

Advanced Logic ICs

Selection guide



June 2006

Digital and analog NEATSwitch™

Part number	Function	Description	I _{CC} @ 5V (max) [μA]	R _{ON} @ 5V (typ) [Ω]	BW [MHz]	V _{CC} [V]	I _{NOM} [mA]	Package
74V1G66CTR	1 x SPDT	Single bilateral switch	10	6.5	180	2 to 5.5	50	SOT323-5L
74V1T66CTR	1 x SPDT	Single bilateral switch	10	6.5	180	4.5 to 5.5	50	SOT323-5L
74V2G66STR	2 x SPST	Dual bilateral switch	10	6.5	180	2 to 5.5	50	SOT23-8L
74V2T66STR	2 x SPST	Dual bilateral switch	10	10	180	4.5 to 5.5	50	SOT23-8L
74V1T384CTR	1 x SPST	Single high-speed bus switch	10	7	NA	4 to 5.5	50	SOT323-5L
74V1G384CTR	1 x SPST	Single high-speed bus switch	10	7	NA	3 to 5.5	50	SOT323-5L
74V2G384STR	2 x SPST	Dual high-speed bus switch	10	7	NA	3 to 5.5	50	SOT23-8L
74V2T384STR						4 to 5.5		

Part number	Function #	Description	I _{CC} @ 3V (max) [μA]	R _{ON} @ 4.3V (typ) [Ω]	BW [MHz]	V _{CC} [V]	I _{NOM} [mA]	Package
STG719STR	1 x SPDT	Low-voltage 4Ω SPDT switch with BBM*	1	6	200	1.8 to 5.5	50	SOT23-6L
STG3157CTR	1 x SPDT	Single bilateral switch	1	4.4	250	1.65 to 5.5	128	SOT323-6L
STG3155DTR	1 x SPDT	Low-voltage 0.5Ω max Single SPDT switch with BBM*	0.2	0.5	70	1.65 to 4.3	500	DFN6 (1.45 x 1.0)
STG3159DTR	1 x SPDT	Low-voltage 1Ω max Single SPDT switch with BBM*	0.2	1	150	1.65 to 4.3	400	DFN6 (1.2 x 1.0)
STG4159BJR	1 x SPDT	Low-voltage 0.3Ω max Single SPDT switch with BBM* & 10KV contact ESD protection	0.2	0.21	28	1.65 to 4.8	500	Flip-Chip7
STG3680QTR	2 x SPDT	Low-voltage 0.5Ω/0.8Ω max dual SPDT switch with BBM*	0.2	0.4	50	1.65 to 4.3	500	QFN16 (3 x 3)
STG3684AQTR	2 x SPDT	Low-voltage 0.5Ω max Dual SPDT switch with BBM*	0.2	0.40	50	1.65 to 4.3	500	QFN16 (3 x 3)
STG3684ADTR								DFN10 (2.3 x 2.0)
STG3689DTR	2 x SPDT	Low-voltage 0.5Ω max Dual SPDT switch with BBM* (high BW)	0.2	0.5	85	1.4 to 4.3	400	DFN10 (2.5 x 1.3)
STG4259BJR	2 x SPDT	Low-voltage 0.3Ω max Dual SPDT switch with BBM* & 10KV contact ESD protection	0.2	0.21	28	1.65 to 4.8	500	Flip-Chip11
STG3856QTR	2 x SP3T	Low-voltage 1Ω max Dual SP3T switch with BBM*	0.2	0.6	100	1.65 to 4.3	300	QFN12
STG3690QTR	4 x SPDT	Low-voltage 5Ω max quad SPDT switch with BBM*	0.2	5	50	1.65 to 3.6	500	QFN16 (3 x 3)
STG3699BVTR	4 x SPDT	Low-voltage 0.5Ω max quad SPDT switch with BBM*	0.2	0.35	40	1.65 to 4.3	500	QFN16 (2.6 x 1.8)
STG3692QTR	4 x SPDT	Low-voltage 5Ω max quad SPDT switch with BBM* (high BW)	0.2	3.5	800	1.65 to 4.3	300	QFN16 (2.6 x 1.8)
STG3482QTR	2 x SP4T	Low-voltage 4Ω high BW SP4T with BBM*	0.2	4.6	300	1.65 to 4.3	300	QFN16 (2.6 x 1.8)

