TOSHIBA PHOTOCOUPLER GaAs IRED & PHOTO-TRIAC

TLP3064

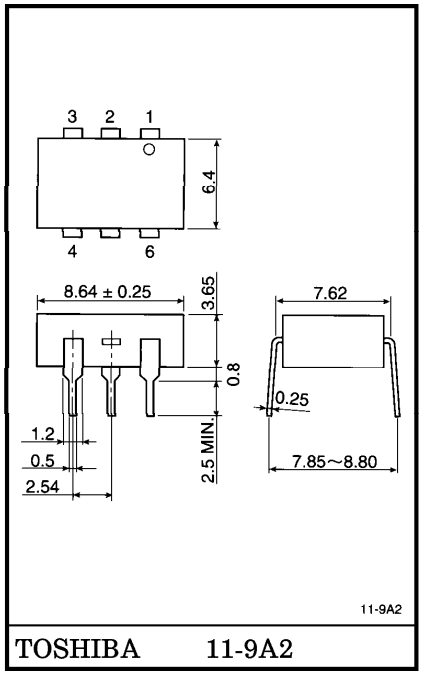
OFFICE MACHINE

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.

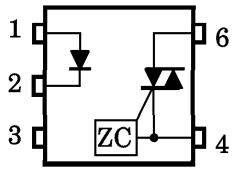
- Peak Off-State Voltage : 600V (Min.)
- Trigger LED Current : 3mA (Max.)
- On-State Current : 100mA (Max.)
- Isolation Voltage : 5000Vrms (Min.)
- UL Recognized : UL1577, File No. E67349
- Option (D4) type
  VDE Approved : DIN VDE0884 / 06.92,
  Certificate No. 83649

  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)

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

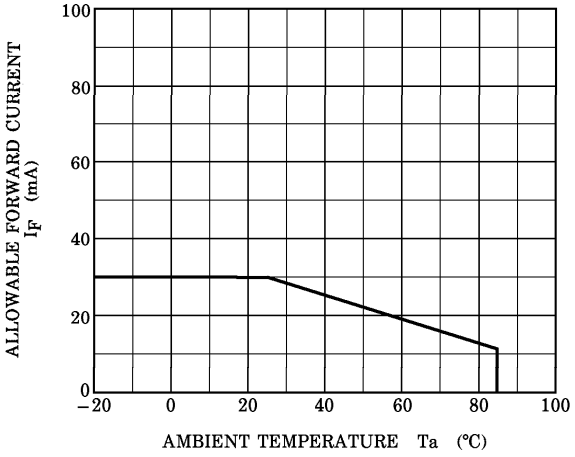
INDIVIDUAL ELECTRICAL CHARACTERISTICS (Ta = 25°C)

	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

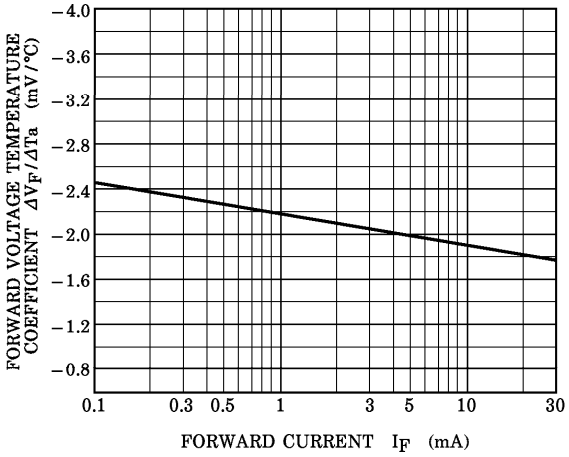
COUPLED ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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

