

TOSHIBA Photocoupler Photorelay

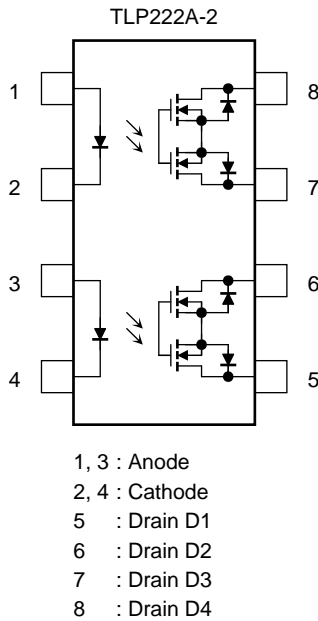
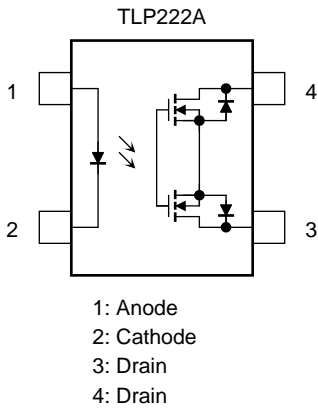
TLP222A, TLP222A-2

Telecommunications
 Measurement and Control Equipment
 Data Acquisition System
 Measurement Equipment

The Toshiba TLP222A and TLP222A-2 consist of a gallium arsenide infrared emitting diode optically coupled to a photo-MOSFET in a DIP package whose withstanding voltage is 60 V. These photorelays have higher output current rating than phototransistor-type photocoupler; hence, they are suitable for use as On/Off control for high current.

- x Normally open (1-form-A and 2-form-A) devices
- x Peak off-state voltage: 60 V (min)
- x Trigger LED current: 3 mA (max)
- x On-state current: 500 mA (max)
- x On-state resistance: 2 Ω (max)
- x Isolation voltage: 2500 Vrms (min)
- x UL recognized: UL1557, File No.E67349

Pin Configuration (top view)



TOSHIBA 11-5B2	
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Weight: 0.26 g (typ.)

TLP222A-2	
JEDEC	
JEITA	
TOSHIBA 11-10C4	

Weight: 0.54 g (typ.)

Coupled Electrical Characteristics (Ta 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Trigger LED current	I_{FT}	I_{ON} 500 mA	•	1.6	3	mA
Return LED current	I_{FC}	I_{OFF} 100 PA	0.1	•	•	mA
On-state resistance	R_{ON}	I_{ON} 500 mA, I_F 5 mA	•	1	2	:

Isolation Characteristics (Ta 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Capacitance input to output	C_S	V_S 0 V, f 1 MHz	•	0.8	•	pF
Isolation resistance	R_S	V_S 500 V, R.H. 60%	$5 \mu 10^{10}$	10^{14}	•	:
Isolation voltage	BV_S	AC, 1 min	2500	•	•	Vrms
		AC, 1 s, in oil	•	5000	•	
		DC, 1 min, in oil	•	5000	•	Vdc

Switching Characteristics (Ta 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Turn-on time	t_{ON}	R_L 200 : V_{DD} 20 V, I_F 5 mA (Note 2)	•	0.8	2	ms
Turn-off time	t_{OFF}		•	0.1	0.5	

Note 2: Switching time test circuit

