

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.

SELECTION GUIDE

| Order Code | Type | Function | Pulse Width (max) uS | Turns Ratio | Primary Inductance (typ) 10kHz, 250mV mH | Interwinding Capacitance (typ) 100kHz pF | Package Style |
|-------------|---------------|----------------------------|-------------------------|-------------|--|--|---------------|
| 1600 | Quad Isolator | 5V to 5V Logic Isolation | 5 | 1:1 | 3 | 60 | 2 |
| 1601 | Dual Isolator | 5V to 5V Logic Isolation | 5 | 1:1 | 3 | 60 | 1 |
| 1620 | Quad Isolator | 5V to 10V Logic Isolation | 3.4 | 1:2 | 1.5 | 45 | 2 |
| 1621 | Dual Isolator | 5V to 10V Logic Isolation | 3.4 | 1:2 | 1.5 | 45 | 1 |
| 1630 | Quad Isolator | 5V to 15V Logic Isolation | 2.6 | 1:3 | 1 | 34 | 2 |
| 1631 | Dual Isolator | 5V to 15V Logic Isolation | 2.6 | 1:3 | 1 | 34 | 1 |
| 1635 | Quad Isolator | 3.3V to 5V Logic Isolation | 5 | 1:1.5 | 2 | 40 | 2 |
| 1636 | Dual Isolator | 3.3V to 5V Logic Isolation | 5 | 1:1.5 | 2 | 40 | 1 |

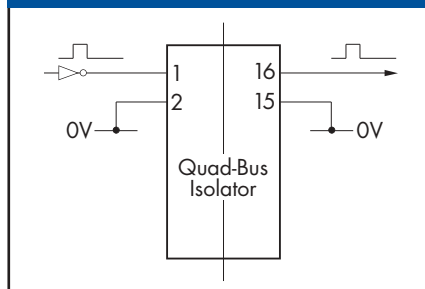
SWITCHING CHARACTERISTICS, 5V LOGIC

| Parameter | Conditions | MAX | Units |
|---|-----------------------|-----|-------|
| Propagation delay, t_{PD} | LSTTL Buffer drive | 5.0 | ns |
| Low-level pulse width ¹ , t_{LPW} | Other terminal to VCC | 5.0 | µs |
| High-level pulse width ¹ , t_{HPW} | Other terminal to GND | 5.0 | µs |

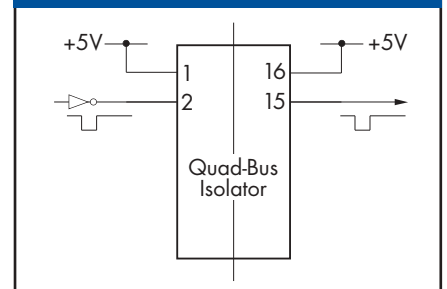
ABSOLUTE MAXIMUM RATINGS

| | |
|---|----------------|
| 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 |