* BBM = Break-before-make-feature
I_{NOM} = Nominal current

SPDT = Single pole dual throw

SPST = Single pole single throw

SP3T = Single pole triple throw

Level translators

Part number	N bit	Description	t_{PD} [ns]	V_{CC} [V]	V_I [V]	Package
74LVX3245MTR	8	Low-voltage, high-performance HCMOS level translator	8	2.7 to 5.5	0 to V_{CCA}	S0-24
74LVX3245TTR						TSSOP24
74LVX4245MTR	8	Low-voltage, high-performance HCMOS level translator	8	2.7 to 5.5	0 to V_{CCB}	S0-24
74LVX4245TTR						TSSOP24
74LVXC3245MTR	8	Low-voltage, high-performance HCMOS level translator	8	2.7 to 5.5	0 to V_{CCB}	S0-24
74LVXC3245TTR						TSSOP24
74LVXC4245MTR	8	Low-voltage, high-performance HCMOS level translator	8	2.7 to 5.5	0 to V_{CCB}	S0-24
74LVXC4245TTR						TSSOP24
74VXC1632245TBR	16	Very low-voltage HCMOS, dual supply level translator	4.4	1.65 to 3.6	0 to 3.6	μ TFBGA42
74VXC1632245TTR						TSSOP48
74V CXH1632245TBR	16	Very low-voltage HCMOS, dual supply level translator, with bus hold	4.4	1.65 to 3.6	0 to V_{CCB}	μ TFBGA42
74V CXH1632245TTR						TSSOP48
74V CXHQ163245TBR	16	Dual supply bus transceiver level translator with bus hold and EMI noise control	5.5	1.65 to 3.6	0 to V_{CCB}	μ TFBGA42
74V CXHQ163245TTR						TSSOP48
ST16C32245TBR	14	Dual supply bus transceiver level translator, "A" side series resistor, two bit I ² C lines	4.4	1.65 to 3.6	0 to V_{CCB}	μ TFBGA42
ST1G3234BJR	1	Ultra low-voltage single bit level translator	4.4	1.4 to 3.6	0 to V_{CCB}	Flip-Chip5
ST4G3234BJR	4	Ultra low-voltage 4-bit level translator	4.4	1.4 to 3.6	0 to V_{CCB}	Flip-Chip11
ST4G3235BJR						Flip-Chip11
ST2G3236QTR	2	Dual supply bus transceiver level translator, "A" side series resistor	4.4	1.4 to 3.6	0 to V_{CCB}	QFN10
ST6G3237TBR	6	Dual supply level translator for SD/MiniSD/Tflash Card	4.4	1.4 to 3.6	0 to V_{CCA}	μ TFBGA25
ST6G3238ETBR	6	Dual supply level translator for SD/MiniSD/Tflash Card with 15kV ESD protection	4.4	1.4 to 3.6	0 to V_{CCA}	μ TFBGA25
ST2378ETTR	8	Low-voltage level translator \pm 15kV ESD protection	15	1.7 to 5.5	0 to 5.5	TSSOP20
ST2378EBJR						Flip-Chip20
ST10G32245TBR	10	Dual supply level translator with A side series resistor	4.4	1.4 to 2.7	0 to V_{CCB}	μ TFBGA25

Power logic LED drivers

Part number	Description	V_{DD} [V]	I_O [mA]	Interface	Current matching [%]	Package
STPIC6A259M	Power logic 8-bit addressable latch	5	350	SPI	NA	S0-24
STPIC6A259MTR						S0-24
STPIC6C595M	Power logic 8-bit addressable latch	5	250	SPI	NA	S0-16
STPIC6C595MTR						S0-16
STPIC6C595TTR						TSSOP16
STPIC44L02PTR	4 channel serial and parallel low side pre-FET driver for automotive applications	5	2	SER-PAR	NA	SSOP24

Power logic LED drivers cont'd.

