF noise
	HA17902AFP	-	32	0.8	7	0.19	-40	85	SOP (FP-14DAV)	△	No error against RF noise
	HA17902AP	-	32	0.8	7	0.19	-40	85	DIP (DP-14AV)	○	No error against RF noise
	HA17902ARP	-	32	0.8	7	0.19	-40	85	SOP (FP-14DNV)	△	No error against RF noise (JEDEC)
	HA17902AT	-	32	0.8	7	0.19	-40	85	TSSOP (TTP-14DV)	△	No error against RF noise

Notes) Production Status ○: In Mass Production
 SPL: Samples are available
 △: Long delivery date(Lead time: 3 months)

Ordering Condition ◆: Large order only

Voltage Comparators (CMOS)

Configuration	Part No.	V _{DD} (V)		I _{DD} /ch (μA) typ.	V _{IO} (mV) max.	Response time (μs) typ.		T _{OPa} (°C)		Package	Status	Remarks
		min.	max.			T _{P_H}	T _{P_L}	min.	max.			
Single (Low Consumption)	HA1631S01CM	1.8	5.5	5	5	0.55	1.2	-40	85	CMPAK-5V	○	Push-pull type
	HA1631S01LP	1.8	5.5	5	5	0.55	1.2	-40	85	MPAK-5V	○	Push-pull type
	HA1631S03CM	1.8	5.5	5	5	0.55	-	-40	85	CMPAK-5V	○	Open drain type
	HA1631S03LP	1.8	5.5	5	5	0.55	-	-40	85	MPAK-5V	○	Open drain type
Single (High SR)	HA1631S02CM	1.8	5.5	50	5	0.17	0.33	-40	85	CMPAK-5V	○	Push-pull type
	HA1631S02LP	1.8	5.5	50	5	0.17	0.33	-40	85	MPAK-5V	○	Push-pull type
	HA1631S04CM	1.8	5.5	50	5	0.17	-	-40	85	CMPAK-5V	○	Open drain type
	HA1631S04LP	1.8	5.5	50	5	0.17	-	-40	85	MPAK-5V	○	Open drain type
Dual (Low Consumption)	HA1631D01MM	1.8	5.5	5	5	0.55	1.2	-40	85	MMPAK	○	Push-pull type
	HA1631D01T	1.8	5.5	5	5	0.55	1.2	-40	85	TSSOP (TTP-8DA)	○	Push-pull type
	HA1631D03MM	1.8	5.5	5	5	0.55	-	-40	85	MMPAK	○	Open drain type
	HA1631D03T	1.8	5.5	5	5	0.55	-	-40	85	TSSOP (TTP-8DA)	○	Open drain type
Dual (High SR)	HA1631D02MM	1.8	5.5	50	5	0.17	0.33	-40	85	MMPAK	○	Push-pull type
	HA1631D02T	1.8	5.5	50	5	0.17	0.33	-40	85	TSSOP (TTP-8DA)	○	Push-pull type
	HA1631D04MM	1.8	5.5	50	5	0.17	-	-40	85	MMPAK	○	Open drain type
	HA1631D04T	1.8	5.5	50	5	0.17	-	-40	85	TSSOP (TTP-8DA)	○	Open drain type

Voltage Comparators (Bipolar)

Configuration	Part No.	V _{CC} (V)	I _{CC} (mA) typ.	V _{IO} (mV) max.	Response time (μs) typ.	T _{OPa} (°C)		Package	Status	Remarks
						min.	max.			
Single	μPC271G2	36	5.1	7.5	0.2	-40	85	SOP-8 (225mil)	○	High speed
	μPC311G2	36	5.1	7.5	0.2	-20	80	SOP-8 (225mil)	○	High speed
Dual	HA17393A	36		7	1.3	-40	85	DIP (DP-8FV)	○	No error against RF noise
	HA17393AF	36		7	1.3	-40	85	SOP (FP-8DGV)	○	No error against RF noise
	HA17393ARP	36		7	1.3	-40	85	SOP (FP-8DCV)	△	No error against RF noise (JEDEC)
	HA17393AT	36		7	1.3	-40	85	TSSOP (TTP-8DAV)	○	No error against RF noise
	HA17903AFP	36		7	1.3	-40	85	SOP (FP-8DGV)	○	No error against RF noise
	HA17903APS	36		7	1.3	-40	85	DIP (DP-8FV)	○	No error against RF noise
	HA17903ARP	36		7	1.3	-40	85	SOP (FP-8DCV)	△	No error against RF noise (JEDEC)
	HA17903AT	36		7	1.3	-40	85	TSSOP (TTP-8DAV)	△	No error against RF noise
	μPC272G2	±18	8	8	0.08	-40	85	SOP-14	○	Single supply voltage, Low power
	μPC277G2	36	0.6	5	1.3	-40	85	SOP-8 (225mil)	○	Single supply voltage, Low power
	μPC277GR	36	0.6	5	1.8	-40	125	TSSOP-8 (5.75mm(225))	○	Single supply voltage, Low power
	μPC277MA	36	0.6	5	1.8	-40	85	SOP-8 (225mil)	○	Single supply voltage, Low power
	μPC277MP	36	0.6	5	1.8	-40	125	TSSOP-8 (2.8*2.9)	○	Single supply voltage, Low power
	μPC319G2	±18	8	8	0.08	-20	80	SOP-14	○	High speed
	μPC393G2	36	0.6	5	1.3	-20	80	SOP-8 (225mil)	○	Single supply voltage, Low power
	μPC393GR	36	0.6	5	1.8	-40	85	TSSOP-8 (5.75mm(225))	○	Single supply voltage, Low power
μPC393MA	36	0.6	5	1.8	-40	85	SOP-8 (225mil)	○	Single supply voltage, Low power	
μPC393MF	36	0.6	5	1.8	-40	85	SOP-8 (3.8*4.9)	○	Single supply voltage, Low power	
Quad	HA17339A	36		7	1.3	-40	85	DIP (DP-14AV)	○	No error against RF noise
	HA17339AF	36		7	1.3	-40	85	SOP (FP-14DAV)	○	No error against RF noise
	HA17339ARP	36		7	1.3	-40	85	SOP (FP-14DNV)	○	No error against RF noise (JEDEC)
	HA17339AT	36		7	1.3	-40	85	TSSOP (TTP-14DV)	○	No error against RF noise
	HA17901AFP	36		7	1.3	-40	85	SOP (FP-14DAV)	○	No error against RF noise
	HA17901AP	36		7	1.3	-40	85	DIP (DP-14AV)	○	No error against RF noise
	HA17901ARP	36		7	1.3	-40	85	SOP (FP-14DNV)	○	No error against RF noise (JEDEC)
	HA17901AT	36		7	1.3	-40	85	TSSOP (TTP-14DV)	△	No error against RF noise
	μPC177G2	36	1.1	5	1.3	-40	85	SOP-14	○	Single supply voltage, Low power
	μPC177GR	36	1.1	5	1.6	-40	125	TSSOP-14	○	Single supply voltage, Low power
	μPC177MA	36	1.1	5	1.3	-40	85	SOP-14 (225mil)	○	Single supply voltage, Low power
	μPC339G2	36	1.1	5	1.3	-20	80	SOP-14	○	Single supply voltage, Low power
	μPC339GR	36	1.1	5	1.6	-40	85	TSSOP-14	○	Single supply voltage, Low power
	μPC339MA	36	1.1	5	1.6	-40	85	SOP-14 (225mil)	○	Single supply voltage, Low power

Converters

■ D/A Converters

Function	Part No.	Resolution (bit)	Channel (ch)	Bus Format	Output Buffer Amp.	Power-supply voltage Vcc (V)	Settling Time (μ s)	Output Current (mA)	Output Voltage (V)	Package	Status
R-2R Type D/A converter with buffer	M62342FP	8	2	3-line Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	M62342GP	8	2	3-line Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SSOP (8P2J-A)	○
	M62342HP	8	2	3-line Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SSOP (8P2X-F)	○
	R2A20162NS	8	2	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SON (PWSN0008KA-A)	○
	R2A20162SA	8	2	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	TSSOP (TTP-8DAV)	○
	R2A20162SP	8	2	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SOP (PRSP0008DE-C)	○
	M62332FP	8	2	I ² C Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	R2A20152NS	8	2	I ² C Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SON (PWSN0008KA-A)	○
	R2A20152SP	8	2	I ² C Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SOP (PRSP0008DE-C)	○
	M62343FP	8	3	3-line Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	M62343GP	8	3	3-line Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SSOP (8P2J-A)	○
	M62333FP	8	3	I ² C Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	M62384FP	8	4	3-line Bus	Yes	3 to 5	5	± 0.5	0.1 to (Vcc -0.1)	SOP (16P2N-A)	○
	R2A20164NP	8	4	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	QFN (PWQN0016KB-A)	○
	R2A20164SA	8	4	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	TSSOP (TTP-16DAV)	○
	M62334FP	8	4	I ² C Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	M62339FP	8	4	I ² C Bus	Yes	3 to 5	100	± 1	0.1 to (Vcc -0.1)	SOP (8P2S-A)	○
	R2A20154NS	8	4	I ² C Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SON (PWSN0008KA-A)	○
	R2A20154SP	8	4	I ² C Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SOP (PRSP0008DE-C)	○
	M62368GP	8	6	3-line Bus	Yes	3	100	-0.3 +1.0	0.1 to (Vcc -0.1)	SSOP (16P2E-A)	○
	M62354FP	8	6	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SOP (14P2N-A)	○
	M62354GP	8	6	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (16P2E-A)	○
	R2A20166NP	8	6	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	QFN (PWQN0016KB-A)	○
	R2A20166SA	8	6	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	TSSOP (TTP-16DAV)	○
	M62367GP	8	8	3-line Bus	Yes	3	100	-0.3 +1.0	0.1 to (Vcc -0.1)	SSOP (16P2E-A)	○
	M62353FP	8	8	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SOP (16P2N-A)	○
	M62353GP	8	8	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (16P2E-A)	○
	R2A20168NP	8	8	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	QFN (PWQN0016KB-A)	○
	R2A20168SA	8	8	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	TSSOP (TTP-16DAV)	○
	R2A20168SP	8	8	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SOP (FP-16DAV)	○
	M62393FP	8	8	I ² C Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SOP (20P2N-A)	○
	R2A20158NP	8	8	I ² C Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	QFN (PWQN0020KB-A)	○
	M62366GP	8	12	3-line Bus	Yes	3	100	-0.3 +1.0	0.1 to (Vcc -0.1)	SSOP (20P2E-A)	○
	M62352FP	8	12	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SOP (20P2N-A)	○
	M62352GP	8	12	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (20P2E-A)	○
	R2A20169NP	8	12	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	QFN (PWQN0020KB-A)	○
	R2A20169SA	8	12	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	TSSOP (TTP-20DAV)	○
	R2A20169SP	8	12	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (Vcc -0.1)	SOP (FP-20DAV)	○
	M62370GP	8	36	3-line Bus	Yes	3 to 5	100	-0.3 +0.5	0.1 to (Vcc -0.1)	QFP (48P6D-A)	○
	R-2R Type D/A converter with buffer (TTL input type)	M62354AGP	8	6	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (16P2E-A)
M62353AGP		8	8	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (16P2E-A)	○
M62352AGP		8	12	3-line Bus	Yes	5	100	± 1	0.1 to (Vcc -0.1)	SSOP (20P2E-A)	○
Multiplying functioned D/A converter	M62363FP	8	8	3-line Bus	-	5	5	-	0.1 to (Vcc -0.1)	SOP (24P2Q-A)	○
	M62364FP	8	8	3-line Bus	Yes	3 to 5	100	± 1.0	0.1 to (Vcc -0.1)	SOP (24P2Q-A)	○
	M62364GP	8	8	3-line Bus	Yes	3 to 5	100	± 1.0	0.1 to (Vcc -0.1)	SOP (24P2E-A)	○
	R2A20178NP	8	8	3-line Bus	Yes	3 to 5	100	± 2.0	0.1 to (V _{DD} -0.1)	QFN (PWQN0024KD-A)	○
1280 Step resolution, Multiplying functioned D/A converter	M62362FP	10	3	3-line Bus	-	5	5	-	0.1 to (Vcc -0.1)	SOP (16P2N-A)	○

Converters

■ A/D Converters

Function	Part No.	Resolution (bit)	Channel (ch)	Bus Format	Output Buffer Amp.	Power-supply voltage V _{CC} (V)	Settling Time (μs)	Output Current (mA)	Output Voltage (V)	Package	Status
Integrating type A/D converter	M62301FP	10 to 12	4	-	-	4.5 to 12	0.5ms	6	-	SOP (20P2N-A)	○
	M62301SP	10 to 12	4	-	-	4.5 to 12	0.5ms	6	-	DIP (20P4B)	○
High precision Double Integrating type A/D converter	M62303FP	14	1	-	-	8.1 to 13	16ms	10	-	QFP (64P6S-A)	○

