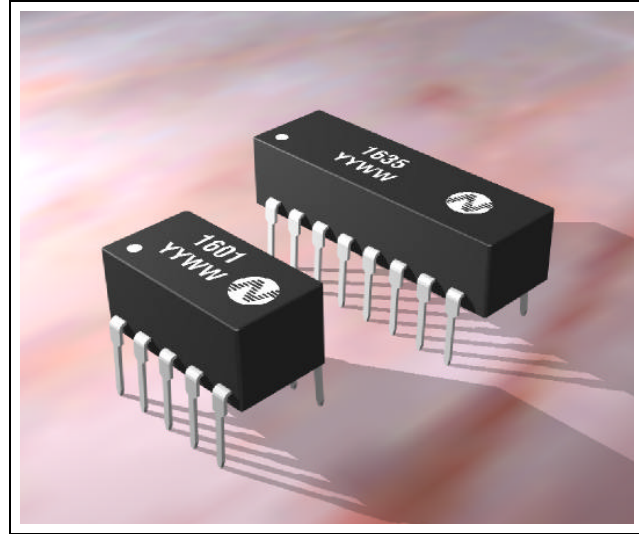


### features

- Logic Translation
- Bi-Directional
- Invert / Non-Invert
- TTL-CMOS Convert
- 3V-5V convert
- Toroidal construction
- Low Profile
- Dual or Quad packs
- 700VDC Isolation

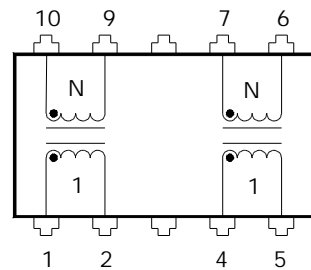


### description

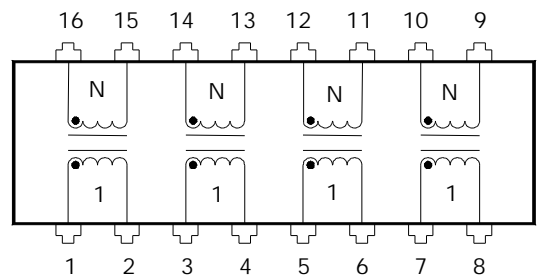
The 1600 series are dual or quad isolation transformer packs for use in digital circuits. They are particularly suited to isolating microprocessor bus connections and performing logic level translation. Being completely passive, power savings are offered over opto-coupled or emitter follower solutions.

### pin connections

10 Pin DIL (top view)



16 Pin DIL (top view)



# 1600 SERIES

## Dual and Quad Data-bus Isolators

### absolute maximum ratings over operating free air temperature range

Operating free air temperature range . . . . .	0°C to 70°C
Storage temperature range . . . . .	-40°C to 125°C
Lead Temperature 1.5mm from case for 10 seconds . . . . .	300°C
Isolation voltage (flash tested for 1 second) . . . . .	700VDC
Insulation resistance at 500VDC . . . . .	>10GΩ

### electrical specifications over operating free air temperature range

Parameter	Test Conditions	Part Number								Units
		1600	1601	1620	1621	1630	1631	1635	1636	
Turns Ratio		1:1		1:2		1:3		1:1.5		
Primary Inductance (typ.)	10kHz, 250mV	3.00		1.50		1.00		2.00		mH
Interwinding Capacity (typ.)	100kHz	60		45		34		40		pF

Note : All data taken at T<sub>A</sub> = 25°C.

