



# New Product Announcement

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## LOGIC

## Low Voltage CMOS (LVC) Logic Family Adds Octal Functions in TSSOP-20 and QFN-20 Packages

74LVCx is the popular “Low Voltage CMOS” logic family that is widely used in computer and consumer electronics applications.

The inputs are tolerant to 5.5V even when  $V_{cc}$  is 3V allowing the parts to be used in mixed voltage applications.

Devices can be utilized to accept TTL input voltage input levels.

### 13 Popular Functions:

#### Buffers:

240A, 241A, 244A, H244A, 540A, 541A

#### Transceivers:

245A, H245A

#### Latches:

373A, 573A

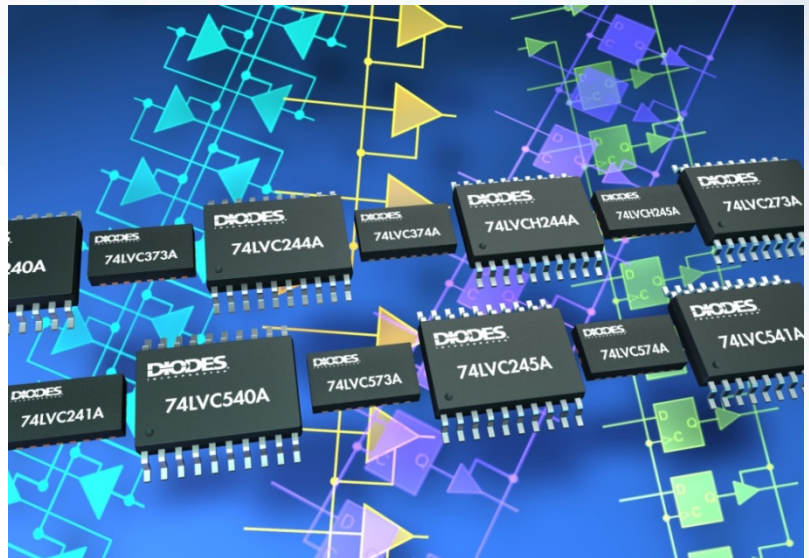
#### Flip Flops:

273A, 374A, 574A

Bushold is implemented on the H244A and H245A defining inputs to a proper level if left floating.

#### Packages:

TSSOP-20  
QFN-20



### The Diodes Advantage

#### Wide Supply Voltage Range

The recommended operating voltage range is  $V_{cc}$  from 1.65 to 3.6 V

#### Ioff Circuit Included

Diodes offers the designer the flexibility of power down isolation for sections of a system. Ioff circuits are not offered by all vendors for LVC products.

#### Direct Replacement and More Available Functions

The LVCxx series offers a direct replacement for the industry standard LVC providing better value and improved availability. Diodes offers more octal functions in QFN than the competition.

### Circuit Features

- $V_{cc} = 1.65$  to 3.6 V
- Power down isolation
- 5.5V tolerant inputs
- $<10\mu A$  Static  $I_{cc}$  at 25 C
- 24 mA drive current at 3.6V
- Suitable for voltage translation



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## 74LVCxxx Octal Cross Reference