I/O Expanders

■ General I/O Expanders

Part No.	Function	Package	Status
M64620P	High-speed parallel I/O Expander for Z80 CPU	SDIP (64P4B)	○
M64621FP	High-speed parallel I/O Expander for 68 series CPU	QFP (64P6N)	○
M64621P	High-speed parallel I/O Expander for 68 series CPU	SDIP (64P4B)	○
M66013FP	8-bit I/O Expander with address input	SOP (20P2N-A)	○
R8A66150SP	12-bit I/O Expander	SOP (20P2X-C)	○
R8A66151SP	24-bit I/O Expander	SOP (32P2X-A)	○
R8A66152SP	12-bit I/O Expander with LED drive function	SOP (20P2X-C)	○
R8A66153FP	Programmable buffered I/O Expander	LQFP (64P6X-B)	○
R8A66154SP	8-bit I/O Expander	SOP (16P2X-E)	○
R8A66155SP	16-bit I/O Expander with LED drive	SOP (24P2X-B)	○
R8A66156SP	24-bit I/O Expander with LED drive function	SSOP (36P2X-B)	○

■ I²C BUS I/O Expanders

Part No.	Function	Package	Status
M62320FP	I ² C to 8 bit I/O Expander	SOP (16P2N-A)	○
M62320GP	I ² C to 8 bit I/O Expander	SSOP (16P2Z-A)	○
M62320P	I ² C to 8 bit I/O Expander	DIP (16P4)	○
R2A20150NP	I ² C to 8 bit I/O Expander	QFN (PWQFN0016KB-A)	○
R2A20150SA	I ² C to 8 bit I/O Expander	TSSOP (TTP-16DAV)	○

Other Functions

■ Timers

Function	Part No.	V _{CC} (V)	Output Current (mA) Max.	Output tr/ff (ns) Typ.	Topr (°C)	Package	Status
Precision Timer	HA17555	5 to 15	200	100	-20 to +75	DIP (DP-8FV)	○
Precision Timer	HA17555F	5 to 15	200	100	-20 to +75	SOP (FP-8DGV)	○
Precision Timer	HA17555FP	5 to 15	200	100	-20 to +75	SOP (FP-8DGV)	○
Precision Timer	HA17555PS	5 to 15	200	100	-20 to +75	DIP (DP-8FV)	○

Notes) Production Status
 O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)
 Ordering Condition ♦: Large order only

HD74ALVC Series

Ultra high speed standard logic drawing out the abilities of high performance CPUs fully

- High Speed Switching :
tpd = 2 ns (typ) (Vcc = 3.3 V, Ta = 25°C)
- Drivability :
I_{OH}/I_{OL} = -24/24 mA
- Low Current Consumption :
Stand-By Mode
Icc = 40 μA
- On-Chip Damping Resistor (26Ω) :
HD74ALVC162xxx, HD74ALVCH162xxx Series
- On-Chip Bus Hold Function :
HD74ALVCH16xxx, HD74ALVCH162xxx Series
- ALVC-A Series :
Supports 133 MHz bus
(tpd.max. = 3.5 ns @Vcc = 3.3 ± 0.3 V)

Part No.	Function	Package	Status
HD74ALVCH162244T	16-bit Buffer/Driver with 3-state Outputs	TSSOP (TTP-48DBV)	○
HD74ALVCH16244T	16-bit Buffer/Driver with 3-state Outputs	TSSOP (TTP-48DBV)	○
HD74ALVCH16245T	16-bit Bus Transceiver with 3-state Outputs	TSSOP (TTP-48DBV)	○
HD74ALVCH16374T	16-bit Edge-Triggered D-type Flip-Flop with 3-state Outputs	TSSOP (TTP-48DBV)	△

Notes)

1. HD74ALVCH1622xxx contain bus hold circuit.
2. HD74ALVCH162xxx contains output damping resistor (26Ω).

HD74BC Series

- Propagation Delay Time :
tpd = 5 ns (typ)
- Output Current :
I_{OH}/I_{OL} = -15/64 mA
- Power Dissipation :
100 mW typ (f = 10 MHz)
- Input/Output Level :
TTL
- Inputs/Outputs have High Impedance when Power is Off. (Prevents Leakage Current)

Part No.	Function	Package	Status
HD74BC240AFP	Octal Buffers/Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74BC240AT	Octal Buffers/Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74BC244AFP	Octal Buffers/Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74BC245AFP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○
HD74BC373AFP	Octal D-type Transparent Latches with 3-state outputs	SOP (FP-20DAV)	○
HD74BC374AFP	Octal D-type Flip-Flops with 3-state outputs	SOP (FP-20DAV)	○
HD74BC645AFP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○

Notes) Production Status ○: In Mass Production
 SPL: Samples are available
 △: Long delivery date(Lead time: 3 months)

Ordering Condition ◆: Large order only

HD/RD74LVC Series

- Expanded Operation Voltage :
Guaranteed up to Vcc = 1.65 V
- Low Power Consumption :
Ioff, Icc 5 μA max.
- Improvement of Switching Speed :
tpd = 5.1 ns(max.) (Vcc = 3.3 V)
- 5-V I/O Tolerance for Gate product
- Hi-Z is Guaranteed at Power-Up&Down :
HD74LVCZxxxA

Part No.	Function	Package	Status
RD74LVC00BFP	Quad. 2-input NAND Gates	SOP (FP-14DAV)	○
RD74LVC00BT	Quad. 2-input NAND Gates	TSSOP (TTP-14DV)	○
RD74LVC02BFP	Quad. 2-input NOR Gates	SOP (FP-14DAV)	○
RD74LVC02BT	Quad. 2-input NOR Gates	TSSOP (TTP-14DV)	○
RD74LVC04BFP	Hex Inverters	SOP (FP-14DAV)	○
RD74LVC04BT	Hex Inverters	TSSOP (TTP-14DV)	○
RD74LVC08BFP	Quad. 2-input AND Gates	SOP (FP-14DAV)	○
RD74LVC08BT	Quad. 2-input AND Gates	TSSOP (TTP-14DV)	○
RD74LVC14BFP	Hex Schmitt-trigger Inverters	SOP (FP-14DAV)	○
RD74LVC14BT	Hex Schmitt-trigger Inverters	TSSOP (TTP-14DV)	○
RD74LVC32BFP	Quad. 2-input OR Gates	SOP (FP-14DAV)	○
RD74LVC32BT	Quad. 2-input OR Gates	TSSOP (TTP-14DV)	○
RD74LVC74BFP	Dual D-type Flip Flops with Preset and Clear	SOP (FP-14DAV)	○
RD74LVC74BT	Dual D-type Flip Flops with Preset and Clear	TSSOP (TTP-14DV)	○
RD74LVC125BFP	Quad. Bus Buffer Gates with 3-state Outputs	SOP (FP-14DAV)	○
RD74LVC125BT	Quad. Bus Buffer Gates with 3-state Outputs	TSSOP (TTP-14DV)	○
RD74LVC126BFP	Quad. Bus Buffer Gates with 3-state Outputs	SOP (FP-14DAV)	○
RD74LVC126BT	Quad. Bus Buffer Gates with 3-state Outputs	TSSOP (TTP-14DV)	○
RD74LVC138BFP	3-to-8-line Decoder / Demultiplexer	SOP (FP-16DAV)	○
RD74LVC138BT	3-to-8-line Decoder / Demultiplexer	TSSOP (TTP-16DAV)	○
RD74LVC139BFP	Dual 2-to-4-line Decoders / Demultiplexers	SOP (FP-16DAV)	○
RD74LVC139BT	Dual 2-to-4-line Decoders / Demultiplexers	TSSOP (TTP-16DAV)	○
RD74LVC240BFP	Octal Buffers/Line Drivers with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC240BT	Octal Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC244BFP	Octal Buffers/Line Drivers with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC244BT	Octal Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC245BFP	Octal Bidirectional Transceivers with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC245BT	Octal Bidirectional Transceivers with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC273BFP	Octal D-type Flip Flops with Clear	SOP (FP-20DAV)	○
RD74LVC273BT	Octal D-type Flip Flops with Clear	TSSOP (TTP-20DAV)	○
RD74LVC373BFP	Octal D-type Transparent Latches with 3-state Outputs	SOP (FP-20DAV)	○

Part No.	Function	Package	Status
RD74LVC373BT	Octal D-type Transparent Latches with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC374BFP	Octal D-type Flip Flops with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC374BT	Octal D-type Flip Flops with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC540BFP	Octal Buffers/Line Drivers with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC540BT	Octal Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC541BFP	Octal Buffers/Line Drivers with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC541BT	Octal Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC573BFP	Octal D-type Transparent Latches with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC573BT	Octal D-type Transparent Latches with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC574BFP	Octal D-type Flip Flops with 3-state Outputs	SOP (FP-20DAV)	○
RD74LVC574BT	Octal D-type Flip Flops with 3-state Outputs	TSSOP (TTP-20DAV)	○
RD74LVC16240BT	16-bit Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-48DBV)	○
RD74LVC16244BT	16-bit Buffers/Line Drivers with 3-state Outputs	TSSOP (TTP-48DBV)	○
RD74LVC16245BT	16-bit Bus Transceivers with 3-state Outputs	TSSOP (TTP-48DBV)	○
RD74LVC16373BT	16-bit D-type Transparent Latches with 3-state Outputs	TSSOP (TTP-48DBV)	○
RD74LVC16374BT	16-bit D-type Flip Flops with 3-state Outputs	TSSOP (TTP-48DBV)	○
HD74LVC4245AT	Octal Bus Transceiver and 3.3 V to 5 V shifters with 3-state Outputs	TSSOP (TTP-24DBV)	○
HD74LVCC3245AT	Octal Bus Transceiver with adjustable output voltage and 3-state Outputs	TSSOP (TTP-24DBV)	○
HD74LVCC4245AT	Octal Dual-supply Bus Transceiver with configurable output voltage with 3-state Outputs	TSSOP (TTP-24DBV)	○
HD74LVCZ16240AT	16-bit Buffers/Line Drivers/Line Receivers with inverted 3-state outputs (live insertion)	TSSOP (TTP-48DBV)	△
HD74LVCZ16244AT	16-bit Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs (live insertion)	TSSOP (TTP-48DBV)	○
HD74LVCZ16245AT	16-bit Bus Transceivers with 3-state outputs (live insertion)	TSSOP (TTP-48DBV)	○
HD74LVCZ240AFP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs (live insertion)	SOP (FP-20DAV)	△
HD74LVCZ240AT	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs (live insertion)	TSSOP (TTP-20DAV)	○
HD74LVCZ244AFP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs (live insertion)	SOP (FP-20DAV)	○
HD74LVCZ244AT	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs (live insertion)	TSSOP (TTP-20DAV)	○
HD74LVCZ245AFP	Octal Bus Transceivers with 3-state outputs (live insertion)	SOP (FP-20DAV)	○
HD74LVCZ245AT	Octal Bus Transceivers with 3-state outputs (live insertion)	TSSOP (TTP-20DAV)	○

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)
 Ordering Condition ♦: Large order only

HD74LV-A Series

- Switching Performance :
tpd = 6.8 ns (Vcc = 3.3 V, Ta = 25°C)
- Drivability :
I_{OH}/I_{OL} = -8/8 mA
- 2.5 V Spec. is Added.
- Various Functions Added :
I/O 5 V Tolerant, Output Skew, Ioff Spec.
- Low Current Consumption :
Stand-By Mode
I_{cc} = 20 μA
- Operating Voltage :
Vcc = 2.0V to 5.5V

Part No.	Function	Package	Status
HD74LV00AFP	Quad. 2-input NAND Gates	SOP (FP-14DAV)	○
HD74LV00AT	Quad. 2-input NAND Gates	TSSOP (TTP-14DV)	○
HD74LV02AFP	Quad. 2-input NOR Gates	SOP (FP-14DAV)	○
HD74LV02AT	Quad. 2-input NOR Gates	TSSOP (TTP-14DV)	○
HD74LV04AFP	Hex Inverters	SOP (FP-14DAV)	○
HD74LV04AT	Hex Inverters	TSSOP (TTP-14DV)	○
HD74LVU04AFP	Hex Inverters (Unbuffer)	SOP (FP-14DAV)	○
HD74LVU04AT	Hex Inverters (Unbuffer)	TSSOP (TTP-14DV)	○
HD74LV05AFP	Hex Inverters with Open Drain Outputs	SOP (FP-14DAV)	○
HD74LV05AT	Hex Inverters with Open Drain Outputs	TSSOP (TTP-14DV)	○
HD74LV06AFP	Hex Inverter Buffers Drivers with Open Drain Outputs	SOP (FP-14DAV)	○
HD74LV06AT	Hex Inverter Buffers Drivers with Open Drain Outputs	TSSOP (TTP-14DV)	○
HD74LV07AFP	Hex Buffers Drivers with Open Drain Outputs	SOP (FP-14DAV)	○
HD74LV07AT	Hex Buffers Drivers with Open Drain Outputs	TSSOP (TTP-14DV)	○
HD74LV08AFP	Quad. 2-input AND Gates	SOP (FP-14DAV)	○
HD74LV08AT	Quad. 2-input AND Gates	TSSOP (TTP-14DV)	○
HD74LV10AFP	Triple 3-input NAND Gates	SOP (FP-14DAV)	○
HD74LV10AT	Triple 3-input NAND Gates	TSSOP (TTP-14DV)	○
HD74LV11AFP	Triple 3-input AND Gates	SOP (FP-14DAV)	○
HD74LV11AT	Triple 3-input AND Gates	TSSOP (TTP-14DV)	○
HD74LV14AFP	Hex Schmitt-trigger Inverters	SOP (FP-14DAV)	○
HD74LV14AT	Hex Schmitt-trigger Inverters	TSSOP (TTP-14DV)	○
HD74LV20AFP	Dual 4-input NAND Gates	SOP (FP-14DAV)	△
HD74LV20AT	Dual 4-input NAND Gates	TSSOP (TTP-14DV)	○
HD74LV21AFP	Dual 4-input AND Gates	SOP (FP-14DAV)	○
HD74LV21AT	Dual 4-input AND Gates	TSSOP (TTP-14DV)	○
HD74LV27AFP	Triple 3-input NOR Gates	SOP (FP-14DAV)	△
HD74LV27AT	Triple 3-input NOR Gates	TSSOP (TTP-14DV)	△
HD74LV32AFP	Quad. 2-input OR Gates	SOP (FP-14DAV)	○
HD74LV32AT	Quad. 2-input OR Gates	TSSOP (TTP-14DV)	○
HD74LV74AFP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DAV)	○
HD74LV74AT	Dual D-type Flip-Flops with Preset and Clear	TSSOP (TTP-14DV)	○
HD74LV86AFP	Quad. 2-input Exclusive-OR Gates	SOP (FP-14DAV)	○
HD74LV86AT	Quad. 2-input Exclusive-OR Gates	TSSOP (TTP-14DV)	○
HD74LV123AFP	Dual Retriggerable Monostable Multivibrators with Clear	SOP (FP-16DAV)	○
HD74LV123AT	Dual Retriggerable Monostable Multivibrators with Clear	TSSOP (TTP-16DAV)	○
HD74LV125AFP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DAV)	○
HD74LV125AT	Quad. Bus Buffer Gates with 3-state outputs	TSSOP (TTP-14DV)	○
HD74LV126AFP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DAV)	○
HD74LV126AT	Quad. Bus Buffer Gates with 3-state outputs	TSSOP (TTP-14DV)	○
HD74LV132AFP	Quad. 2-input NAND Schmitt-trigger	SOP (FP-14DAV)	△
HD74LV132AT	Quad. 2-input NAND Schmitt-trigger	TSSOP (TTP-14DV)	○
HD74LV138AFP	3-to-8-line Decoder / Demultiplexer	SOP (FP-16DAV)	○
HD74LV138AT	3-to-8-line Decoder / Demultiplexer	TSSOP (TTP-16DAV)	○
HD74LV139AFP	Dual 2-to-4-line Decoders / Demultiplexers	SOP	△

Part No.	Function	Package	Status
HD74LV139AT	Dual 2-to-4-line Decoders / Demultiplexers	TSSOP (TTP-16DAV)	○
HD74LV157AFP	Quad. 2-to-1 line Data Selectors/Multiplexers with Non-inverted outputs	SOP (FP-16DAV)	○
HD74LV157AT	Quad. 2-to-1 line Data Selectors/Multiplexers with Non-inverted outputs	TSSOP (TTP-16DAV)	○
HD74LV161AFP	Synchronous 4-bit Binary Counter with Direct Clear	SOP (FP-16DAV)	△
HD74LV161AT	Synchronous 4-bit Binary Counter with Direct Clear	TSSOP (TTP-16DAV)	○
HD74LV163AFP	Synchronous 4-bit Binary Counter with Synchronous Clear	SOP (FP-16DAV)	△
HD74LV163AT	Synchronous 4-bit Binary Counter with Synchronous Clear	TSSOP (TTP-16DAV)	○
HD74LV166AFP	Parallel-load 8-bit Shift Register	SOP (FP-16DAV)	△
HD74LV166AT	Parallel-load 8-bit Shift Register	TSSOP (TTP-16DAV)	○
HD74LV221AFP	Dual Monostable Multivibrators with Schmitt-trigger input	SOP (FP-16DAV)	△
HD74LV221AT	Dual Monostable Multivibrators with Schmitt-trigger input	TSSOP (TTP-16DAV)	○
HD74LV240AFP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DAV)	○
HD74LV240AT	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74LV244AFP	Octal Buffers/Line Drivers/Line Receivers with non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74LV244AT	Octal Buffers/Line Drivers/Line Receivers with non-inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74LV245AFP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○
HD74LV245AT	Octal Bus Transceivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74LV273AFP	Octal D-type Edge-triggered Flip-Flops with Clear	SOP (FP-20DAV)	○
HD74LV273AT	Octal D-type Edge-triggered Flip-Flops with Clear	TSSOP (TTP-20DAV)	○
HD74LV373AFP	Octal D-type Transparent Latches with 3-state output	SOP (FP-20DAV)	○
HD74LV373AT	Octal D-type Transparent Latches with 3-state output	TSSOP (TTP-20DAV)	○
HD74LV374AFP	Octal D-type Flip-Flops with 3-state output	SOP (FP-20DAV)	○
HD74LV374AT	Octal D-type Flip-Flops with 3-state output	TSSOP (TTP-20DAV)	○
HD74LV393AFP	Dual 4-bit Binary Counters	SOP (FP-14DAV)	△
HD74LV393AT	Dual 4-bit Binary Counters	TSSOP (TTP-14DV)	○
HD74LV4040AFP	12-stage Binary Counter	SOP (FP-16DAV)	○
HD74LV4040AT	12-stage Binary Counter	TSSOP (TTP-16DAV)	○
HD74LV4051AFP	8-channel Analog Multiplexer/Demultiplexer	SOP (FP-16DAV)	○
HD74LV4051AT	8-channel Analog Multiplexer/Demultiplexer	TSSOP (TTP-16DAV)	○
HD74LV4053AFP	Triple 2-channel Analog Multiplexers/Demultiplexers	SOP (FP-16DAV)	○
HD74LV4053AT	Triple 2-channel Analog Multiplexers/Demultiplexers	TSSOP (TTP-16DAV)	○
HD74LV4066AFP	Quad. Analog Switches/Quad. Multiplexers	SOP (FP-14DAV)	○
HD74LV4066AT	Quad. Analog Switches/Quad. Multiplexers	TSSOP (TTP-14DV)	○
HD74LV540AFP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DAV)	△
HD74LV540AT	Octal Buffers and Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	△
HD74LV541AFP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74LV541AT	Octal Buffers and Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74LV573AFP	Octal D-type Transparent Latches with 3-state Outputs	SOP (FP-20DAV)	△
HD74LV573AT	Octal D-type Transparent Latches with 3-state Outputs	TSSOP (TTP-20DAV)	○
HD74LV574AFP	Octal D-type Flip-Flops with 3-state Outputs	SOP (FP-20DAV)	△
HD74LV574AT	Octal D-type Flip-Flops with 3-state Outputs	TSSOP (TTP-20DAV)	△
HD74LV595AFP	8-bit Shift Register/Latch with 3-state outputs	SOP (FP-16DAV)	○
HD74LV595AT	8-bit Shift Register/Latch with 3-state outputs	TSSOP (TTP-16DAV)	○

HD74AC Series

- High Speed :
Propagation Delay Time: tpd = 5 ns (typ)
Maximum Operating Frequency :
fcp(max) = 160 MHz
- High Drivability :
Output Current : I_{OH}/I_{OL} = -24/24 mA
(HS-CMOS : I_{OH}/I_{OL} = -4/4 mA)
(-6/6 mA)--Bus Series
- Low Power Dissipation :
HS-CMOS Level

Part No.	Function	Package	Status
HD74AC00P	Quad. 2-input NAND Gates	DIP (DP-14AV)	Δ
HD74AC00FP	Quad. 2-input NAND Gates	SOP (FP-14DAV)	○
HD74AC00RP	Quad. 2-input NAND Gates	SOP (FP-14DNV)	Δ ^{os}
HD74AC00T	Quad. 2-input NAND Gates	TSSOP (TTP-14DV)	Δ
HD74AC04P	Hex Inverters	DIP (DP-14AV)	Δ
HD74AC04FP	Hex Inverters	SOP (FP-14DAV)	○
HD74AC04RP	Hex Inverters	SOP (FP-14DNV)	Δ ^{os}
HD74AC04T	Hex Inverters	TSSOP (TTP-14DV)	Δ
HD74AC14P	Hex Schmitt-trigger Inverters	DIP (DP-14AV)	Δ
HD74AC14FP	Hex Schmitt-trigger Inverters	SOP (FP-14DAV)	○
HD74AC14RP	Hex Schmitt-trigger Inverters	SOP (FP-14DNV)	Δ ^{os}
HD74AC14T	Hex Schmitt-trigger Inverters	TSSOP (TTP-14DV)	Δ
HD74AC32P	Quad. 2-input OR Gates	DIP (DP-14AV)	Δ
HD74AC32FP	Quad. 2-input OR Gates	SOP (FP-14DAV)	○
HD74AC32RP	Quad. 2-input OR Gates	SOP (FP-14DNV)	Δ ^{os}
HD74AC32T	Quad. 2-input OR Gates	TSSOP (TTP-14DV)	○
HD74AC74P	Dual D-type Flip-Flops with Preset and Clear	DIP (DP-14AV)	Δ
HD74AC74FP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DAV)	○
HD74AC74RP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DNV)	Δ ^{os}
HD74AC74T	Dual D-type Flip-Flops with Preset and Clear	TSSOP (TTP-14DV)	Δ
HD74AC138P	3-to-8 line Decoder/Demultiplexer	DIP (DP-16FV)	Δ
HD74AC138FP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DAV)	○

Part No.	Function	Package	Status
HD74AC138RP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DNV)	Δ ^{os}
HD74AC138T	3-to-8 line Decoder/Demultiplexer	TSSOP (TTP-16DAV)	Δ
HD74AC164P	Parallel-out Serial-In Shift Register	DIP (DP-14AV)	Δ
HD74AC164FP	Parallel-out Serial-In Shift Register	SOP (FP-14DAV)	Δ
HD74AC164RP	Parallel-out Serial-In Shift Register	SOP (FP-14DNV)	Δ ^{os}
HD74AC164T	Parallel-out Serial-In Shift Register	TSSOP (TTP-14DV)	○
HD74ACT240FP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DAV)	○
HD74AC244P	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	DIP (DP-20NEV)	Δ
HD74ACT244P	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	DIP (DP-20NEV)	Δ
HD74ACT244FP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74ACT244RP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DBV)	Δ ^{os}
HD74ACT244T	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74AC244T	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	TSSOP (TTP-20DAV)	Δ
HD74AC244FP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74AC244RP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DBV)	Δ ^{os}
HD74ACT245P	Octal Bus Transceivers with 3-state outputs	DIP (DP-20NEV)	Δ
HD74ACT245FP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○
HD74ACT245RP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DBV)	Δ ^{os}
HD74ACT245T	Octal Bus Transceivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74AC365FP	Hex Bus Drivers with 3-state outputs	SOP (FP-16DAV)	○
HD74AC365RP	Hex Bus Drivers with 3-state outputs	SOP (FP-16DNV)	Δ ^{os}

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)

Ordering Condition ♦: Large order only

Uni-Logic

- Super Small Package :
CMPAK-5,MPAK-5,VSON-5,SSOP-8
- 1 to 3 Circuits in 1 Package
- HD74HC1G/T1G Series have Switching Characteristics Equivalent to those of the HD74HC.
- HD74LV1G-A/T-A/LV2G-A Series have Switching Characteristics Equivalent to those of the HD74LV-A.
- HD74CBT1G Series is high-speed bus switch IC: high-speed communication tpd = 250ps(Vcc = 5V, CL = 50pF, RL = 500Ω) Low-on-resistance of about 5Ω(typ.)