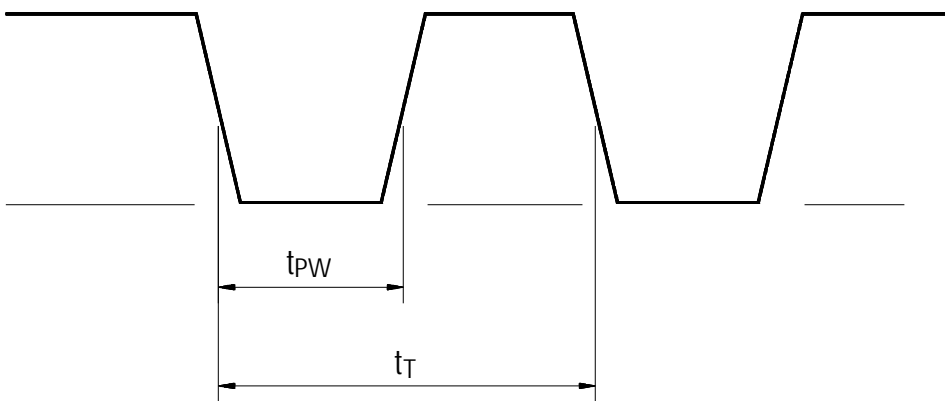
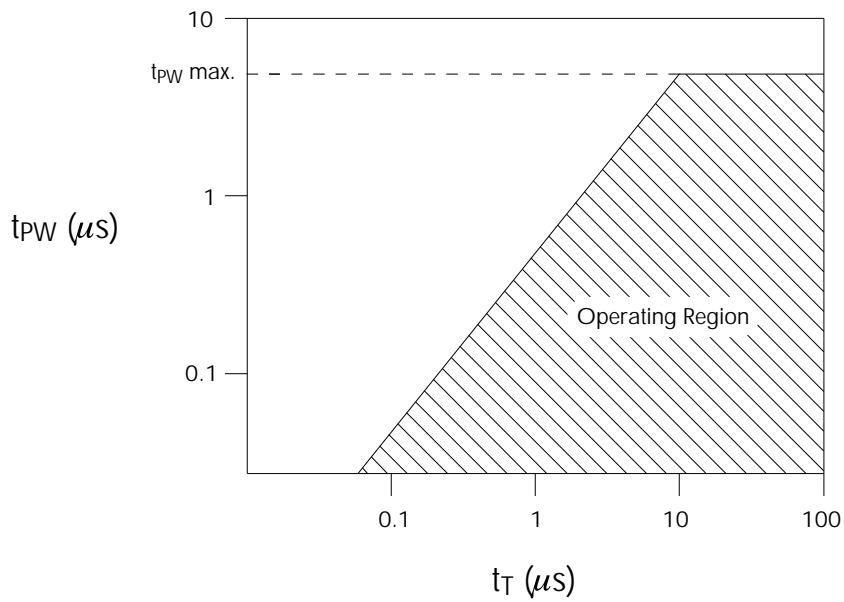
### switching characteristics, 5V logic

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Propagation delay, t <sub>PD</sub>	LSTTL Buffer drive			5.0	ns
Low-level pulse width <sup>1</sup> , t <sub>LPW</sub>	Other terminal to V <sub>CC</sub>			5.0	μs
High-level pulse width <sup>1</sup> , t <sub>HPW</sub>	Other terminal to GND			5.0	μs

Note : All data taken at T<sub>A</sub> = 25°C.

1.The maximum pulse width limit to be applied to the repetition curve.