Diodes Device	Description	Package	Toshiba	TI	NXP	ON	Fairchild
74LVC240AQ20-13	Octal Buffer/Line Driver with 3 State Outputs	QFN-20			74LVC240ABQ		
74LVC240AT20-13	Octal Buffer/Line Driver with 3 State Outputs	TSSOP-20	TC74LCX240FT	SN74LVC240APWR	74LVC240APW	MC74LCX240DTR2G	74LCX240MTC
74LVC241AQ20-13	Octal Buffer/Line Driver with 3 State Outputs	QFN-20					
74LVC241AT20-13	Octal Buffer/Line Driver with 3 State Outputs	TSSOP-20			74LVC241APW		74LCX241MTC
74LVC244AQ20-13	Octal Buffer/Line Driver with 3 State Outputs	QFN-20			74LVC244ABQ	MC74LCX244MNTWG	74LCX244BQX
74LVC244AT20-13	Octal Buffer/Line Driver with 3 State Outputs	TSSOP-20	TC74LCX244FT	SN74LVC244APWR	74LVC244APW	MC74LCX244DTR2G	74LCX244MTC
74LVC245AQ20-13	Octal Bus Transceivers with 3-state Outputs	QFN-20			74LVC245ABQ	MC74LCX245MNTWG	74LCX245BQX
74LVC245AT20-13	Octal Bus Transceivers with 3-state Outputs	TSSOP-20	TC74LCX245FT	SN74LVC245APWR	74LVC245APW	MC74LCX245DTR2G	74LCX245MTC
74LVC273AQ20-13	Octal D-Type Flip-Flops with Clear	QFN-20			74LVC273BQ		
74LVC273AT20-13	Octal D-Type Flip-Flops with Clear	TSSOP-20	TC74LCX273FT		74LVC273APW		
74LVC373AQ20-13	Octal Transparent D-Type Latches with 3-State Outputs	QFN-20			74LVC373ABQ		74LCX373BQX
74LVC373AT20-13	Octal Transparent D-Type Latches with 3-State Outputs	TSSOP-20	TC74LCX373FT	SN74LVC373APWR	74LVC373APW	MC74LCX373DTR2G	74LCX373MTC
74LVC374AQ20-13	Octal D-Type Flip-Flops with 3 State Outputs	QFN-20			74LVC374ABQ		74LCX374BQX
74LVC374AT20-13	Octal D-Type Flip-Flops with 3 State Outputs	TSSOP-20	TC74LCX374FT	SN74LVC374APWR	74LVC374APW	MC74LCX374DTR2G	74LCX374MTC
74LVC540AQ20-13	Octal Buffers/Line Drivers with 3 State Outputs	QFN-20					74LCX540BQX
74LVC540AT20-13	Octal Buffers/Line Drivers with 3 State Outputs	TSSOP-20	TC74LCX540FT	SN74LVC540APWR		MC74LCX540DTR2G	74LCX540MTC
74LVC541AQ20-13	Octal Buffers/Line Drivers with 3 State Outputs	QFN-20			74LVC541ABQ		74LCX541BQX
74LVC541AT20-13	Octal Buffers/Line Drivers with 3 State Outputs	TSSOP-20	TC74LCX541FT	SN74LVC541APWR	74LVC541APW	MC74LCX541DTR2G	74LCX541MTC
74LVC573AQ20-13	Octal Transparent D-Type Latches with 3-State Outputs	QFN-20			74LVC573ABQ		74LCX573BQX
74LVC573AT20-13	Octal Transparent D-Type Latches with 3-State Outputs	TSSOP-20	TC74LCX573FT	SN74LVC573APWR	74LVC573APW	MC74LCX573DTR2G	74LCX573MTC
74LVC574AQ20-13	Octal D-Type Flip-Flops with 3 State Outputs	QFN-20			74LVC574ABQ		74LCX574BQX
74LVC574AT20-13	Octal D-Type Flip-Flops with 3 State Outputs	TSSOP-20	TC74LCX574FT	SN74LVC574APWR	74LVC574APW	MC74LCX574DTR2G	74LCX574MTC
74LVCH244AQ20-13	Octal Buffers/Line Drivers with Bus Hold / 3 State Output	QFN-20			74LVCH244ABQ		
74LVCH244AT20-13	Octal Buffers/Line Drivers with Bus Hold / 3 State Output	TSSOP-20		SN74LVCH244APWR	74LVCH244APW		
74LVCH245AQ20-13	Octal Bus Transceivers with Bus Hold / 3 State Outputs	QFN-20			74LVCH245ABQ		
74LVCH245AT20-13	Octal Bus Transceivers with Bus Hold / 3 State Outputs	TSSOP-20	TC74LCX245FT	SN74LVCH245APWR	74LVCH245APW		

### Features

- Supply Voltage Range from 1.65V to 3.6V
- Sinks or sources 24ma at Vcc = 3V
- I<sub>OFF</sub> Supports Partial -Power Down Operation
- Inputs or Outputs accept up to 5.5V
- Inputs can be driven by 3.3V or up to 5.5V allowing for mixed voltage applications.
- Schmitt Trigger Action at All Inputs
- Typical V<sub>OLP</sub> (Quiet Output Ground Bounce) less than 0.8V with V<sub>CC</sub>=3.3V and T<sub>A</sub>=25C
- Typical V<sub>OHV</sub> (Quiet Output dynamic VOH) greater than 2.0V with V<sub>CC</sub>=3.3V and T<sub>A</sub>=25C
- ESD Protection Tested per JESD 22
  - Exceeds 200-V Machine Model (A115)
  - Exceeds 2000-V Human Body Model (A114)
  - Exceeds 1000-V Charged Device Model (C101)
- Latch-Up Exceeds 250mA per JESD 78, Class I
- All devices are:

Totally Lead-Free & Fully RoHS compliant (Notes 1 & 2)  
Halogen and Antimony Free. "Green" Device (Note 3)

### Applications

- General Purpose Logic
- Bus Driving
- Power Down Signal Isolation
- Wide array of products such as:
  - PCs, notebooks, netbooks, ultrabooks
  - Networking Computer peripherals, hard drives, CD/DVD ROM, TV, DVD, DVR, set top box

### Ordering Information

Device	Package	Reel size	Tape Width	Quantity
74LVCxxxxT20-13	TSSOP-20	13"	12mm	2500
74LVCxxxxQ20-13	QFN-20	13"	12mm	2500

- Notes:
- No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
  - See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen and Antimony free, "Green" and Lead-Free.
  - Halogen and Antimony free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds