TOSHIBA PHOTOCOUPLER GaAs IRED & PHOTO-TRIAC

TLP3064

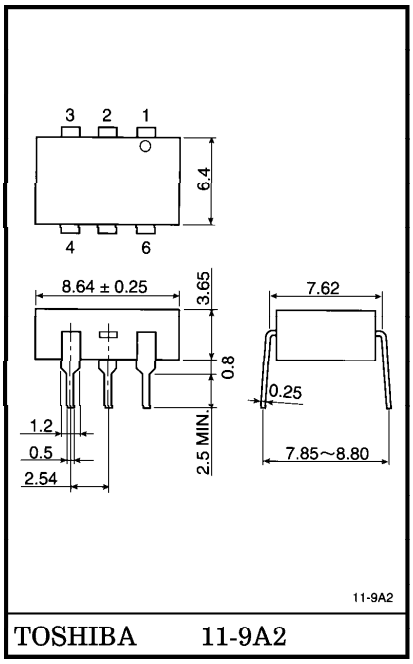
OFFICE MACHINE

HOUSEHOLD USE EQUIPMENT

TRIAC DRIVER

SOLID STATE RELAY

Unit in mm



TOSHIBA 11-9A2

Weight : 0.44g

The TOSHIBA TLP3064 consists of a zero voltage crossing turn-on photo-triac optically coupled to a GaAℓAs infrared emitting diode in a six lead plastic DIP package.

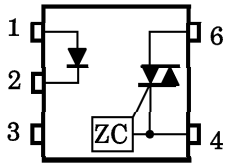
- Peak Off-State Voltage : 600V (Min.)
- Trigger LED Current : 3mA (Max.)
- On-State Current : 100mA (Max.)
- Isolation Voltage : 5000Vrms (Min.)
- UL Recognized : UL1577, File No. E67349
- Option (D4) type
  VDE Approved : DIN VDE0884 / 06.92,
  Certificate No. 83649

  Maximum Operating Insulation Voltage : $890V_{PK}$
  Highest Permissible Over Voltage : $8000V_{PK}$

(Note) When a VDE0884 approved type is needed, please designate the "Option (D4)"

	7.62mm pich standard type	10.16mm pich (LF2) type
Creepage Distance	7.0mm (Min.)	8.0mm (Min.)
Clearance	7.0mm (Min.)	8.0mm (Min.)
Insulation Thickness	0.5mm (Min.)	0.5mm (Min.)

PIN CONFIGURATIONS (TOP VIEW)



1: ANODE
2: CATHODE
3: N.C.
4: TERMINAL 1
6: TERMINAL 2

(ZC : Zero-cross Circuit)

961001EBC2

MAXIMUM RATINGS (Ta = 25°C)

	CHARACTERISTIC		SYMBOL	RATING	UNIT
LED	Forward Current		I_F	30	mA
	Forward Current Derating (Ta≧25°C)		ΔI_F / °C	−0.3	mA / °C
	Peak Forward Current (100μs pulse, 100pps)		I_{FP}	1	A
	Reverse Voltage		V_R	5	V
	Junction Temperature		T_j	125	°C
DETECTOR	Off-State Output Terminal Voltage		V_{DRM}	600	V
	On-State RMS Current	Ta = 25°C	$I_{T(RMS)}$	100	mA
		Ta = 70°C		50	
	On-State Current Derating (Ta≧25°C)		ΔI_T / °C	−1.1	mA / °C
	Peak On-State Current (100μs pulse, 120pps)		I_{TP}	2	A
	Peak Nonrepetitive Surge Current (P_W = 10ms, DC = 10%)		I_{TSM}	1.2	A
	Junction Temperature		T_j	115	°C
Storage Temperature Range			T_{stg}	−55~150	°C
Operating Temperature Range			T_{opr}	−40~100	°C
Lead Soldering Temperature (10s)			T_{sol}	260	°C
Isolation Voltage (AC, 1min., R.H.≦60%) (Note 1)			BV_S	5000	Vrms

(Note 1) Device considered a two terminal device = Pins 1, 2 and 3 shorted together and pins 4 and 6 shorted together.

RECOMMENDED OPERATING CONDITIONS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	V_{AC}	—	—	240	Vac
Forward Current	I_F	4.5	6	7.5	mA
Peak On-State Current	I_{TP}	—	—	1	A
Operating Temperature	T_{opr}	−10	—	85	°C

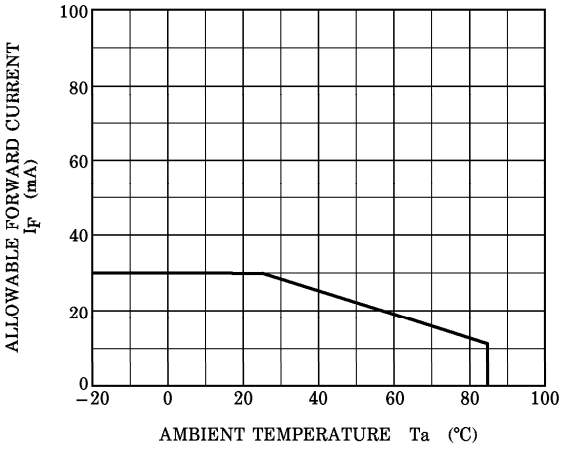
INDIVIDUAL ELECTRICAL CHARACTERISTICS (Ta = 25°C)

	CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
LED	Forward Voltage	V_F	I_F = 10mA	1.2	1.4	1.7	V
	Reverse Current	I_R	V_R = 3V	—	—	10	μA
	Capacitance	C_T	V = 0, f = 1MHz	—	30	—	pF
DETCETOR	Peak Off-State Current	I_{DRM}	V_{DRM} = 600V	—	10	1000	nA
	Peak On-State Voltage	V_{TM}	I_{TM} = 100mA	—	—	3.0	V
	Holding Current	I_H	—	—	0.6	—	mA
	Critical Rate of Rise of Off-State Voltage	dv / dt	V_{in} = 240rms Ta = 85°C	200	500	—	V / μs
	Critical Rate of Rise of Commutating Voltage	dv / dt (c)	V_{in} = 60Vrms I_T = 15mArms	—	0.2	—	V / μs

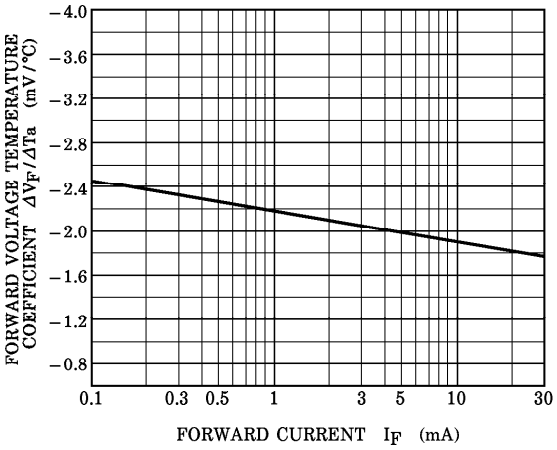
COUPLED ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Trigger LED Current	I_{FT}	V_T = 6V, Resistive Load	—	—	3	mA
Inhibit Voltage	V_{IH}	I_F = Rated I_{FT}	—	—	50	V
Leakage in Inhibited State	I_{IH}	I_F = Rated I_{FT} V_T = Rated V_{DRM}	—	—	600	μA
Capacitance Input to Output	C_S	V_S = 0, f = 1MHz	—	0.8	—	pF
Isolation Resistance	R_S	V_S = 500V, R.H. ≦ 60%	1×10^{12}	10^{14}	—	Ω
Isolation Voltage	BV_S	AC, 1 minute	5000	—	—	Vrms
		AC, 1 second, in oil	—	10000	—	
		DC, 1 minute, in oil	—	10000	—	Vdc