Part number	Description	V _{DD} [V]	I _O [mA]	Interface	Current matching [%]	Package
STP04CM596B1R	4-bit constant current for Power LED sink driver	5	500	SPI	3	DIP-14
STP04CM596MTR						SO-14
STP04CM596XTTR						HTSSOP16
STP08C596B1	8-bit constant current LED sink driver	5	120	SPI	3	DIP-16
STP08C596MTR						SO-16
STP08C596TTR						TSSOP16
STP08CL596B1	8-bit constant current LED sink driver	3.3	90	SPI	3	DIP-16
STP08CL596MTR						SO-16
STP08CL596TTR						TSSOP16
STP08CDC596B1	8-bit constant current LED sink driver with error detection	3.3 to 5.5	120	SPI	3	DIP-16
STP08CDC596MTR						SO-16
STP08CDC596TTR	8-bit constant current LED	5	120	SPI	3	TSSOP16
STP16C596B1R	16-bit constant current LED sink driver	5	120	SPI	3	DIP-24
STP16C596MTR						SO-24
STP16C596TTR						TSSOP24
STP16C596XTTR						HTSSOP24
STP16CL596B1R	16-bit constant current LED sink driver	3.3	90	SPI	3	DIP-24
STP16CL596MTR						SO-24
STP16CL596TTR						TSSOP24
STP16CL596XTTR						HTSSOP24
STP16CDP05B1R	16-bit constant current LED sink driver with error detection	3.3 to 5.5	80	SPI	3	DIP-24
STP16CDP05MTR						SO-24
STP16CDP05TTR						TSSOP24
STP16CDP05XTTR						HTSSOP24
STP16CP596B1R	16-bit constant current LED sink driver with precision output current	3.3 to 5.5	50	SPI	2	DIP-24
STP16CP596MTR						SO-24
STP16CP596TTR						TSSOP24
STP16CP596XTTR						HTSSOP24
STP16CP05B1R	16-bit constant current LED sink driver	3.3 to 5.5	80	SPI	2	DIP-24
STP16CP05MTR						SO-24
STP16CP05TTR						TSSOP24
STP16CP05XTTR						HTSSOP24
STP16CPS05B1R	16-bit constant current LED sink driver with auto-power shutdown	3.3 to 5.5	80	SPI	2	DIP-24
STP16CPS05MTR						SO-24
STP16CPS05TTR						TSSOP24
STP16CPS05XTTR						HTSSOP24

HTSSOP is TSSOP with exposed pad

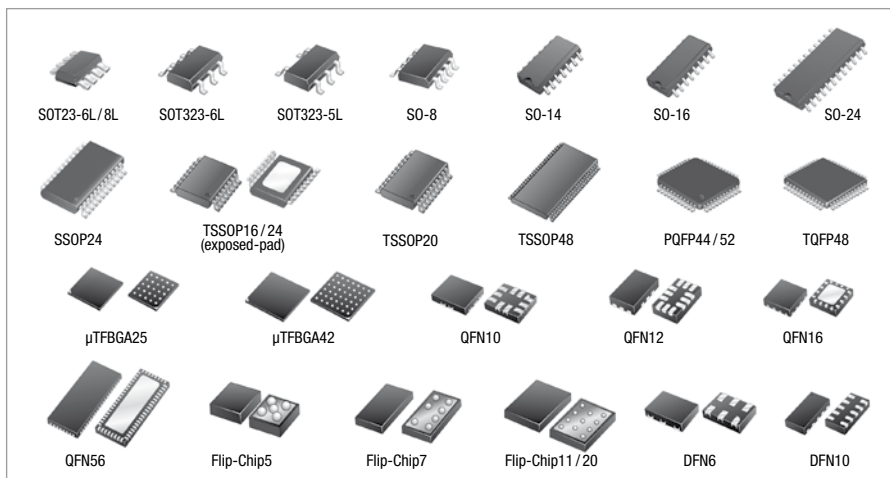
Application specific devices

Application	Part number	Description	V _{CC} [V]	R _{ON} (typ) [Ω]	BW [MHz]	Package
Computing / communications	STMUX100LQTR	Gigabit LAN analog switch 16 to 8-Bit multiplexer	3.3	5.5	>450	QFN56
Computing / consumer electronics	STHDMI001ATTR	3.3V high BW, 2-to-1 HDMI switch with single enable	3.3	5.5	>450	TSSOP48
Computing / consumer electronics	STHDMI002ABFR	3.3V high BW, 2-to-1 HDMI switch with single enable, HPD and DDC lines switching	3.3	5.5	850	TQFP48
Consumer electronics (video switching)	STMAV340TTR	Low ON resistance, Quad SPDT, wide BW video switch	5	3	300	TSSOP16
Consumer electronics (video switching)	STMAV335TTR	Low ON resistance, triple SP3T, wide BW video switch	5	3	300	TSSOP16