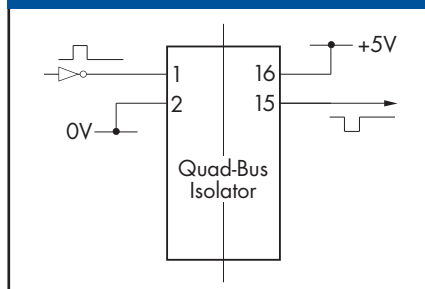
NON-INVERTED +VE GOING PULSE



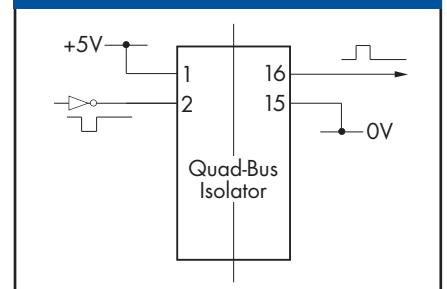
NON-INVERTED -VE GOING PULSE



INVERTED +VE GOING PULSE



INVERTED -VE GOING PULSE

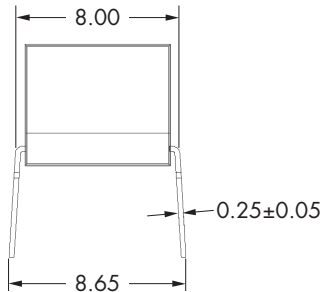
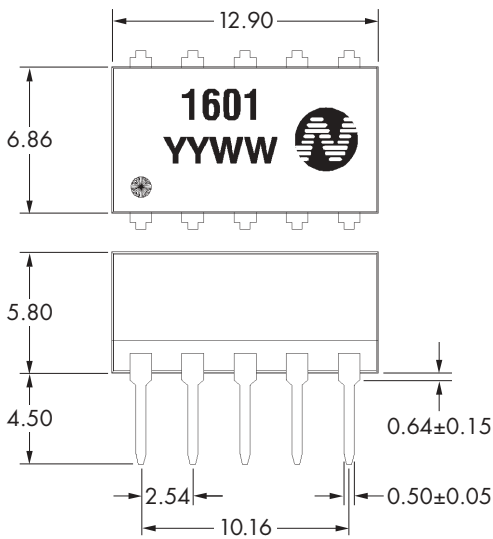


¹ The maximum pulse width limit to be applied to the repetition curve. All specifications typical at $T_A = 25^\circ\text{C}$

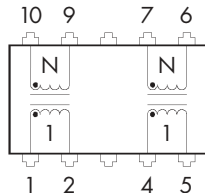
1600 SERIES

Dual and Quad Data-bus Isolators

MECHANICAL DIMENSIONS (PACKAGE STYLE 1)

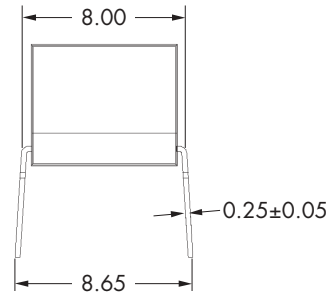
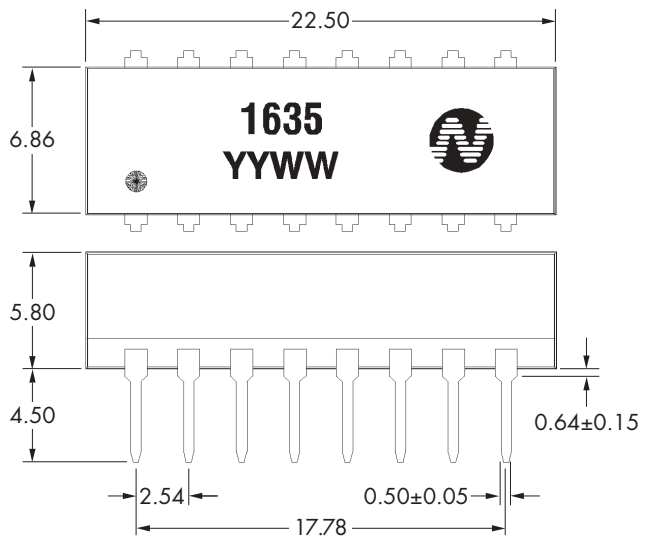


10 PIN DIL (TOP VIEW)

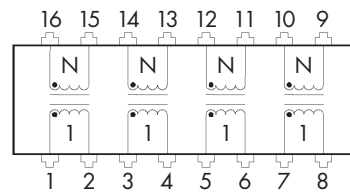


All dimensions in mm (±0.25mm unless otherwise stated)

MECHANICAL DIMENSIONS (PACKAGE STYLE 2)

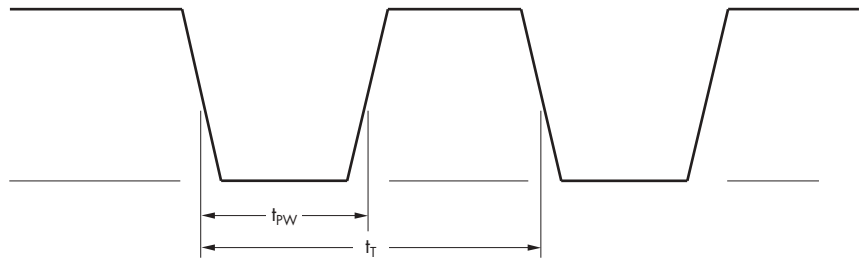
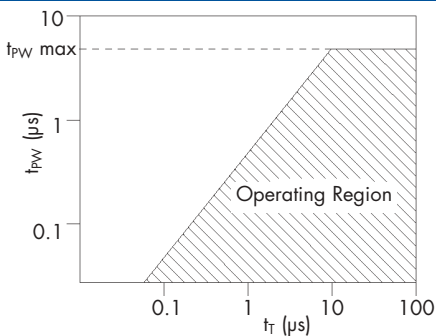


16 PIN DIL (TOP VIEW)



All dimensions in mm (±0.25mm unless otherwise stated)

REPETITION RATE VERSUS PULSE WIDTH CURVE



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