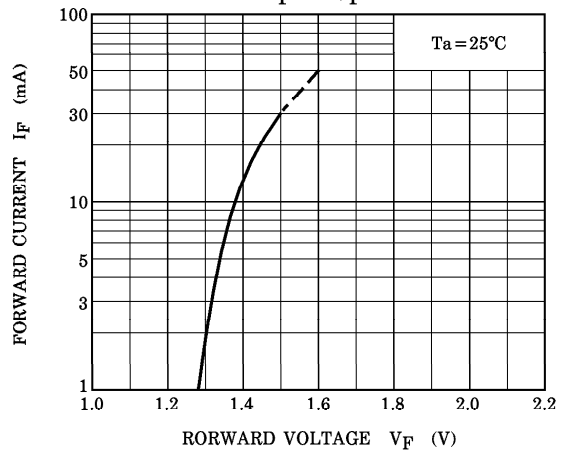
I_F – Ta



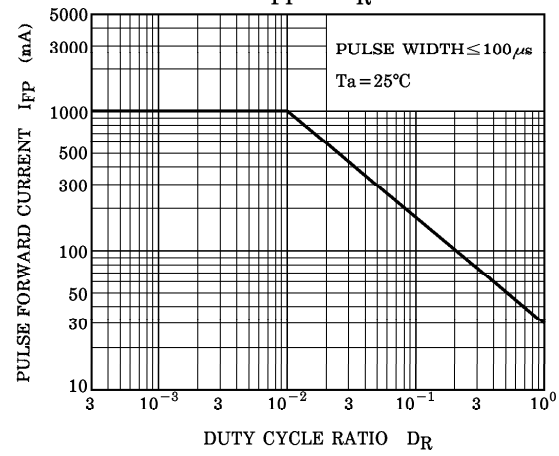
$\Delta V_F / \Delta Ta$ – I_F



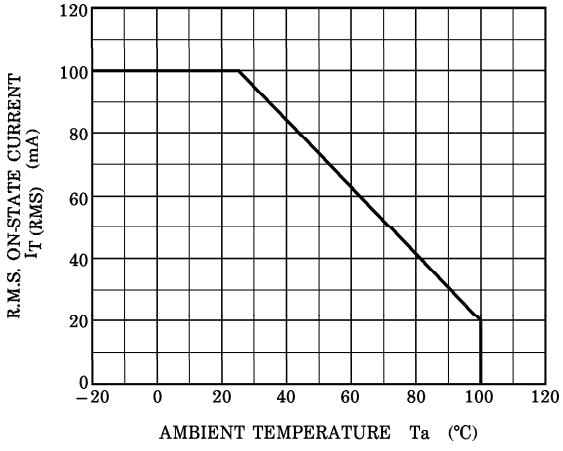
I_F – V_F



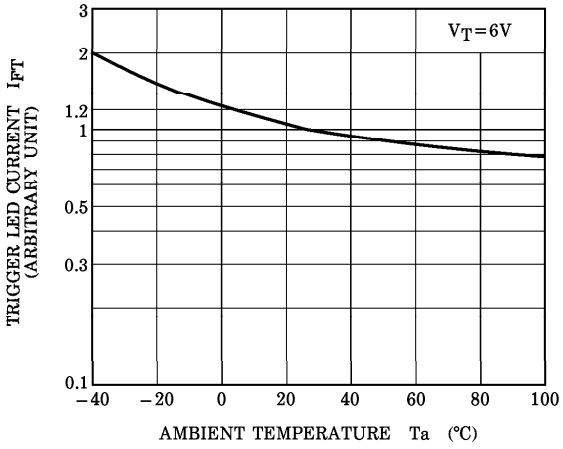
I_{FP} – D_R



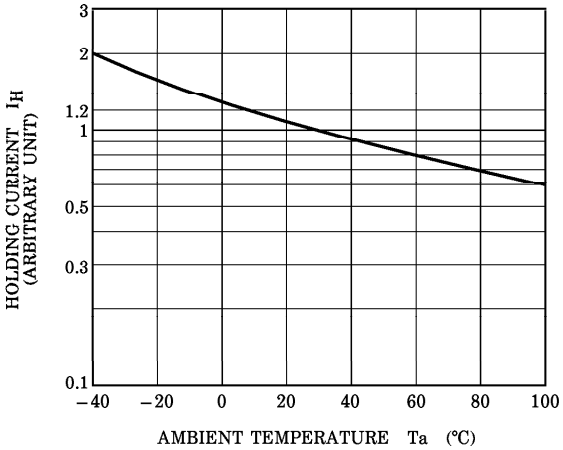