■ HD74LV1G-A/1GT-A Series

Part No.	Function	Package	Status
HD74LV1G00ACM	2-input NAND Gate	CMPAK-5	○
HD74LV1G00AVS	2-input NAND Gate	VSON (TNP-5DV)	○
HD74LV1GT00ACM	2-input NAND Gate	CMPAK-5	○
HD74LV1GT00AVS	2-input NAND Gate	VSON (TNP-5DV)	○
HD74LV1G02ACM	2-input NOR Gate	CMPAK-5	○
HD74LV1G02AVS	2-input NOR Gate	VSON (TNP-5DV)	○
HD74LV1GT02ACM	2-input NOR Gate	CMPAK-5	△
HD74LV1GT02AVS	2-input NOR Gate	VSON (TNP-5DV)	○
HD74LV1G04ACM	Inverter	CMPAK-5	○
HD74LV1G04AVS	Inverter	VSON (TNP-5DV)	○
HD74LV1GU04ACM	Inverter	CMPAK-5	○
HD74LV1GU04AVS	Inverter	VSON (TNP-5DV)	○
HD74LV1GT04ACM	Inverter	CMPAK-5	○
HD74LV1GT04AVS	Inverter	VSON (TNP-5DV)	△
HD74LV1G08ACM	2-input AND Gate	CMPAK-5	○
HD74LV1G08AVS	2-input AND Gate	VSON (TNP-5DV)	○
HD74LV1GT08ACM	2-input AND Gate	CMPAK-5	○
HD74LV1GT08AVS	2-input AND Gate	VSON (TNP-5DV)	○
HD74LV1G14ACM	Schmitt-trigger Inverters	CMPAK-5	○
HD74LV1G14AVS	Schmitt-trigger Inverters	VSON (TNP-5DV)	○
HD74LV1GT14ACM	Schmitt-trigger Inverters	CMPAK-5	○
HD74LV1GT14AVS	Schmitt-trigger Inverters	VSON (TNP-5DV)	○
HD74LV1G32ACM	2-input OR Gate	CMPAK-5	○
HD74LV1G32AVS	2-input OR Gate	VSON (TNP-5DV)	○
HD74LV1GT32ACM	2-input OR Gate	CMPAK-5	○
HD74LV1GT32AVS	2-input OR Gate	VSON (TNP-5DV)	△
HD74LV1G66ACM	Analog Switch	CMPAK-5	○
HD74LV1G66AVS	Analog Switch	VSON (TNP-5DV)	○
HD74LV1GT66ACM	Analog Switch	CMPAK-5	△
HD74LV1GT66AVS	Analog Switch	VSON (TNP-5DV)	△
HD74LV1G86ACM	2-input Exclusive-OR Gate	CMPAK-5	○
HD74LV1G86AVS	2-input Exclusive-OR Gate	VSON (TNP-5DV)	○
HD74LV1GT86ACM	2-input Exclusive-OR Gate	CMPAK-5	△
HD74LV1GT86AVS	2-input Exclusive-OR Gate	VSON (TNP-5DV)	△
HD74LV1G125ACM	Bus Buffer Dates with 3-state outputs	CMPAK-5	○
HD74LV1G125AVS	Bus Buffer Dates with 3-state outputs	VSON (TNP-5DV)	○
HD74LV1GT125ACM	Bus Buffer Dates with 3-state outputs	CMPAK-5	○
HD74LV1GT125AVS	Bus Buffer Dates with 3-state outputs	VSON (TNP-5DV)	○
HD74LV1G126ACM	Bus Buffer Dates with 3-state outputs	CMPAK-5	○
HD74LV1G126AVS	Bus Buffer Dates with 3-state outputs	VSON (TNP-5DV)	○
HD74LV1GT126ACM	Bus Buffer Dates with 3-state outputs	CMPAK-5	○
HD74LV1GT126AVS	Bus Buffer Dates with 3-state outputs	VSON (TNP-5DV)	○

■ HD74LV1GW-A Series

Part No.	Function	Package	Status
HD74LV1GW04ACM	Dual Inverter	CMPAK-6	○
HD74LV1GW04U04ACM	Dual Unbuffer Inverter	CMPAK-6	○
HD74LV1GW06ACM	Dual Inverter Open Drain	CMPAK-6	△
HD74LV1GW07ACM	Dual Buffer Open Drain	CMPAK-6	○
HD74LV1GW14ACM	Dual Inverter with Schmitt-trigger Input	CMPAK-6	○
HD74LV1GW16ACM	Dual Buffer	CMPAK-6	○
HD74LV1GW17ACM	Dual Buffer with Schmitt Trigger Inputs	CMPAK-6	○
HD74LV1GW53ACM	2-channel Analog Multiplexer / Demultiplexer	CMPAK-6	○
HD74LV1GW57ACM	Configurable Multiple-Function Gate	CMPAK-6	○
HD74LV1GW58ACM	Configurable Multiple-Function Gate	CMPAK-6	△
HD74LV1GW97ACM	Configurable Multiple-Function Gate	CMPAK-6	○
HD74LV1GW98ACM	Configurable Multiple-Function Gate	CMPAK-6	△

■ HD74LV2G-A/2GT-A Series

Part No.	Function	Package	Status
HD74LV2G00AUS	Dual 2-Input NAND Gates	SSOP (TTP-8DBV)	○
HD74LV2GT00AUS	Dual 2-input NAND Gates	SSOP (TTP-8DBV)	△
HD74LV2G02AUS	Dual 2-Input NOR Gates	SSOP (TTP-8DBV)	○
HD74LV2GT02AUS	Dual 2-input NOR Gates	SSOP (TTP-8DBV)	△
HD74LV2G04AUS	Triple Inverters	SSOP (TTP-8DBV)	○
HD74LV2GT04AUS	Triple Inverters	SSOP (TTP-8DBV)	○
HD74LV2GU04AUS	Triple Unbuffered Inverters	SSOP (TTP-8DBV)	○
HD74LV2G08AUS	Dual 2-Input AND Gates	SSOP (TTP-8DBV)	○
HD74LV2GT08AUS	Dual 2-input AND Gates	SSOP (TTP-8DBV)	○
HD74LV2G14AUS	Triple Inverters with Schmitt-trigger Inputs	SSOP (TTP-8DBV)	○
HD74LV2GT14AUS	Triple Inverters with Schmitt-trigger Inputs	SSOP (TTP-8DBV)	△
HD74LV2G32AUS	Dual 2-Input OR Gates	SSOP (TTP-8DBV)	○
HD74LV2GT32AUS	Dual 2-input OR Gates	SSOP (TTP-8DBV)	△
HD74LV2G34AUS	Triple Non-inverters	SSOP (TTP-8DBV)	○
HD74LV2GT34AUS	Triple Non-inverters	SSOP (TTP-8DBV)	○
HD74LV2G53AUS	Analog Multiplexer/Demultiplexer	SSOP (TTP-8DBV)	○
HD74LV2GT53AUS	2-channel Analog Multiplexer / Demultiplexer	SSOP (TTP-8DBV)	○
HD74LV2G66AUS	Analog Switch	SSOP (TTP-8DBV)	○
HD74LV2GT66AUS	2-channel Analog Switch	SSOP (TTP-8DBV)	○
HD74LV2G74AUS	Single D-type Flip-Flops with Preset and Clear	SSOP (TTP-8DBV)	○
HD74LV2GT74AUS	Single D-type Flip-Flops with Preset and Clear	SSOP (TTP-8DBV)	△
HD74LV2GT86AUS	2-input Exclusive-OR Gate	SSOP (TTP-8DBV)	○
HD74LV2G123AUS	Retriggerable Monostable Multivibrators	SSOP (TTP-8DBV)	○
HD74LV2GT123AUS	Retriggerable Monostable Multivibrator	SSOP (TTP-8DBV)	△
HD74LV2G125AUS	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	○
HD74LV2GT125AUS	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	○
HD74LV2G126AUS	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	○
HD74LV2GT126AUS	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	○
HD74LV2G157AUS	2-channel Multiplexer	SSOP (TTP-8DBV)	○
HD74LV2GT157AUS	2-channel Multiplexer	SSOP (TTP-8DBV)	△
HD74LV2G240AUS	Dual Bus Buffer Inverted with 3-state outputs	SSOP (TTP-8DBV)	△
HD74LV2GT240AUS	Dual Bus Buffer Inverted with 3-state Output	SSOP (TTP-8DBV)	△
HD74LV2G241AUS	Dual Bus Buffer Non-inverted with 3-state output	SSOP (TTP-8DBV)	△
HD74LV2GT241AUS	Dual Bus Buffer Non-inverted with 3-state Output	SSOP (TTP-8DBV)	△
HD74LV2G245AUS	Dual Bus Transceivers with 3-state outputs	SSOP (TTP-8DBV)	△
HD74LV2GT245AUS	Dual Bus Transceivers with 3-state Outputs	SSOP (TTP-8DBV)	△

Uni-Logic

■ HD74ALVC1G Series

Part No.	Function	Package	Status
HD74ALVC1G00VS	2-input NAND Gate	VSON (TNP-5DV)	○
HD74ALVC1G02VS	2-input NOR Gate	VSON (TNP-5DV)	○
HD74ALVC1G04VS	Single Inverter Buffer	VSON (TNP-5DV)	○
HD74ALVC1G06VS	Single Inverter Buffer/Driver with Open Drain	VSON (TNP-5DV)	△
HD74ALVC1G07VS	Single Buffer/Driver with Open Drain	VSON (TNP-5DV)	○
HD74ALVC1G08VS	2-input AND Gate	VSON (TNP-5DV)	○
HD74ALVC1G14VS	Schmitt-trigger Inverter Buffer	VSON (TNP-5DV)	△
HD74ALVC1G32VS	2-input OR Gate	VSON (TNP-5DV)	○
HD74ALVC1G66VS	Analog Switch	VSON (TNP-5DV)	△
HD74ALVC1G79VS	Single Positive Edge-triggered D-type Flip-Flop	VSON (TNP-5DV)	○
HD74ALVC1G80VS	Single Positive Edge-triggered D-type Flip-Flop	VSON (TNP-5DV)	○
HD74ALVC1G86VS	2-input Exclusive-OR Gate	VSON (TNP-5DV)	○
HD74ALVC1G125VS	Bus Buffer Gate with 3-state Output	VSON (TNP-5DV)	○
HD74ALVC1G126VS	Bus Buffer Gate with 3-state Output	VSON (TNP-5DV)	△
HD74ALVC1G240VS	Bus Buffer Inverted with 3-state Output	VSON (TNP-5DV)	△

■ HD74ALVC2G Series

Part No.	Function	Package	Status
HD74ALVC2G00US	Dual 2-input NAND Gates	SSOP (TTP-8DBV)	△
HD74ALVC2G02US	Dual 2-input NOR Gates	SSOP (TTP-8DBV)	△
HD74ALVC2G04US	Triple Inverter Buffers	SSOP (TTP-8DBV)	△
HD74ALVC2G06US	Triple Inverter Buffers/Drivers with Open Drain	SSOP (TTP-8DBV)	○
HD74ALVC2G07US	Triple Buffers / Drivers with Open Drain	SSOP (TTP-8DBV)	△
HD74ALVC2G08US	Dual 2-input AND Gates	SSOP (TTP-8DBV)	△
HD74ALVC2G14US	Triple Schmitt-trigger Inverter Buffers	SSOP (TTP-8DBV)	△
HD74ALVC2G32US	Dual 2-input OR Gates	SSOP (TTP-8DBV)	○
HD74ALVC2G34US	Triple Non-inverter Buffers	SSOP (TTP-8DBV)	○
HD74ALVC2G53US	2-channel Analog Multiplexer Demultiplexer	SSOP (TTP-8DBV)	○
HD74ALVC2G66US	2-channel Analog Switch	SSOP (TNP-5DV)	○
HD74ALVC2G74US	Single D-type Flip Flops with Preset and Clear	SSOP (TTP-8DBV)	○
HD74ALVC2G86US	Dual 2-input Exclusive-OR Gates	SSOP (TTP-8DBV)	△
HD74ALVC2G125US	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	△
HD74ALVC2G126US	Dual Bus Buffer with 3-state Output	SSOP (TTP-8DBV)	△
HD74ALVC2G157US	2-channel Multiplexer	SSOP (TTP-8DBV)	△
HD74ALVC2G240US	Dual Bus Buffer Inverted with 3-state Output	SSOP (TTP-8DBV)	○
HD74ALVC2G241US	Dual Bus Buffer Non-inverted with 3-state Output	SSOP (TTP-8DBV)	△
HD74ALVC2G245US	Dual Bus Transceivers with 3-state Output	SSOP (TTP-8DBV)	△

■ HD74CBT1G Series

Part No.	Function	Package	Status
HD74CBT1G125CM	Single FET Bus Switch	CMPAK-5	○
HD74CBT1G126CM	Single FET Bus Switch	CMPAK-5	○

Note)
LV-A series is added "A" to the end of Part No.

