TOSHIBA Photocoupler GaAs Ired & Photo-Triac

TLP763J

Office Machine Household Use Equipment Triac Driver Solid State Relay

The TOSHIBA TLP763J consists of a GaAs infrared LED optically coupled to a zero voltage crossing turn-on photo-triac in a 6 lead plastic DIP.

- Peak off-state voltage: 600 V (min)
- Trigger LED current: 10 mA (max)
- On-state current: 100 mA (max)
- Isolation voltage: 4000 Vrms (min)
- UL recognized: UL1577, file No. E67349
- BSI approved: BS EN60065: 2002,

Certificate No. 8945 BS EN60950-1: 2002,

Certificate No. 8946

• SEMKO approved: SS EN60065 (EN60065, 1993)

SS EN60950 (EN60950, 1992) SS EN60335 (EN60335, 1988) Certificate No. 9522145

• Option (D4) type

VDE approved: DIN EN 60747-5-2

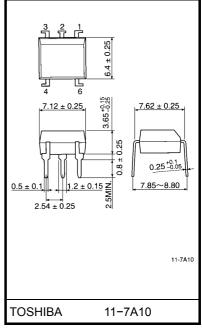
Certificate No. 40009373

 $\label{eq:maximum operating insulation voltage $$:890 \ V_{Pk}$ \\ Highest permissible over voltage $$:6000 \ V_{Pk}$ \\$

(Note) When an EN60747-5-2 approved type is needed, please designate the "option (D4)".

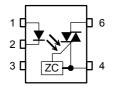
		7.62mm pitch	10.16mm pitch
		TLP763J type	TLP763JF type
•	Creepage distance	7.0mm (min)	8.0mm (min)
	Clearance	: 7.0mm (min)	8.0mm (min)
	Internal creepage path	: 4.0mm (min)	4.0mm (min)
	Insulation thickness	: 0.5mm (min)	0.5mm (min)





Weight: 0.42g (typ.)

Pin configuration (top view)



- 1: Anode
- 2 : Cathode
- 3: N.C.
- 4 : Terminal 1
- 6 : Terminal 2

Absolute Maximum Ratings (Ta = 25°C)

Characteristic			Symbol	Rating	Unit	
	Forward current	lF	50	mA		
	Forward current derating (Ta ≥ 53	°C)	ΔI _F /°C	-0.7	mA/°C	
LED	Peak forward current (100 µs pulse, 100 pps)		I _{FP}	1	Α	
	Reverse voltage		V_{R}	5	V	
	Junction temperature		Tj	125	°C	
	Off-state output terminal voltage		V_{DRM}	600	V	
	On-state RMS current	Ta = 25°C		100	- mA	
_		Ta = 70°C	I _{T(RMS)}	50	IIIA	
Detector	On–state current derating (Ta ≥ 25°C)		ΔI _T /°C	-1.1	mA/°C	
Det	Peak on-state current (100µs puls	I _{TP}	2	Α		
	Peak non-repetitive surge current (PW = 10 ms)		I _{TSM}	1.2	А	
	Junction temperature	Tj	115	°C		
Storage temperature range			T _{stg}	-55 to 125	°C	
Operating temperature range			T _{opr}	-40 to 100	°C	
Lead soldering temperature (10s)			T _{sol}	260	°C	
Isolation voltage (AC, 1 minute, R.H.≤ 60%)			BVS	4000	Vrms	

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

Recommended Operating Conditions

Characteristic	Symbol	Min	Тур.	Max	Unit
Supply voltage	V _{AC}	_	_	240	V _{ac}
Forward current	lF	15	20	25	mA
Peak on-state current	I _{TP}	_	_	1	Α
Operating temperature	T _{opr}	-25	_	85	°C

Note: Recommended operating conditions are given as a design guideline to obtain expected performance of the device. Additionally, each item is an independent guideline respectively. In developing designs using this product, please confirm specified characteristics shown in this document.

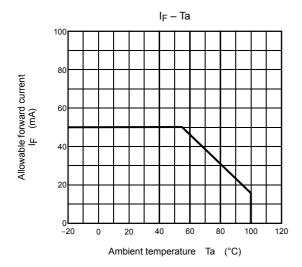
Electrical Characteristics (Ta = 25°C)

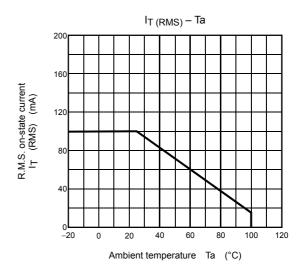
	Characteristic	Symbol	Test Condition	Min	Тур.	Max	Unit
	Forward voltage	V _F	I _F = 10 mA	1.0	1.15	1.3	V
LED	Reverse current	I _R	V _R = 5 V	_	_	10	μA
	Capacitance	C _T	V _F = 0, f = 1 MHz	_	30	_	pF
	Peak off-state current	I _{DRM}	V _{DRM} = 600 V	_	10	1000	nA
	Peak on-state voltage	V_{TM}	I _{TM} = 100 mA	_	1.7	3.0	V
ctor	Holding current	lΗ	_	_	0.6	_	mA
Detector	Critical rate of rise of off–state voltage	dv / dt	Vin = 240 V, Ta = 85°C	_	500	_	V/µs
	Critical rate of rise of commutating voltage	dv / dt (c)	Vin = 60Vrms , I _T = 15 mA	_	0.2	_	V/µs

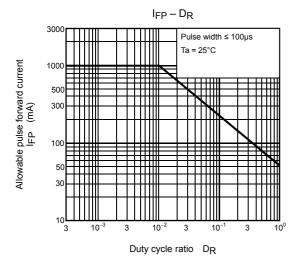
Coupled Electrical Characteristics (Ta = 25°C)

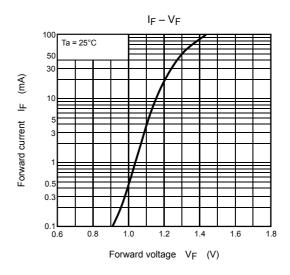
Characteristic	Symbol	Test Condition	Min	Тур.	Max	Unit
Trigger LED current	I _{FT}	V _T = 6 V	_	_	10	mA
Inhibit voltage	V _{IH}	I _F = rated I _{FT}	_	_	50	V
Leakage in inhibited state	lін	I _F = rated I _{FT} V _T = Rated V _{DRM}	_	200	600	μΑ
Capacitance (input to output)	CS	V _S = 0, f = 1 MHz	_	0.8	_	pF
Isolation resistance	R _S	V _S = 500 V	1×10 ¹²	10 ¹⁴	_	Ω
	BVS	AC, 1 minute	4000	_	_	Vrms
Isolation voltage		AC, 1 second, in oil	_	10000	_	
		DC, 1 minute, in oil	_	10000	_	V _{dc}

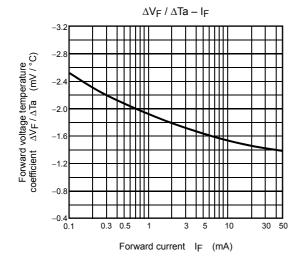
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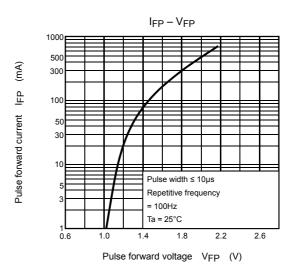












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