### repetition rate versus pulse width curve

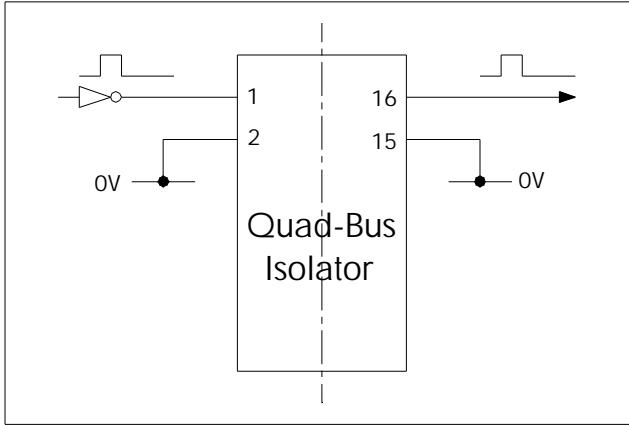


# 1600 SERIES

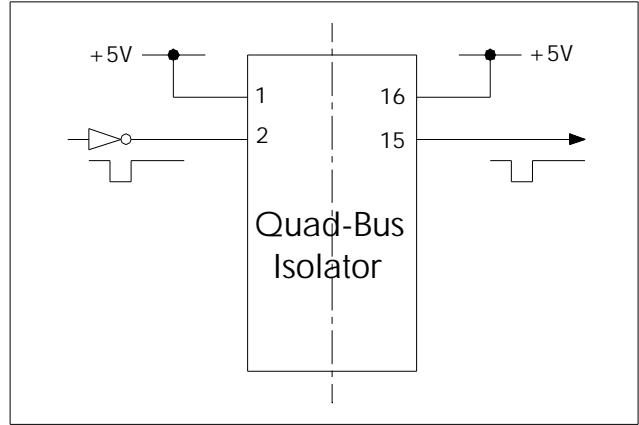
## Dual and Quad Data-bus Isolators

**applications** - LSTTL recommended as drive buffers

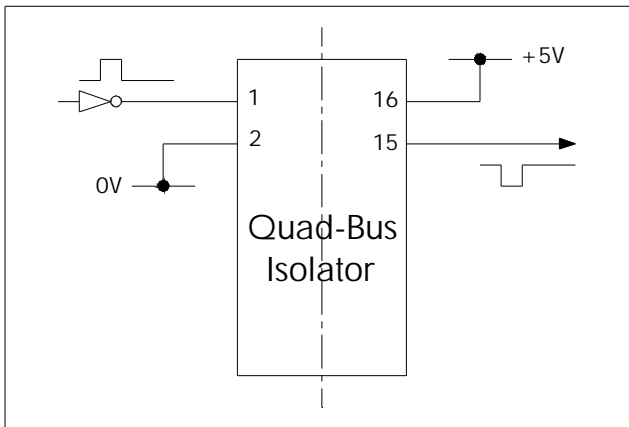
non-inverted positive going pulse



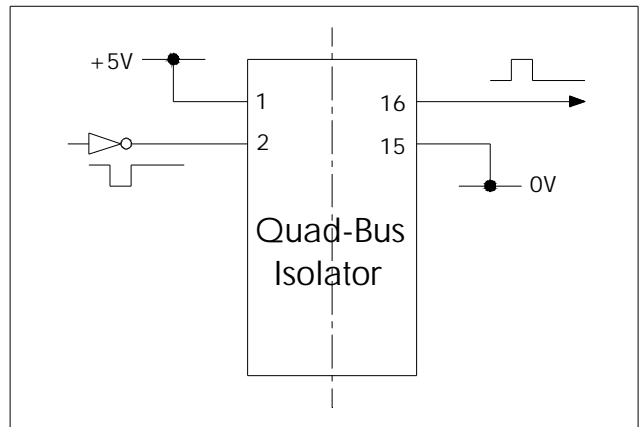
non-inverted negative going pulse



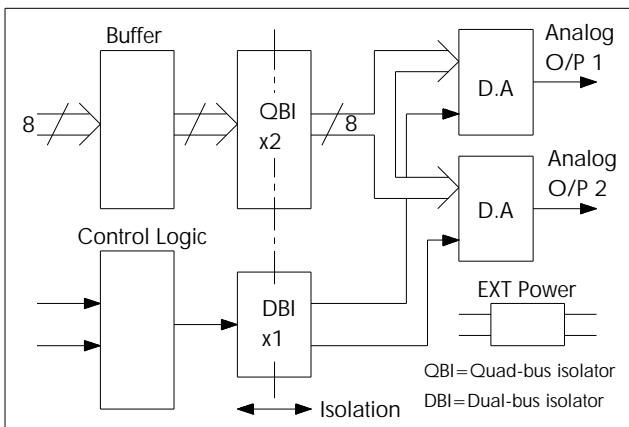
inverted positive going pulse



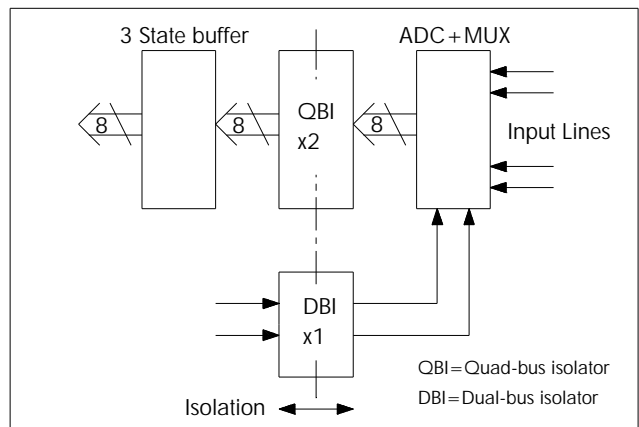
inverted negative going pulse



isolated digital-analog outputs



isolated analog-digital inputs



### ordering information

Part Number	Type	Function	Pulse Width max. ( $\mu$ s)	Package Style
1600	Quad Isolator	5V to 5V Logic Isolation	5.0	2
1601	Dual Isolator			1
1620	Quad Isolator	5V to 10V Logic Isolation	3.4	2
1621	Dual Isolator			1
1630	Quad Isolator	5V to 15V Logic Isolation	2.6	2
1631	Dual Isolator			1
1635	Quad Isolator	3.3V to 5V Logic Isolation	5.0	2
1636	Dual Isolator			1