Application	Part number	Description	V _{CC} [V]	R _{ON} @ 5V (typ) [Ω]	I _{LIMIT} (max) [mA]	Package
Computing / consumer electronics (USB/memory card)	ST2041BDR	Single channel, low R _{ON} current-limiting power distribution switch, active LOW enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST2051BDR	Single channel, low R _{ON} current-limiting power distribution switch, active HIGH enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST2042BDR	Dual channel, low R _{ON} current-limiting power distribution switch, active LOW enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST2052BDR	Dual channel, low R _{ON} current-limiting power distribution switch, active HIGH enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST2044BDR	Quad channel, low R _{ON} current-limiting power distribution switch, active LOW enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST2054BDR	Quad channel, low R _{ON} current-limiting power distribution switch, active HIGH enable	5	110	700	S0-8
Computing / consumer electronics (USB/memory card)	ST890CDR/BDR	Single channel, 1.2A max (adj) current-limiting power distribution switch, active LOW enable	5	75	1.2 x I _{LM} (typ)	S0-8
Computing (expresscard)	STMEC001BTTR	Power switch for express card with 3 channels (3.3V/1.5V/3.3V _{AUX})	3.3/	50/	2500/1300/	HTSSOP24
	STMEC001ATTR		1.5/3.3	66/140	600	TSSOP20

Application	Part number	Description	V _{CC} [V]	N. of Grids/Segment	Key-scan	Interface	Package
Consumer electronics (VFD display)	STM86312	1/4 to 1/11 duty, VFD controller with key-scan	5	6-grid/ 16-segments, 11-grids/ 11-segments	6 x 4	Serial (CLK, STB, DIN, DOUT)	PQFP44
Consumer electronics (VFD display)	STFPC311	Front-panel controller with standby power management and IR decoder	3.3	8-grid/ 20-segments, 16-grids/ 12-segments	12 x 2	Serial (CLK, STB, DIN, DOUT)	PQFP52
Consumer electronics (VFD display)	STFPC320	Front-panel controller with standby power management, IR decoder and integrated Real-Time Clock (RTC)	3.3	8-grid/ 20-segments, 16-grids/ 12-segments	12 x 2	i ² C (SCL, SDA)	PQFP52

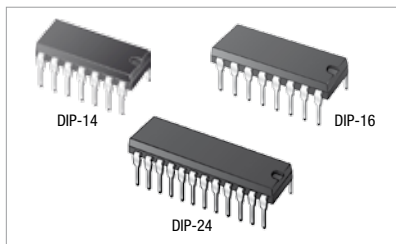
Surface mounting packages



Tape & reel

Packages	Quantity
SO-24,	1,000 pcs
SOT23-6L/8L, SOT323-5L/6L, QFN10, QFN12, QFN16, DFN10, μTFBGA42, Flip-Chip5, Flip-Chip11	3,000 pcs
TSSOP48	2,000 pcs
SO-8/14/16, TSSOP16, TSSOP20, TSSOP24, QFN56, Flip-Chip20	2,500 pcs
SSOP24	1,350 pcs
μTFBGA25	3,500 pcs
DFN6, Flip-Chip7	5,000 pcs

Through-hole packages



Tube

Package	Base quantity	Bulk quantity
DIP-14	25 pcs	1,000 pcs
DIP-16	25 pcs	1,000 pcs
DIP-24	15 pcs	750 pcs

Tray

Package	Base quantity	Bulk quantity
TQFP48	250 pcs	1,500 pcs
PQFP44	96 pcs	576 pcs
PQFP52	96 pcs	576 pcs



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