$I_{T\,(RMS)}$ – Ta



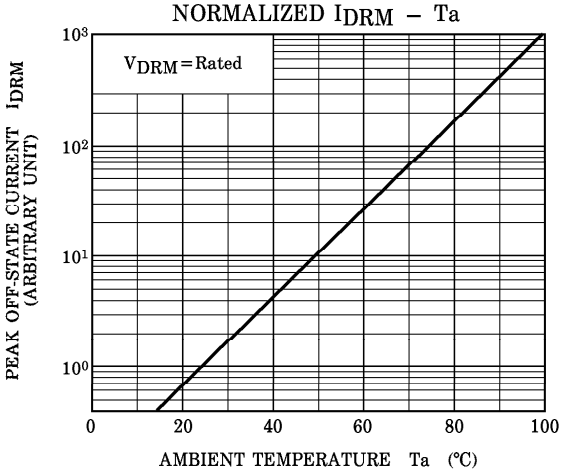
NORMALIZED I_{FT} – Ta



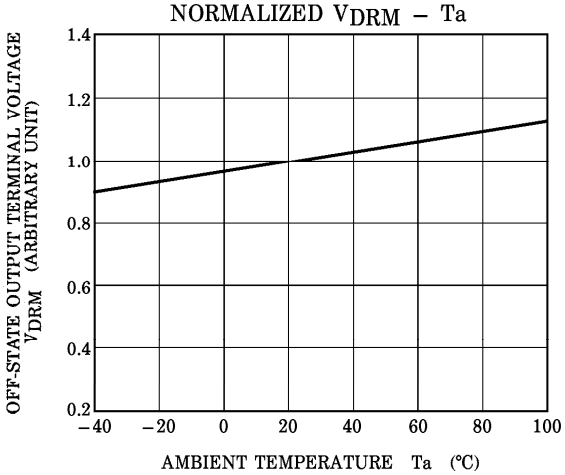
NORMALIZED I_H – Ta



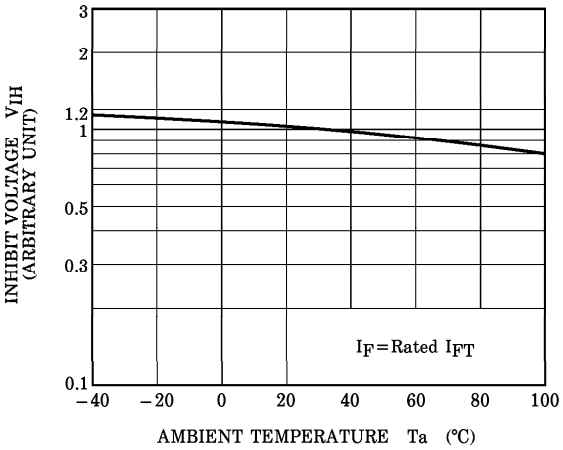
NORMALIZED I_{DRM} – Ta



NORMALIZED V_{DRM} – Ta



NORMALIZED V_{IH} – Ta



NORMALIZED I_{IH} – Ta