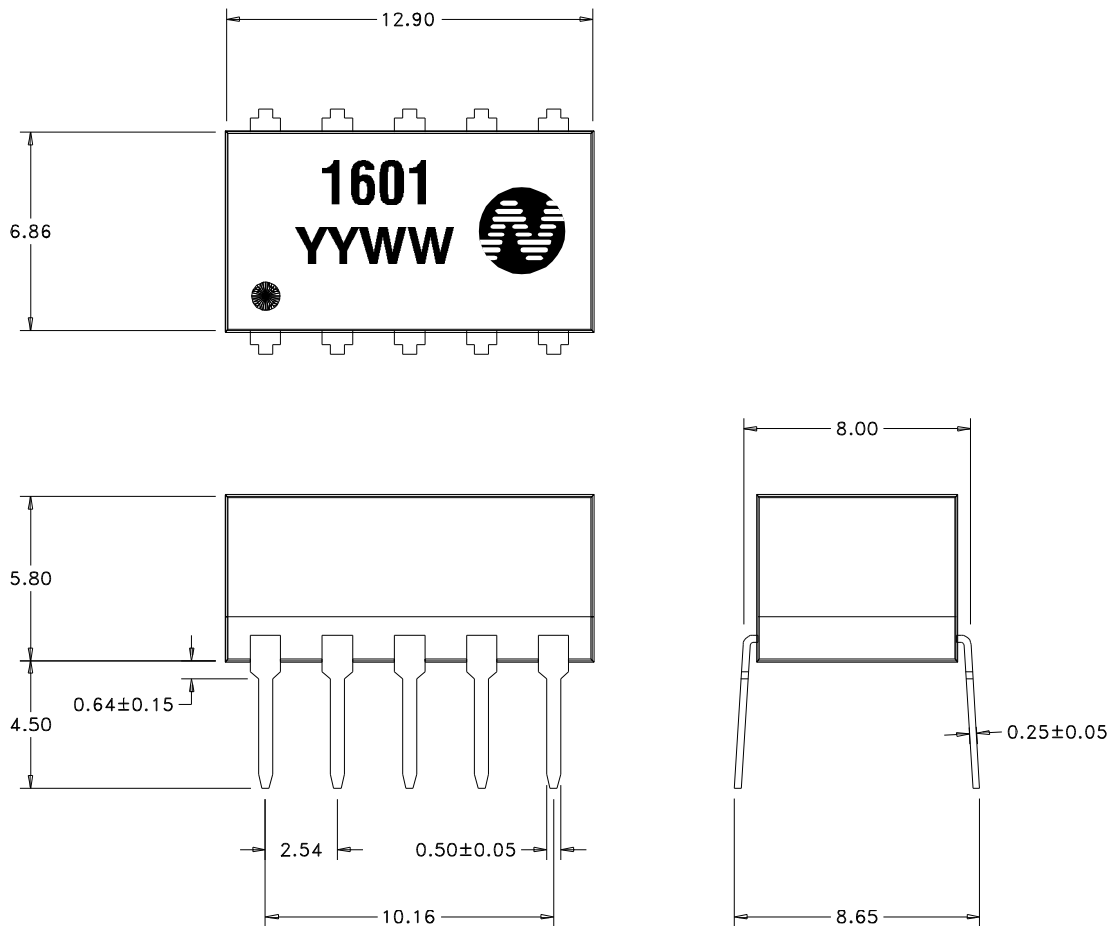
# 1600 SERIES

## Dual and Quad Data-bus Isolators

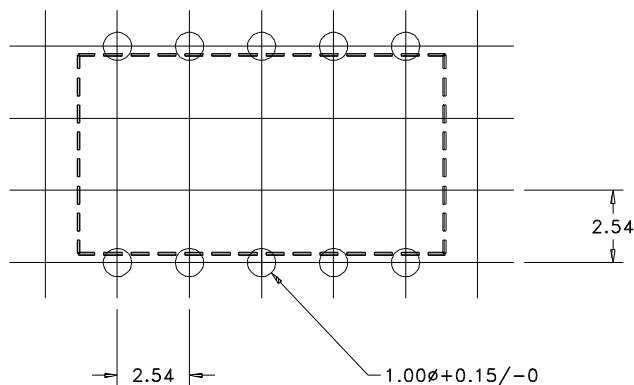
### outline dimensions

10 Pin DIL package style

1



### recommended footprint details



Dot denotes pin 1

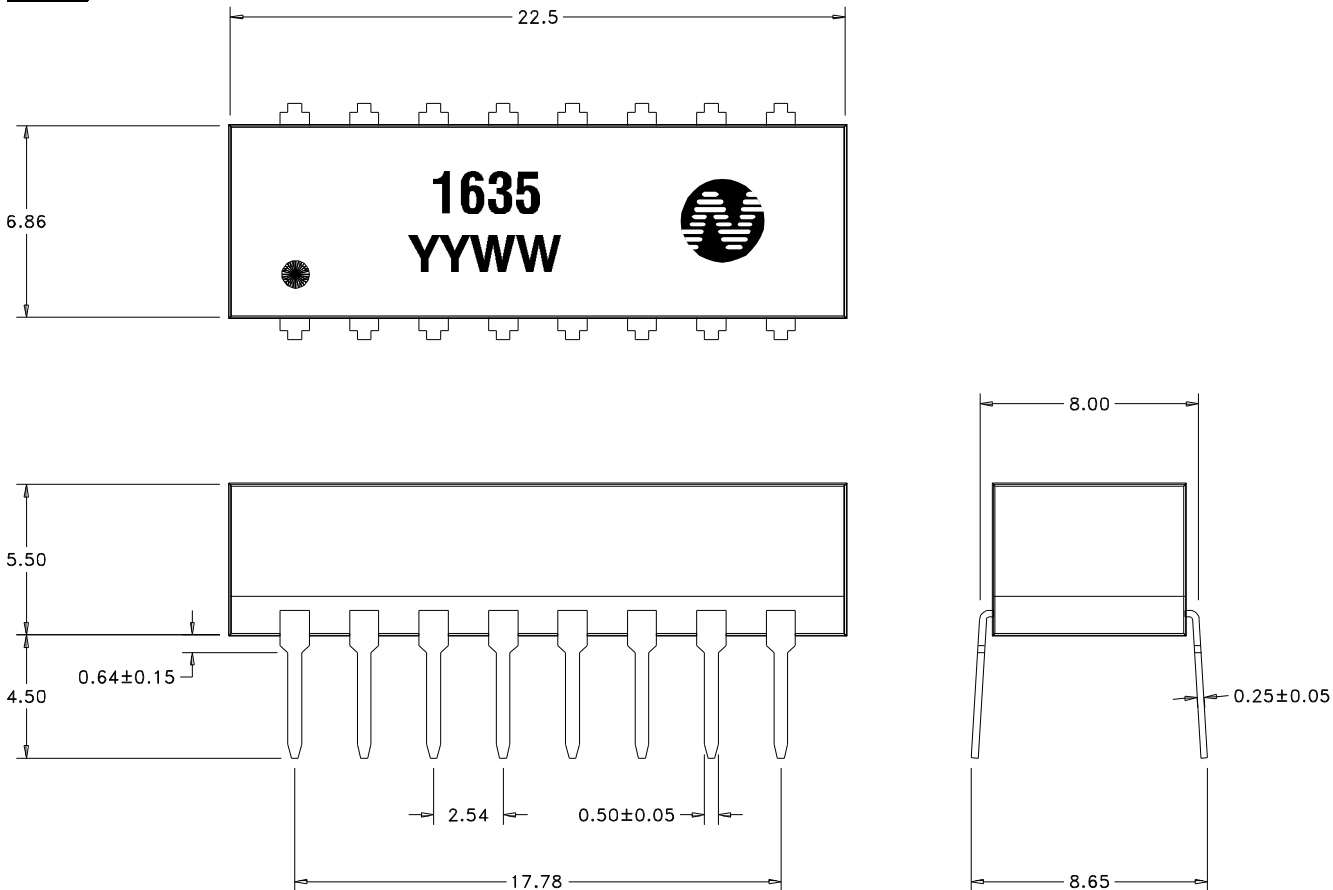
