

TLP706F

Intelligent power module signal isolation

Industrial inverters

Motor drive

The Toshiba TLP706F consists of a GaAlAs light-emitting diode and an integrated high-gain, high-speed photodetector. The TLP706F is suitable for isolating input control signals to intelligent power modules. This unit is a 6-pin SDIP. The TLP706F is 50% smaller than the 8-PIN DIP and meets the reinforced insulation class requirements of international safety standards. Therefore the mounting area can be reduced in equipment requiring safety standard certification.

The detector has a totem pole output stage to provide both source and sink driving. The detector IC has an internal shield that provides a guaranteed common-mode transient immunity of 10 kV/ μ s.

The TLP706F is buffer logic type. For inverter logic type, the TLP702F is in line-up.

Absolute Maximum ratings and electrical characteristics are the same as The TLP706 technical data sheets.

- Buffer logic type (totem pole output)
- Pb Free
- Guaranteed performance over temperature : -40~100°C
- Power supply voltage : 4.5~20 V
- Input current: $I_{FHL} = 5$ mA (max.)
- Switching time (t_{PLH} / t_{PHL}) : 600 ns (max.)
- Common-mode transient immunity : ± 10 kV/ μ s (min)
- Isolation voltage : 5000 Vrms (min)
- UL Recognized : UL1577, File No.E67349
- Option (D4)
TÜV Approved : DIN EN60747-5-2

No.R50033433

Maximum Operating Insulation Voltage : 1140V_{PK}

Highest Permissible Over Voltage : 8000V_{PK}

(Note) : When a EN60747-5-2 approved type is needed,

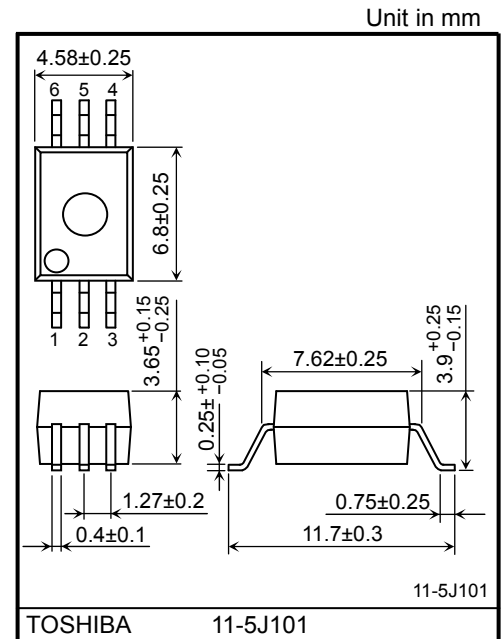
Please designate "Option(D4)"

- Construction Mechanical Rating

| | |
|----------------------|--------------|
| Creepage Distance | 8.0 mm (min) |
| Clearance | 8.0 mm (min) |
| Insulation Thickness | 0.4 mm (min) |

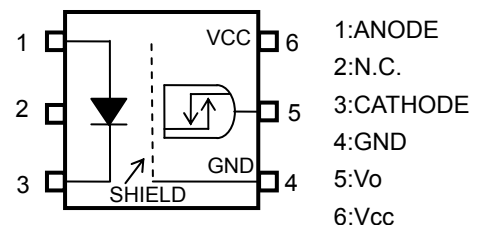
Truth Table

| Input | LED | Tr1 | Tr2 | Output |
|-------|-----|-----|-----|--------|
| H | ON | ON | OFF | H |
| L | OFF | OFF | ON | L |

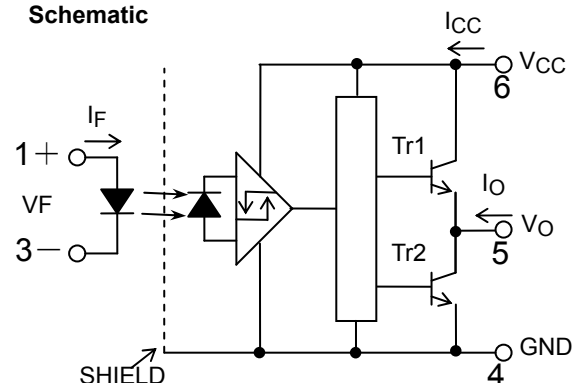


Weight: 0.26 g (typ.)

Pin Configuration (Top View)



Schematic



0.1 μ F bypass capacitor must be connected between pins 6 and 4. (Note 4)

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20070701-EN

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