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)

Ordering Condition ◆: Large order only

HD74HC Series (CMOS)

Part No.	Function	Package	Status
HD74HC00P	Quad. 2-input NAND Gates	DIP (DP-14AV)	○
HD74HC00FP	Quad. 2-input NAND Gates	SOP (FP-14DAV)	○
HD74HC00RP	Quad. 2-input NAND Gates	SOP (FP-14DNV)	△ ^{os}
HD74HC00T	Quad. 2-input NAND Gates	TSSOP (TTP-14DV)	○
HD74HC02P	Quad. 2-input NOR Gates	DIP (DP-14AV)	○
HD74HC02FP	Quad. 2-input NOR Gates	SOP (FP-14DAV)	○
HD74HC02RP	Quad. 2-input NOR Gates	SOP (FP-14DNV)	△ ^{os}
HD74HC02T	Quad. 2-input NOR Gates	TSSOP (TTP-14DV)	○
HD74HC04P	Hex Inverters	DIP (DP-14AV)	○
HD74HC04FP	Hex Inverters	SOP (FP-14DAV)	○
HD74HC04RP	Hex Inverters	SOP (FP-14DNV)	△ ^{os}
HD74HC04T	Hex Inverters	TSSOP (TTP-14DV)	○
HD74HC08P	Quad. 2-input AND Gates	DIP (DP-14AV)	○
HD74HC08FP	Quad. 2-input AND Gates	SOP (FP-14DAV)	○
HD74HC08RP	Quad. 2-input AND Gates	SOP (FP-14DNV)	△ ^{os}
HD74HC08T	Quad. 2-input AND Gates	TSSOP (TTP-14DV)	○
HD74HC14RP	Hex Schmitt-trigger Inverters	SOP (FP-14DNV)	△ ^{os}
HD74HC14P	Hex Schmitt-trigger Inverters	DIP (DP-14AV)	○
HD74HC14FP	Hex Schmitt-trigger Inverters	SOP (FP-14DAV)	○
HD74HC14T	Hex Schmitt-trigger Inverters	TSSOP (TTP-14DV)	○
HD74HC21P	Dual 4-input AND Gates	DIP (DP-14AV)	△
HD74HC32P	Quad. 2-input OR Gates	DIP (DP-14AV)	○
HD74HC32FP	Quad. 2-input OR Gates	SOP (FP-14DAV)	○
HD74HC32RP	Quad. 2-input OR Gates	SOP (FP-14DNV)	△ ^{os}
HD74HC32T	Quad. 2-input OR Gates	TSSOP (TTP-14DV)	○
HD74HC74P	Dual D-type Flip-Flops with Preset and Clear	DIP (DP-14AV)	○
HD74HC74FP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DAV)	○
HD74HC74RP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DNV)	△ ^{os}
HD74HC74T	Dual D-type Flip-Flops with Preset and Clear	TSSOP (TTP-14DV)	○
HD74HC86P	Quad. 2-input Exclusive-OR Gates	DIP (DP-14)	○
HD74HC86FP	Quad. 2-input Exclusive-OR Gates	SOP (FP-14DAV)	○
HD74HC86RP	Quad. 2-input Exclusive-OR Gates	SOP (FP-14DNV)	△ ^{os}
HD74HC86T	Quad. 2-input Exclusive-OR Gates	TSSOP (TTP-14DV)	○
HD74HC107FP	Dual J-K Flip-Flops with Clear	SOP (FP-14DAV)	○
HD74HC123AP	Dual Retriggerable Monostable Multivibrators with Clear	DIP (DP-16FV)	○
HD74HC123AFP	Dual Retriggerable Monostable Multivibrators with Clear	SOP (FP-16DAV)	○
HD74HC125P	Quad. Bus Buffer Gates with 3-state outputs	DIP (DP-14AV)	○
HD74HC125T	Quad. Bus Buffer Gates with 3-state outputs	TSSOP (TTP-14DV)	○
HD74HC126P	Quad. Bus Buffer Gates with 3-state outputs	DIP (DP-14AV)	△
HD74HC126FP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DAV)	○
HD74HC126RP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DNV)	△ ^{os}
HD74HC126T	Quad. Bus Buffer Gates with 3-state outputs	TSSOP (TTP-14DV)	○
HD74HC138P	3-to-8 line Decoder/Demultiplexer	DIP (DP-16FV)	○
HD74HC138FP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DAV)	○
HD74HC138T	3-to-8 line Decoder/Demultiplexer	TSSOP (TTP-16DAV)	○
HD74HC164P	Parallel-out Serial-In Shift Register	DIP (DP-14AV)	○
HD74HC164FP	Parallel-out Serial-In Shift Register	SOP (FP-14DAV)	○
HD74HC165P	Parallel-load 8-bit Shift Register	DIP (DP-16FV)	△
HD74HC165FP	Parallel-load 8-bit Shift Register	SOP (FP-16DAV)	○
HD74HC174P	Hex D-type Flip-Flops with Clear	DIP (DP-16FV)	○

Part No.	Function	Package	Status
HD74HC174FP	Hex D-type Flip-Flops with Clear	SOP (FP-16DAV)	○
HD74HC174T	Hex D-type Flip-Flops with Clear	TSSOP (TTP-16DAV)	○
HD74HC175P	Quad. D-type Flip-Flops with Clear	DIP (DP-16FV)	○
HD74HC175FP	Quad. D-type Flip-Flops with Clear	SOP (FP-16DAV)	○
HD74HC175T	Quad. D-type Flip-Flops with Clear	TSSOP (TTP-16DAV)	△
HD74HC238P	3-to-8 line Decoder/Demultiplexer	DIP (DP-16FV)	○
HD74HC238FP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DAV)	○
HD74HC240FP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DAV)	○
HD74HCT240RP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HC240P	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	DIP (DP-20NEV)	○
HD74HC240RP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HC240T	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HCT244P	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	DIP (DP-20NEV)	○
HD74HCT244FP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74HCT244RP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HCT244T	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HCT245P	Octal Bus Transceivers with 3-state outputs	DIP (DP-20NEV)	△
HD74HCT245FP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○
HD74HCT245RP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HCT245T	Octal Bus Transceivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HC244RP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HC244T	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HC244P	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	DIP (DP-20NEV)	○
HD74HC244FP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74HC245P	Octal Bus Transceivers with 3-state outputs	DIP (DP-20NEV)	○
HD74HC245FP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	○
HD74HC245RP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74HC245T	Octal Bus Transceivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HC273P	Octal D-type Edge-triggered Flip-Flops with Clear	DIP (DP-20NEV)	○
HD74HC273FP	Octal D-type Edge-triggered Flip-Flops with Clear	SOP (FP-20DAV)	○
HD74HC273T	Octal D-type Edge-triggered Flip-Flops with Clear	TSSOP (TTP-20DAV)	○
HD74HC373P	Octal D-type Transparent Latches with 3-state output	DIP (DP-20NEV)	○
HD74HC373FP	Octal D-type Transparent Latches with 3-state output	SOP (FP-20DAV)	○
HD74HCT373RP	Octal D-type Transparent Latches with 3-state output	SOP (FP-20DBV)	△ ^{os}
HD74HC373T	Octal D-type Transparent Latches with 3-state output	TSSOP (TTP-20DAV)	○
HD74HCT374RP	Octal D-type Flip-Flops with 3-state output	SOP (FP-20DBV)	△ ^{os}
HD74HC374FP	Octal D-type Flip-Flops with 3-state output	SOP (FP-20DAV)	○
HD74HC374T	Octal D-type Flip-Flops with 3-state output	TSSOP (TTP-20DAV)	○
HD74HC393P	Dual 4-bit Binary Counters	DIP (DP-14AV)	○
HD74HC393FP	Dual 4-bit Binary Counters	SOP (FP-14DAV)	○
HD74HC4020P	14-stage Binary Counter	DIP (DP-16FV)	○
HD74HC4020FP	14-stage Binary Counter	SOP (FP-16DAV)	○
HD74HC4040P	12-stage Binary Counter	DIP (DP-16FV)	○
HD74HC4040FP	12-stage Binary Counter	SOP (FP-16DAV)	○
HD74HC4051P	8-channel Analog Multiplexer/Demultiplexer	DIP (DP-16FV)	○
HD74HC4051FP	8-channel Analog Multiplexer/Demultiplexer	SOP (FP-16DAV)	○
HD74HC4052P	Dual 4-channel Analog Multiplexers/Demultiplexers	DIP (DP-16FV)	○
HD74HC4052FP	Dual 4-channel Analog Multiplexers/Demultiplexers	SOP (FP-16DAV)	○
HD74HC4052RP	Dual 4-channel Analog Multiplexers/Demultiplexers	SOP (FP-16DNV)	△ ^{os}
HD74HC540P	Octal Buffers and Line Drivers with 3-state outputs	DIP (DP-20NEV)	○

HD74HC Series (CMOS)

Part No.	Function	Package	Status
HD74HCT541P	Octal Buffers and Line Drivers with 3-state outputs	DIP (DP-20NEV)	△
HD74HCT541FP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74HCT541RP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DBV)	△ ^{OS}
HD74HC540T	Octal Buffers and Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HC541T	Octal Buffers and Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HCT541T	Octal Buffers and Line Drivers with 3-state outputs	TSSOP (TTP-20DAV)	○
HD74HC540FP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74HC540RP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DBV)	△ ^{OS}
HD74HC573P	Octal Transparent Latches with 3-state output	DIP (DP-20NEV)	○
HD74HC541P	Octal Buffers and Line Drivers with 3-state outputs	DIP (DP-20NEV)	△
HD74HC541FP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DAV)	○
HD74HC541RP	Octal Buffers and Line Drivers with 3-state outputs	SOP (FP-20DBV)	△ ^{OS}
HD74HC574FP	Octal D-type Flip-Flops with 3-state output	SOP (FP-20DAV)	○
HD74HC590P	8-bit Binary Counter/Register with 3-state outputs	DIP (DP-16FV)	○
HD74HC590FP	8-bit Binary Counter/Register with 3-state outputs	SOP (FP-16DAV)	○

Part No.	Function	Package	Status
HD74HC595FP	8-bit Shift Register/Latch with 3-state outputs	SOP (FP-16DAV)	○
HD74HC573FP	Octal Transparent Latches with 3-state output	SOP (FP-20DAV)	○
HD74HC573RP	Octal Transparent Latches with 3-state output	SOP (FP-20DBV)	△ ^{OS}
HD74HC573T	Octal Transparent Latches with 3-state output	TSSOP (TTP-20DAV)	○
HD74HC574P	Octal D-type Flip-Flops with 3-state output	DIP (DP-20NEV)	○
HD74HC595P	8-bit Shift Register/Latch with 3-state outputs	DIP (DP-16FV)	○
HD74HC640P	Octal Bus Transceivers with 3-state outputs	DIP (DP-20NEV)	△
HD74HC640FP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DAV)	△
HD74HC138RP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DNV)	△ ^{OS}
HD74HC125RP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DNV)	△ ^{OS}
HD74HC164RP	Parallel-out Serial-In Shift Register	SOP (FP-14DNV)	△ ^{OS}
HD74HC273RP	Octal D-type Edge-triggered Flip-Flops with Clear	SOP (FP-20DBV)	△ ^{OS}
HD74HC373RP	Octal D-type Transparent Latches with 3-state output	SOP (FP-20DBV)	△ ^{OS}
HD74HC125FP	Quad. Bus Buffer Gates with 3-state outputs	SOP (FP-14DAV)	△
HD74HC374P	Octal D-type Flip-Flops with 3-state output	DIP (DP-20NEV)	○

Notes) Production Status O: In Mass Production
 SPL: Samples are available
 Δ: Long delivery date(Lead time: 3 months)

Ordering Condition ◆: Large order only
 ^{OS}: Overseas sales only

HD74LS Series (TTL)

Part No.	Function	Package	Status
HD74LS00P	Quad. 2-input NAND Gates	DIP (DP-14AV)	○
HD74LS00FP	Quad. 2-input NAND Gates	SOP (FP-14DAV)	○
HD74LS00RP	Quad. 2-input NAND Gates	SOP (FP-14DNV)	△ ^{os}
HD74LS02P	Quad. 2-input NOR Gates	DIP (DP-14AV)	○
HD74LS02FP	Quad. 2-input NOR Gates	SOP (FP-14DAV)	○
HD74LS02RP	Quad. 2-input NOR Gates	SOP (FP-14DNV)	△ ^{os}
HD74LS04P	Hex Inverters	DIP (DP-14AV)	○
HD74LS04FP	Hex Inverters	SOP (FP-14DAV)	○
HD74LS04RP	Hex Inverters	SOP (FP-14DNV)	△ ^{os}
HD74LS06P	Hex Inverters Buffers/Drivers with Open Collector High-Voltage output	DIP (DP-14AV)	○
HD74LS06FP	Hex Inverters Buffers/Drivers with Open Collector High-Voltage output	SOP (FP-14DAV)	○
HD74LS06RP	Hex Inverters Buffers/Drivers with Open Collector High-Voltage output	SOP (FP-14DNV)	△ ^{os}
HD74LS07P	Hex Buffers/Drivers with Open Collector High-Voltage output	DIP (DP-14AV)	○
HD74LS07FP	Hex Buffers/Drivers with Open Collector High-Voltage output	SOP (FP-14DAV)	○
HD74LS08P	Quad. 2-input AND Gates	DIP (DP-14AV)	○
HD74LS08FP	Quad. 2-input AND Gates	SOP (FP-14DAV)	○
HD74LS08RP	Quad. 2-input AND Gates	SOP (FP-14DNV)	△ ^{os}
HD74LS14P	Hex Schmitt-trigger Inverters	DIP (DP-14AV)	○
HD74LS14FP	Hex Schmitt-trigger Inverters	SOP (FP-14DAV)	○
HD74LS14RP	Hex Schmitt-trigger Inverters	SOP (FP-14DNV)	△ ^{os}
HD74LS32P	Quad. 2-input OR Gates	DIP (DP-14AV)	○
HD74LS32FP	Quad. 2-input OR Gates	SOP (FP-14DAV)	○
HD74LS38P	Quad. 2-input NAND Buffers with Open Collector output	DIP (DP-14AV)	○
HD74LS38FP	Quad. 2-input NAND Buffers with Open Collector output	SOP (FP-14DAV)	○
HD74LS38RP	Quad. 2-input NAND Buffers with Open Collector output	SOP (FP-14DNV)	△ ^{os}
HD74LS74AP	Dual D-type Flip-Flops with Preset and Clear	DIP (DP-14AV)	○
HD74LS74AFP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DAV)	○

Part No.	Function	Package	Status
HD74LS74ARP	Dual D-type Flip-Flops with Preset and Clear	SOP (FP-14DNV)	△ ^{os}
HD74LS86P	Quad. 2-input Exclusive-OR Gates	DIP (DP-14AV)	○
HD74LS86FP	Quad. 2-input Exclusive-OR Gates	SOP (FP-14DAV)	○
HD74LS138P	3-to-8 line Decoder/Demultiplexer	DIP (DP-16FV)	○
HD74LS138FP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DAV)	○
HD74LS138RP	3-to-8 line Decoder/Demultiplexer	SOP (FP-16DNV)	△ ^{os}
HD74LS145P	BCD-to-Decimal Decoder/Driver with 15V outputs	DIP (DP-16FV)	○
HD74LS145FP	BCD-to-Decimal Decoder/Driver with 15V outputs	SOP (FP-16DAV)	○
HD74LS164P	8-bit Parallel-out Serial-In Shift Register	DIP (DP-14AV)	○
HD74LS164FP	8-bit Parallel-out Serial-In Shift Register	SOP (FP-14DAV)	○
HD74LS164RP	8-bit Parallel-out Serial-In Shift Register	SOP (FP-14DNV)	△ ^{os}
HD74LS240P	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	DIP (DP-20NEV)	○
HD74LS240FP	Octal Buffers/Line Drivers/Line Receivers with inverted 3-state outputs	SOP (FP-20DAV)	○
HD74LS244P	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	DIP (DP-20NEV)	○
HD74LS244FP	Octal Buffers/Line Drivers/Line Receivers with Non-inverted 3-state outputs	SOP (FP-20DAV)	○
HD74LS245RP	Octal Bus Transceivers with 3-state outputs	SOP (FP-20DBV)	△ ^{os}
HD74LS248FP	BCD-to-7segment Decode/Driver with Internal Pull-up outputs	SOP (FP-16DAV)	△
HD74LS273P	Octal D-type Edge-triggered Flip-Flops with Clear	DIP (DP-20NEV)	○
HD74LS273FP	Octal D-type Edge-triggered Flip-Flops with Clear	SOP (FP-20DAV)	○
HD74LS273RP	Octal D-type Edge-triggered Flip-Flops with Clear	SOP (FP-20DBV)	△ ^{os}
HD74LS373P	Octal D-type Transparent Latches with Non-inverted 3-state output	DIP (DP-20NEV)	○
HD74LS373FP	Octal D-type Transparent Latches with Non-inverted 3-state output	SOP (FP-20DAV)	○
HD74LS373RP	Octal D-type Transparent Latches with Non-inverted 3-state output	SOP (FP-20DBV)	△ ^{os}
HD74LS374P	Octal D-type Flip-Flops with Non-inverted 3-state output	DIP (DP-20NEV)	○
HD74LS374FP	Octal D-type Flip-Flops with Non-inverted 3-state output	SOP (FP-20DAV)	○
HD74LS374RP	Octal D-type Flip-Flops with Non-inverted 3-state output	SOP (FP-20DBV)	△ ^{os}

Level Shifter

Part No.	Function	Package	Status
HD151015T	9-bit Level Shifter/Transceiver with 3-state outputs	TSSOP (TTP-24DBV)	○
HD74LVCC4245AT	Octal Bus Transceiver and 3.3 V to 5 V shifters with 3-state Outputs	TSSOP (TTP-24DBV)	○
HD74LVCC165245AT	16bit 1.2 to 3.6 Level Shifter/Transceiver with 3-state Output	TSSOP (TTP-48DBV)	△

Part No.	Function	Package	Status
HD74ALVC166245AT	16bit 1.2 to 3.6 Level Shifter/Transceiver with 3-state Output	TSSOP (TTP-48DBV)	△
HD74LVCC3245AT	Octal Bus Transceiver with adjustable output voltage and 3-state Outputs	TSSOP (TTP-24DBV)	○
HD74LVCC4245AT	Octal Dual-supply Bus Transceiver with configurable output voltage with 3-state Outputs	TSSOP (TTP-24DBV)	○

High Voltage Logic IC (LED Driver)

Part No.	Function	Package	Status
RD15LD74A	8bit D-type Flip-Flop Driver (with clear)	DIP (DP-20NEV)	△

Part No.	Function	Package	Status
RD30LDT3595	24bit Serial-in Parallel-out LED Driver	SSOP (36P2R-D)	△

Interface

Part No.	Function	Package	Status
HD26C31FP	Quad. Differential Line Drivers with 3-state outputs(EIA RS-422A)	SOP (FP-16DAV)	○
HD26C32AFP	Quad. Differential Line Receivers with 3-state outputs(EIA RS-422A, 423A)	SOP (FP-16DAV)	○
HD26C32AP	Quad. Differential Line Receivers with 3-state outputs(EIA RS-422A, 423A)	DIP (DP-16FV)	○
HD26LS31P	Quad. Differential Line Drivers with 3-state outputs(EIA RS-422A)	DIP (DP-16FV)	○
HD29050P	Dual Differential Line Drivers/Receivers with 3-state outputs(EIA RS-422A)	DIP (DP-16FV)	○

Part No.	Function	Package	Status
HD29051P	Dual Differential Line Drivers/Receivers with 3-state outputs(EIA RS-422A)	DIP (DP-16FV)	○
M66014FP	Serial bus controller	SOP (24P2N-B)	○
R8A66171DD	Advanced Asynchronous Receiver & Transmitter (UART)	PRDP0024AF-A (24P4X-A)	○
R8A66171SP	Advanced Asynchronous Receiver & Transmitter (UART)	PRSP0024DF-A (24P2X-B)	○

Multi-Purpose ASSP

Part No.	Function	Package	Status
RD3CYD08CM	IGBT Driver	CMPAK-5	○
RD3CYD08VS	IGBT Driver	VSON (TNP-5DV)	△
RD3ST24US	Standby Control IC for Micro Computer	SSOP (TTP-8DBV)	△

Part No.	Function	Package	Status
RD5CYD08CM	IGBT Driver	CMPAK-5	△
RD5CYD08CM	IGBT Driver/CMOS Logic Level Shifter	CMPAK-5	○

Note: As for the IGBT products above, refer to the Renesas Transistors/Thyristors/Triacs/Photocouplers Status List.

Spread Spectrum Clock Generator (SSCG)

Part No.	Function	Package	Status
RD151TS3312ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3313ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	○
RD151TS3314ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3315ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3316ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△

Part No.	Function	Package	Status
RD151TS3322ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3323ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3324ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3325ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△
RD151TS3326ARP	Spread Spectrum Clock for EMI Solution	SOP (FP-8DCV)	△

CCD/Power MOS Driver

Part No.	Function	Package	Status
HD29029FP	Dual CCD Drivers	SOP (FP-8DGV)	△

Notes) Production Status ○: In Mass Production
 SPL: Samples are available
 △: Long delivery date(Lead time: 3 months)

 Ordering Condition ◆: Large order only

 OS: Overseas sales only

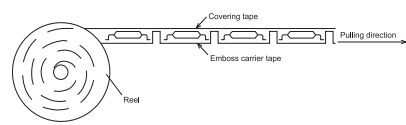
Standard Taping Specifications



Package	Packing Unit (pcs/reel)	Symbol	Appearance	Magazine	
				(pcs/Stick)	(pcs/Inner Box)
SOP (JEITA)	FP-8DGV	2,500	 Pulling direction → -EL (Part No.) + (-EL)	100	1000
	FP-14DAV	2,000		50	1000
	FP-16DAV			40	1000
SOP (JEDEC)	FP-8DCV	2,500	 Pulling direction → -EL (Part No.) + (-EL)	—	—
	FP-14DNV	2,500		—	2500
	FP-20DNV	1,000		—	1000
TSSOP	TTP-8DAV	3,000	 Pulling direction → EL or ELL (Part No.) + (EL) or (ELL)	—	—
	TTP-14DV	2,000		—	2000
	TTP-16DV			—	1000
	TTP-20DV			—	1000
SSOP	TTP-24DV	1,000	 Pulling direction → E (Part No.) + (E)	—	—
	TTP-48DV			—	—
MMPAK-8	TTP-56DV	3,000	 Pulling direction → HO (Part No.) + (HO)	—	—
	36P2R-D	1,000		—	—
CMPAK	CMPAK-5V	3,000	 Pulling direction → E (Part No.) + (E)	—	—
VSON-5	TNP-5DV			—	—
MMPAK-8		3,000	 Pulling direction → -EL (Part No.) + (-EL)	—	—
UPAKV		1,000 or 1,000x4	 Pulling direction → -TL (Part No.) + (-TL)	25	2500
MPAK-5V	MPAKV	3,000	 Pulling direction → -EL (Part No.) + (-EL)	—	—
CMPAK-5V				—	—
TO-92V/TO-92MODV		2,500 (pcs/BOX)	 an enlargement (Part No.) + (-TZ) Zigzag Box (EIAJ-RC-1008B)	—	—
DIP	DP-8	—	 Pulling direction →	50	1000
	DP-14/16	—		25	1000
	DP-20	—		20	1000

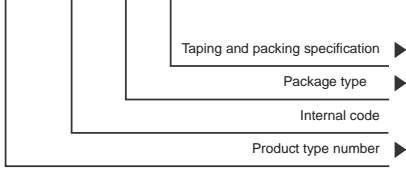
* Products with "-EL" and "-TL" are the counterclockwise-reeled emboss-tape type.
 * Please order the products in multiples of 1000 in magazines. Please order the products in packing units for shipment in reel.

Packing	Emboss Taping (pcs/reel)		Tube (pcs/stick)		Tube (pcs/inner box)		Tray (pcs/tray)		Tray (pcs/inner box)		
	Normal	Moisture-proof	Normal	Moisture-proof	Normal	Moisture-proof	Normal	Moisture-proof	Normal	Moisture-proof	
SIP	5P5T		45		4950						
DIP	8P5		25		2500						
DIP	8P4		50		2250 or 2000						
	14P4		25		1125 or 1000						
	16P4		25		1125 or 1000						
	20P4		20		900 or 800 or 720						
	24P4D		16		720 or 640						
	20P4B		25		1125 or 1000						
SDIP	8P2S-A		3000	100	15000						
SOP	(Package Code : PRSP0008DE-C)	2500	2500	100	1000						
	10P2N-A		2000	70	70	7000	2240 or 4200				
	14P2N-A		2000	50	50	5000	1600 or 3000				
	16P2S-A		3000	50	50	7500					
	16P2N-A		1000	50	50	5000	1600 or 3000				
	20P2N-A		2000	40	40	4000	1280 or 2400				
	24P2V-A		1000	30	30	2400	1800				
	SSOP	8P2J-A									
	16P2E-A		3000 or 2500	90	90	2160	900				
	20P2E-A		4000 or 2500 or 500	70	70	1680	4000				
SSOP	24P2E-A		2500	60	60	5760	600				
	24P2Q-A		2000	50	50	5000	1600 or 3000				
	36P2R-D		1000	35	35	2100	350 or 980				
LQFP	48P6D-A		1000				250		1250		
							144		720		



Part No. Designation

HA1630 S01 CM EL
RNA5 2A10 MM EL



► Product type number (Base series)

HD74HC	HD74HC Series
HA1630	CMOS Operational Amplifier
HA1631	CMOS Comparator
HA17	Standard Linear IC
HA16	Standard Linear IC (for industry)
RNA5	Reset IC (Voltage Detector)
RNB	Overseas Sales Only

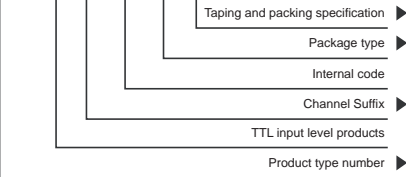
► Taping and packing specifications

EL	Embossed tape, left-winded	SOP, TSSOP-8, MMPAK, MPAK, CMPAK
ELL	Embossed tape, left-winded, large diameter	TSSOP-14
TL	Embossed tape, left-winded	UPAK
TZ	Radial taping packing(Fan-fold)	TO-92, TO-92MOD

► Package types

P, PN	DIP, TO-92, TO-92MOD
F, FP	JEITA SOP
RP	JEDEC SOP
T	TSSOP
LP	MPAK-5
CM	CMPAK
LTP	MPAK
US	SSOP-8
U	UPAK
MM	MMPAK-8
PS	DIP-8
—	DIP

HD74HC T 1G 04 CM E



Note: TTL input products of HD74LV1G/2G are changed to the ones of HD74LV1GT/2GT.

► Product type number (Base series)

HD74HC	HD74HC Series
HD74AC	HD74AC Series
HD74LV-A	HD74LV-A Series
HD74ALVC	HD74ALVC Series
HD74CBT	HD74CBT Series
HD75	HD75 Series
HD26	HD26 Series
HD29	HD29 Series
HD151	HD151 Series
RD74LVC-B	RD74LVC-B Series
RD3CYD	RD3CYD Series
RD5CYD	RD5CYD Series
RD74HV1G	RD74HV1G Series

► Channel Suffix

1G	5-pin device
1GW	6-pin device
2G	8-pin device
—	Others

► Taping and packing specifications

E	Embossed tape	CMPAK, VSON, SSOP
EL	Embossed tape, left-winded	SOP, TSSOP (24 or more pins)
ELL	Embossed tape, left-winded, large diameter	TSSOP (20 or less pins)

► Package types

P	DIP, TO-92, TO-92MOD
FP	JEITA SOP
RP	JEDEC SOP
T	TSSOP
SS	SSOP (Without 8 pins)
CM	CMPAK
VS	VSON
US	SSOP-8

Part No. Designation

Part No. Designation of Series Regulators

<u>μPC</u>	<u>29</u>	<u>M</u>	<u>33</u>	<u>A</u>	<u>HF</u>	
①	②	④	⑤	⑥	⑦	
<u>μPD</u>	<u>12</u>	<u>1</u>	<u>W</u>	<u>18</u>	<u>A</u>	<u>T1F</u>
①	②	③	④	⑤	⑥	⑦

- | | | |
|--|--|---|
| <p>① Product category
C: Bipolar integrated circuits
D: CMOS integrated circuits</p> <p>② Series
[Bipolar type]
78: Standard positive voltage
24: LDO positive voltage
29: Low-power LDO positive voltage
79: Negative voltage
[CMOS type]
12: CMOS positive voltage</p> | <p>③ Additional functions
0: None
1: ON/OFF</p> <p>④ Output Current
L: 100mA
N: 300mA
M: 500mA
No representation: 1A
A: 2A
W: 1.5A</p> | <p>⑤ Output voltage
00: Variable
10: 1.0V or 10V
15: 1.5V or 15V
18: 1.8V or 18V
25: 2.5V
33: 3.3V
05: 5.0V</p> <p>⑥ Version</p> <p>⑦ Package
T: SC-63 or SOT-89
T1D: TO-252 (Pin 3)
HF: TO-220 Isolated
HB: SC-64
TA: SC-74A
T1B: SOT-89
T1F: TO-252 (Pin 5)</p> |
|--|--|---|

Part No. Designation of Switching Regulators

<u>μPC</u>	<u>1933</u>	<u>GR</u>
①	②	③

- | | | |
|--|--------------------------------|---|
| <p>① Product category
C: Bipolar integrated circuits
D: CMOS integrated circuits</p> | <p>② Product serial number</p> | <p>③ Package
C, CX: DIP
G, GR, GS: SOP
W: wafer</p> |
|--|--------------------------------|---|

Part No. Designation of Op Amp & Comparators

<u>μPC</u>	<u>358</u>	<u>GR-9LG</u>
①	②	③

- | | | |
|--|---|---|
| <p>① Product category
Bipolar analog integrated circuits</p> | <p>② Product serial number</p> <ul style="list-style-type: none"> ▪ Temperature spec expanding products or telecom use products apply particular products serial number.
(Example) 1251, 451, 258 etc. ▪ General use products apply those of first source manufacturers
(Example) 358, 324, 4558 etc. | <p>③ Package
GR-9LG: TSSOP
MN-KAA: TSSOP(3x3)
MP-KAA: TSSOP(2.8x2.9)
G2: SOP(225mil)
C: DIP(300mil)</p> |
|--|---|---|

Cross Reference – General-Purpose Linear ICs

Function		TOSHIBA	Panasonic	JRC	NS	ON	TI	Philips	ST	Fairchild	FUJITSU	Others	RENESAS
Single Op-Amps		TC75S55FU TC75S55F		NJU7011F NJU7042F			TLC27L1		TS931 TS941				HA1630S01
		TC75S51FU/F	AN1101SSM		LMC6041 LMC6061		TLV2211 TLV2711						HA1630S02
		TC75S54F		NJU7012F NJU7092	LMC7111 LPC661	NCS7101							HA1630S03
		TC75S54FU		NJU7013F NJU7008F2			TLV2221 TLV2721						HA1630S04
		TC75S60FU/F		NJU7017F					TS461 TS921 TS951 TS971				HA1630S05
					LMC6081 LMC7101 LMV751		TLV2470 TLV2471 TLV4110 TLV4111						HA1630S06
Dual Op-Amps		TA75458		NJM1458	LM1458		MC1458						*HA17458 μPC1458
		TA75358		NJM2904	LM358	LM358	LM358	LM358	LM358	LM358		ROHM BA10358 SANYO LA6358	*HA17358A *HA17904A μPC358 μPC1251
		TC75W55FU		NJU7014V NJU7052 NJU7094V	LMC6062		TLC27L2 TLC27L7		TS27L1 TS932 TS942				HA1630D01MM
		TC75W51FU		NJU7095V	LPC662		TLC2262		TS27M2				HA1630D02MM
		TC75W54FU		NJU7015V NJU7095	LMC6022 LMC6572		TLV2252 TLV2422						HA1630D03MM
				NJU7016V NJU7032		MC33172 MC33178	TLV2432 TLC27M2						HA1630D04MM
				NJU7018V			TLV2332		TS462 TS912 TS922 TS952 TS972				HA1630D05MM
		TC75W60		—	LMC6032 LMC6082		TLC2262 TLC4112		TS272				HA1630D06MM
Quad Op-Amps		TA75902		NJM2902	LM2902								*HA17902A *HA17324A μPC451 μPC452
		TA75324		NJM324	LM324 LM224	LM324 LM224	LM324 LM224					ROHM BA10324A SANYO LA6324	*HA17902A *HA17324A μPC324
Single Comparators					LMC7211 LMC7215 LMC7225		TLV3491		TS861 TS7211				HA1631S01
		TC75S56 TC75S58		NJU7108 NJU7141					TS7221				HA1631S02 HA1631S03
				NJU7118 NJU7102									HA1631S04
Dual Comparators				NJU7102	LMC6762		TLV3492 TLC3702C		TS862 TS3702				HA1631D01MM
		TC75W56											HA1631D02MM
		TC75W58		NJU7112	LMC6772		TLC393C		TS393				HA1631D03MM
Quad Comparators		TA75393		NJM2903	LM2903 LM393 LM293		LM393 LM293					ROHM BA10393	*HA17903A *HA17393A μPC277 μPC393
		TA75339		NJM2901	LM339 LM2901	LM339	LM339	LM339	LM339	LM339	MB4204	ROHM BA10339 SANYO LA6339	*HA17339A *HA17901A μPC339 *HA17339A *HA17901A μPC177
Series Regulators	Positive Voltage	TA78L00 Series		NJM78L00 Series	LM78L00 Series		μA78L00 Series						*HA178L00 Series μPC78L00 Series
	Negative Voltage	TA79L00 Series		NJM79L00 Series	LM79L00 Series								*HA179L00 Series
Timer				NJM555	LM555		NE555					SANYO LB8555	*HA17555 μPC1555
Switching Regulators Controllers	AC/DC		AN8090								MB3769		*HA16107 *HA16108 M51995A M51998 M62213 μPC1094 μPC1099
	DC/DC		AN8011S									UNIT RODE FUJI FA7611M FA7622M	*HA16114 *HA16120 *HA16116 *HA16121 M5291 M62210 M62211 M62212 M62215 M62216 M6227X M6229X μPC1100
Shunt-Regulators		TA76431S	AN1431T AN1431M	NJM431L NJM431U	LM431ACZ	TL431AILP	TL431CLP TL431CPK						HA17431PNA/PA HA17431UA
		TA76432S TA76431F			LMV431AIZ	TLV431ALP	TLV431AILP		TS431ACZ				HA17431AP HA17432UA μPC1093T
				NJM2380AF			TL431AIDBV						HA17431VLP μPC1093TA
													HA17431UP μPC1943T
		TA76432F											HA17432UP μPC1944T
			AN1432MS										HA17432ALT HA17432ALTP
		TA76431S			LM431BIZ	TL431AILP	TL431AILP						HA17431ALP HA17431HP/GP
		TA76431FR TA76431F		NJM2380AU NJM2390AU			TL431AIPK TL432AIPK						HA17431HUP/GUP HA17432HUP/GUP μPC1093T
					LM431BIM3		TL432AIDBZ		TS2431AILT				HA17432HLTP
				NJM2380AF			TL431AIDBV						HA17431HLP/GLP μPC1093TA
					LM431CIZ	TL431BILP	TL431BILP		TL1431CZ	KA431LZ			HA17431GPA HA17431GLTPA
							TL432BIDBZ TL431BIDBV						HA17431GLTPA

Note1) *: Surface-mount package is available.

Note2) Electrical characteristics and pin arrangements may differ among equivalent products.

Cross Reference – General-Purpose Logic ICs

TOSHIBA	ON Semiconductor (MOTOROLA)	FAIRCHILD	IDT	NXP	TI	RENESAS
					SN74LS	HD74LS
TC74HC	MC74HC	MM74HC		74HC	SN74HC	HD74HC
TC74HCT	MC74HCT	MM74HCT		74HCT	SN74HCT	HD74HCT
TC7S/7W	MC74HC1G	NC7S		74HC1G		HD74HC1G
-/TC7WT		NC7ST				HD74HCT1G
TC74AC	MC74AC	74AC		74AC	SN74AC	HD74AC
TC74ACT	MC74ACT	74ACT		74ACT	SN74ACT	HD74ACT
TC74VHC	MC74VHC	74VHC		74AHC	SN74LV-A/AHC	HD74LV-A
TC74VHCT	MC74VHCT	74VHCT		74AHCT	SN74AHCT	
TC7SH/7WH	MC74VHC1G			74AHC1G	SN74AHC1G	HD74LV1G/1GW/2G
TC7SET	MC74VHC1GT			74AHCT1G	SN74AHCT1G	HD74LV1GT
TC74LVX	MC74LVX	74LVX		74LV	SN74LV-A	HD74LV-A
TC74LCX	MC74LCX	74LCX	74LVC	74LVC	SN74LVC	RD74LVC
TC7SZ	NL17SZ/27WZ/37WZ	NC7SZ/WZ	74LVC1G			
					SN74LVC1G/2G/3G	
TC74VCX	MC74VCX	74VCX	74ALVC	74ALVC	SN74ALVC	HD74ALVC
TC7SA/-						HD74ALVC1G/2G
TC74BC		74BC			SN74BC	HD74BC
TC74ABT		74ABT		74ABT	SN74ABT	

■ Package Suffix Table

	TOSHIBA	ON Semiconductor (MOTOROLA)	FAIRCHILD	IDT	NXP	TI	RENESAS
DIP	P	P (AL/Bi-CMOS) N	P		N	N NT(24pins)	P
JEITA SOP	F	F (AL/HS-CMOS) M	SJ		T	NS	FP
JEDEC SOP	FW	D DW	S	SO DC	D	D DW(20/24pins)	RP
SSOP	FS			PY		DB	
TSSOP	FT	DT	MTC MTD(48/56pins)	PG PA	PW DGG(48/56pins)	PW DGG(48pins ↑)	T
CMPAK-5,6	FU	DF	P5,6	DY	GW	DCK	CM
VSON-5	FE	XV					VS
SSOP-8	FK	US	K8		DC	DCU	US

Package Code

Outline	DIP		SOP(JEITA)	SOP(JEDEC)	TSSOP	MMPAK	SIP	UPAKV	MPAKV	MPAK-5V	CMPAK-5V
	8 pins	14 pins or more	8 pins or more	8 pins or more	8/14 pins	8 pins	3 pins	3 pins	3 pins	5 pins	5 pins
Material	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Suffix	Consumer	*—	F	RP	T	MM	*—	—	—	LP	CM
	Industrial	PS	P	FP	T	MM	P, PN	U	LTP	LP	CM

Note) * The Part No. is followed by the suffix, except for packages marked with * in the above table.

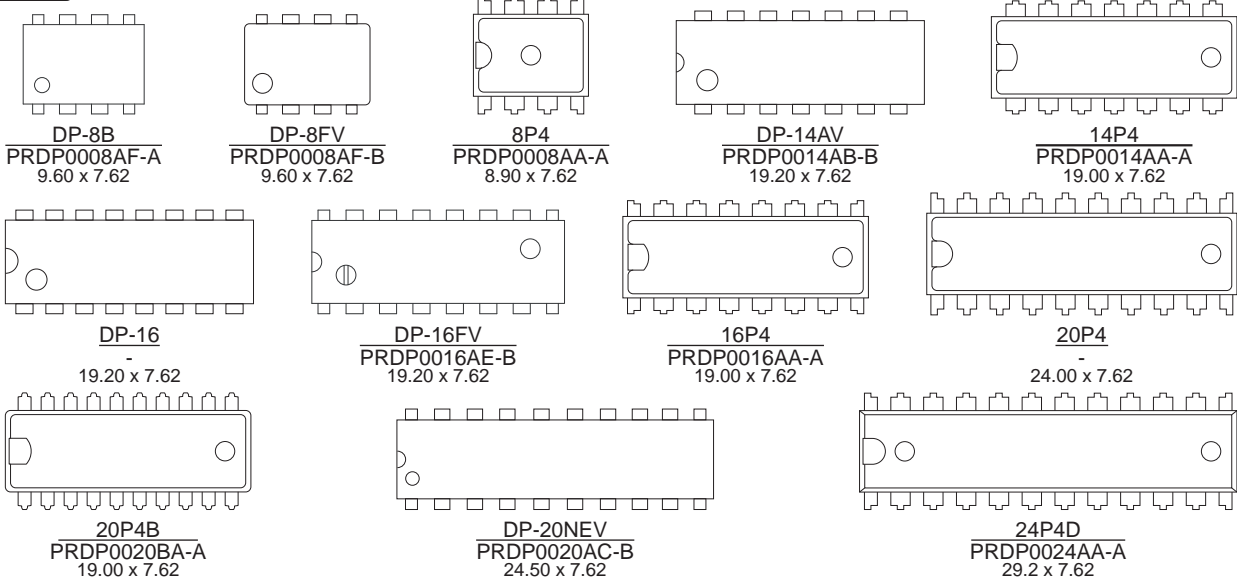
Package

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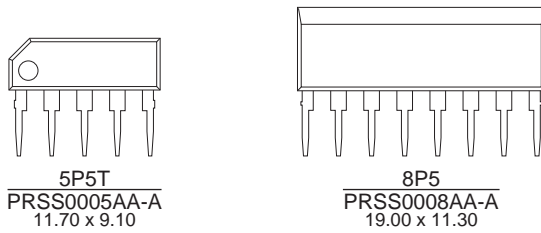
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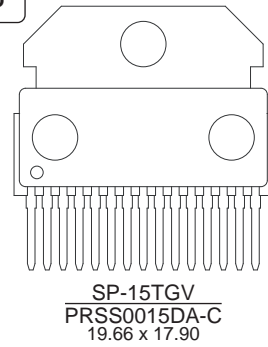
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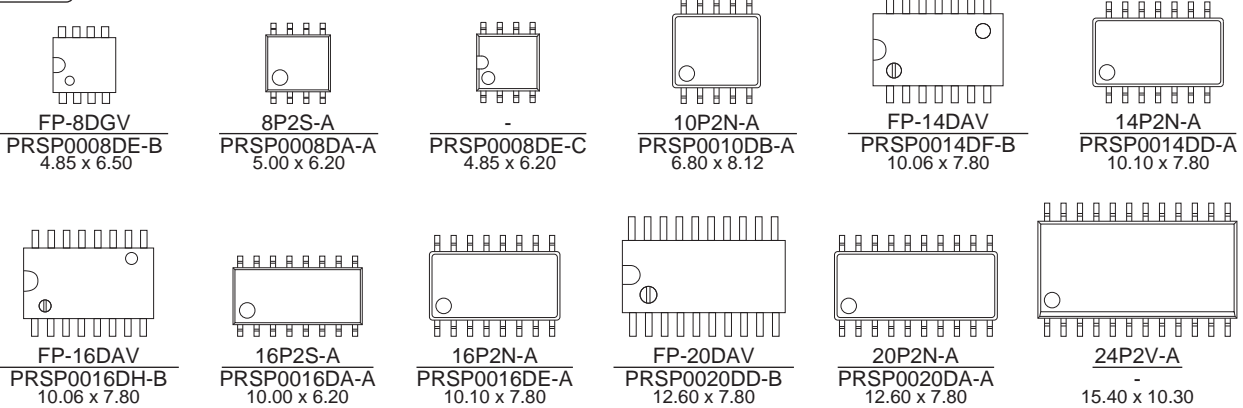
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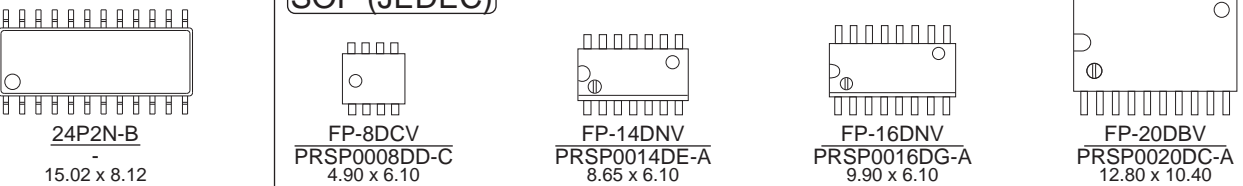
HSIP



SOP



SOP (JEDEC)



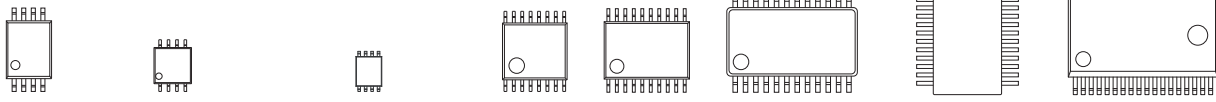



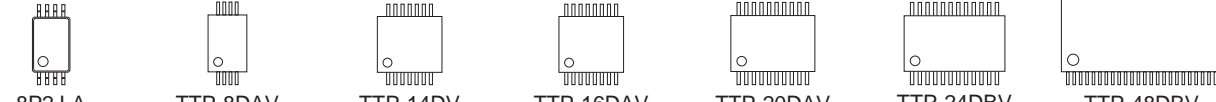
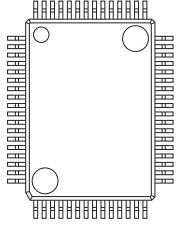
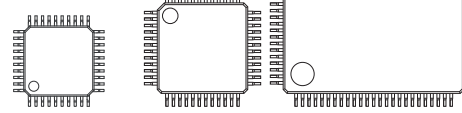





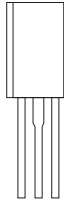
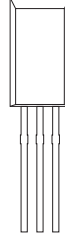






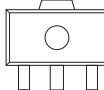
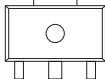
- Note) 1. These packages are not in full size.
 2. Unit is mm, and those values are for reference (values of external dimensions including pins).
 3. For details, refer to the catalog.
 4. All packages in this document are Lead Pb-free or Lead Pb-free available.

Package

R

Package Name




Package Code

<p>SSOP</p>  <p> 8P2X-A - 3.50 x 6.40 8P2X-F PRSP0008JA-A 2.90 x 4.00 TTP-8DB/TTP-8DBV PVSP0008KA-A 2.00 x 3.10 16P2Z-A - 5.00 x 6.20 20P2X-A - 6.60 x 6.40 24P2Q-A PRSP0024GA-A 10.10 x 7.80 FP-28DSAV PRSP0028JA-A 7.90 x 10.20 36P2R-D PRSP0036GA-B 11.93 x 15.00 </p>															
<p>LSSOP</p>  <p> 16P2E-A PLSP0016JA-A 5.00 x 6.40 20P2E-A PLSP0020JA-A 6.50 x 6.40 20P2F-A PLSP0020JB-A 6.50 x 6.40 24P2E-A PLSP0054LA-A 7.80 x 7.60 </p>				<p>MMPAK</p>  <p> MMPAK-8 PLSP0008JC-A 2.95 x 4.0 </p>		<p>VSON</p>  <p> TNP-5DV PUSN0005KA-A 1.60 x 1.60 </p>									
<p>TSSOP</p>  <p> 8P2J-A PTS0008JA-A 3.00 x 6.40 TTP-8DAV PTSP0008JC-B 3.00 x 6.40 TTP-14DV PTSP0014JA-B 5.00 x 6.40 TTP-16DAV PTSP0016JB-A 5.00 x 6.40 TTP-20DAV PTSP0020JB-A 6.50 x 6.40 TTP-24DBV PTSP0024JB-A 7.80 x 6.40 TTP-48DBV PTSP0048KA-A 12.50 x 8.10 </p>															
<p>QFP</p>  <p> 64P6S-A PRQP0064JA-A 12.80 x 16.80 </p>		<p>LQFP</p>  <p> FP-40CV PLQP0040JB-D 7.00 x 7.00 48P6D-A - 9.00 x 9.00 100P6Q-A PLQP0100KB-A 16.00 x 16.00 </p>		<p>HVQFN</p>  <p> PVQN0048LA-A 6.20 x 6.20 52PJV-A PVQN0052LA-A 7.20 x 7.20 </p>		<p>TFLGA</p>  <p> 49F0G PTLG0049JA-A 5.00 x 5.00 </p>									
<p>QFN</p>  <p> QFN-16 PWQN0016KB-A 3.00 x 3.00 QFN-20 PWQN0020KB-A 4.00 x 4.00 QFN-24 PWQN0024KD-A 4.00 x 4.00 </p>				<p>SON</p>  <p> SON-8 PWSN0008KA-A 2.20 x 2.20 </p>											
<p>TO-92V</p>  <p> PRSS0003DA-A 4.80 x 17.70 </p>			<p>TO-92L</p>  <p> PRSS0003DF-A 5.10 x 17.70 </p>			<p>TO-92MODV</p>  <p> PRSS0003DC-A 4.80 x 18.10 </p>									
<p>DFN-10</p>  <p> 2.50 x 2.70 </p>		<p>MPAKV</p>  <p> PLSP0003ZB-A 2.95 x 2.80 </p>		<p>SOT-25</p>  <p> PLSP0005ZA-A 2.90 x 2.80 </p>		<p>MPAK-5V</p>  <p> PLSP0005ZB-A 2.90 x 2.80 </p>		<p>CMPAK-5V</p>  <p> PTSP0005ZC-A 2.00 x 2.10 </p>		<p>CMPAK-6V</p>  <p> PTSP0006JA-A 2.00 x 2.10 </p>		<p>UPAKV</p>  <p> PLZZ0004CA-A 4.50 x 4.25 </p>		<p>SOT-89</p>  <p> PLZZ0004CB-A 4.40 x 3.90 </p>	


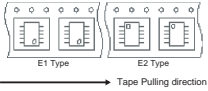

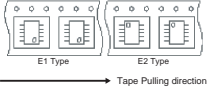

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Packages and Standard Taping Specifications

N

Package	JEDEC Code	JEITA Code	Packing Quantity	Packing Option	Type	Taping Specifications
 3pin PoMM (4.5x4.0x1.5)	SOT-89	SC-62	1000	Taping	E1/E2/T1/T2	There are four taping types (E1, E2, T1, T2) depending on the direction of the device. 
 5pin MM (2.9x2.8x1.4)	SOT-457	SC-74A	3000	Taping	E1/E2/T1/T2	There are four taping types (E1, E2, T1, T2) depending on the direction of the device. 
 5pin MP-3ZK (6.5x9.8x2.3)	TO-252	-	2500	Taping	E1/E2	
 MP-3 (6.5x13.7x2.3)	TO-251	-	1000	Bag stuffing	-	
 MP-3Z (6.5x9.5x2.3)	TO-252	-	2000	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 MP-3ZK (6.5x10.4x2.3)	TO-252	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 SOP-8 (225mil) (5.2x6.5x1.59)	-	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 SOP-8 (3.8*4.9) (5.2x6.5x1.59)	-	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 SOP-16 (7.62mm(300)) (10.46x7.7x1.8)	-	-	50	Magazine case	E1/E2	
 SOP-16 (9.53mm(375)) (10.0x10.3x2.77)	-	-	1500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 SOP-14 (5.15x6.4x1.2)	-	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
 TSSOP-14 (225mil) (5.15x6.4x1.2)	-	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 

Packages and Standard Taping Specifications

Package	JEDEC Code	JEITA Code	Packing Quantity	Packing Option	Type	Taping Specifications
TSSOP-8 (2.8*2.9)  (3.0x4.0x1.03)	-	P-TSSOP8-2.8x2.9-0.65	5000	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
TSSOP-8 (5.75mm(225))  (3.15x6.4x1.2)	-	-	2500	Taping	E1/E2	There are two taping types (E1, E2) depending on the direction of the device. 
TSSOP-8 (3*3)  (3.3x3.3x1.1)	-	P-TSSOP8-3x3-0.65	4000	Taping	E1/E2	

Renesas General-Purpose ICs Status List

Power Management Linear ICs / General-Purpose Linear ICs / General-Purpose Logic ICs

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Renesas Electronics America Inc.

2880 Scott Boulevard Santa Clara, CA 95050-2554, U.S.A.
Tel: +1-408-588-6000, Fax: +1-408-588-6130

Renesas Electronics Canada Limited

1101 Nicholson Road, Newmarket, Ontario L3Y 9C3, Canada
Tel: +1-905-898-5441, Fax: +1-905-898-3220

Renesas Electronics Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K
Tel: +44-1628-651-700, Fax: +44-1628-651-804

Renesas Electronics Europe GmbH

Arcadiastrasse 10, 40472 Düsseldorf, Germany
Tel: +49-211-65030, Fax: +49-211-6503-1327

Renesas Electronics (China) Co., Ltd.

7th Floor, Quantum Plaza, No.27 ZhiChunLu Haidian District, Beijing 100083, P.R.China
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

Renesas Electronics (Shanghai) Co., Ltd.

Unit 204, 205, AZIA Center, No.1233 Lujiazui Ring Rd., Pudong District, Shanghai 200120, China
Tel: +86-21-5877-1818, Fax: +86-21-6887-7858 / -7898

Renesas Electronics Hong Kong Limited

Unit 1601-1613, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong
Tel: +852-2886-9318, Fax: +852 2886-9022/9044

Renesas Electronics Taiwan Co., Ltd.

13F, No. 363, Fu Shing North Road, Taipei, Taiwan
Tel: +886-2-8175-9600, Fax: +886 2-8175-9670

Renesas Electronics Singapore Pte. Ltd.

80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre Singapore 339949
Tel: +65-6213-0200, Fax: +65-6213-0300

Renesas Electronics Malaysia Sdn.Bhd.

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

Renesas Electronics Korea Co., Ltd.

11F., Samik Lavied' or Bldg., 720-2 Yeoksam-Dong, Kangnam-Ku, Seoul 135-080, Korea
Tel: +82-2-558-3737, Fax: +82-2-558-5141