All pins on a 2.54mm pitch

All dimensions in mm XX.XX ±0.50, XX.XX ±0.25

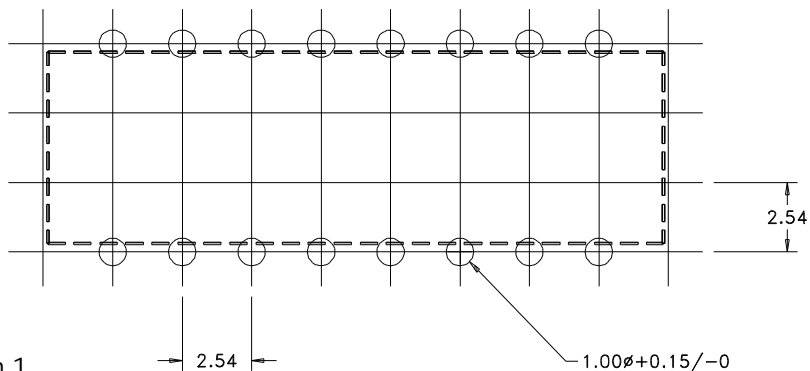
### outline dimensions

16 Pin DIL package style

**2**



### recommended footprint details



Dot denotes pin 1

All pins on a 2.54mm pitch

All dimensions in mm XX.X ± 0.50, XX.XX ± 0.25