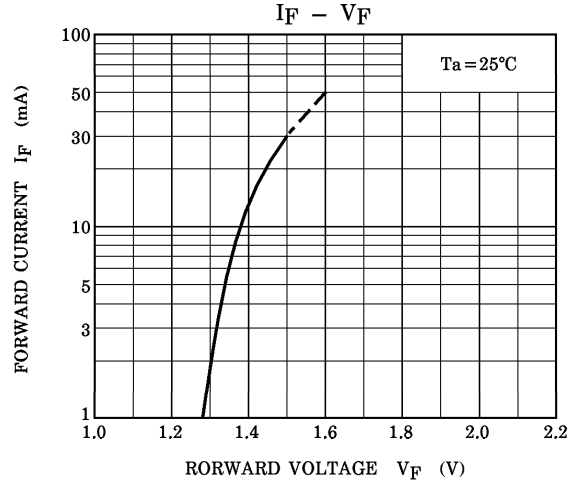
I_F – Ta



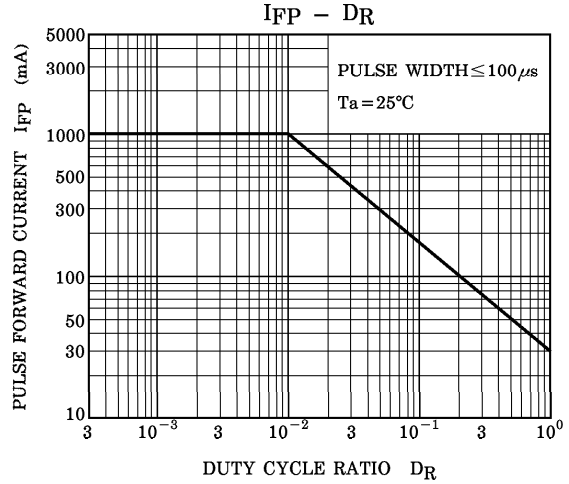
$\Delta V_F / \Delta Ta$ – I_F



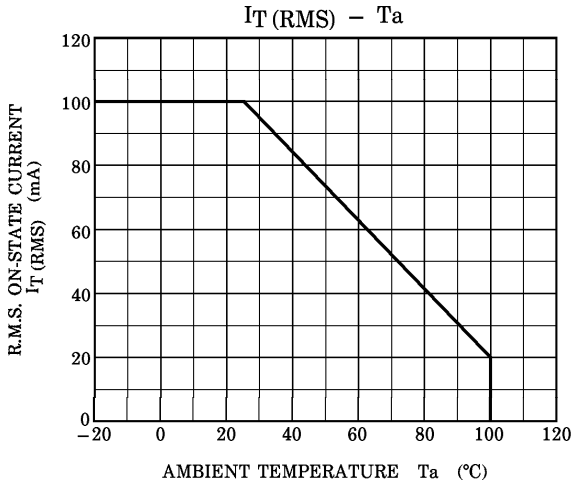
I_F – V_F



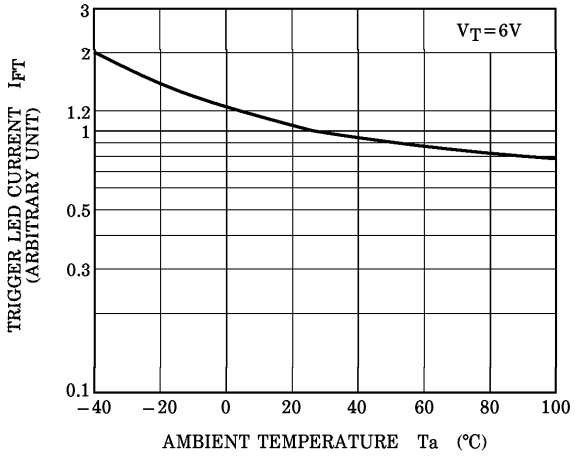
I_{FP} – D_R



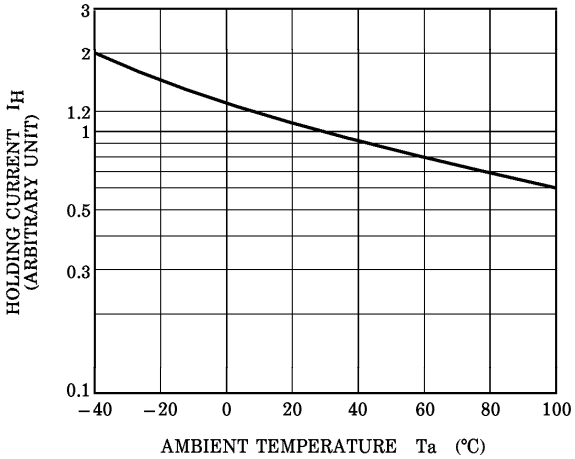
$I_{T(RMS)}$ – Ta



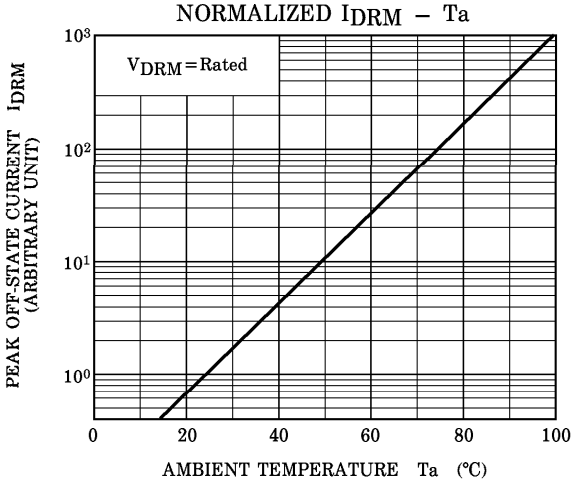
NORMALIZED I_{FT} – Ta



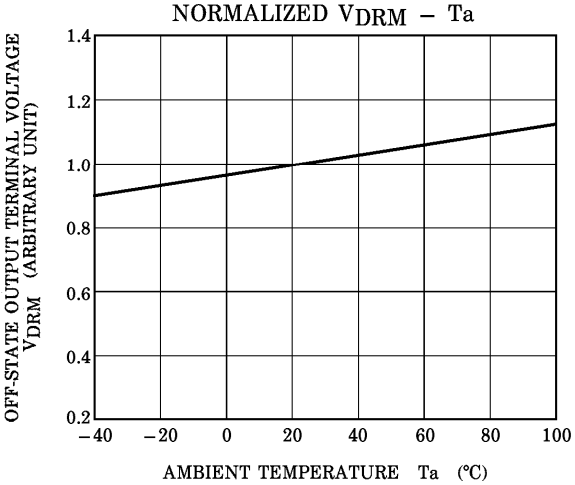
NORMALIZED I_H – Ta



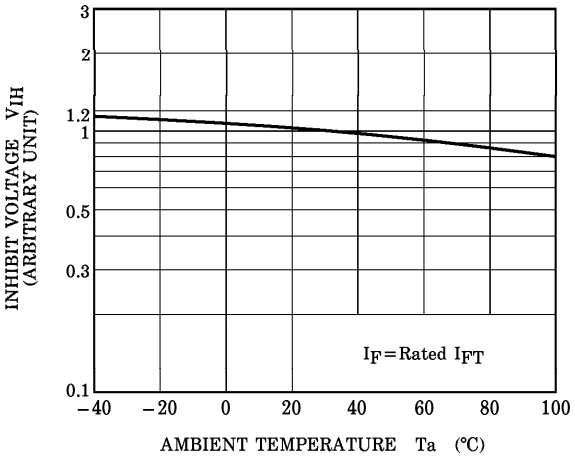
NORMALIZED I_{DRM} – Ta



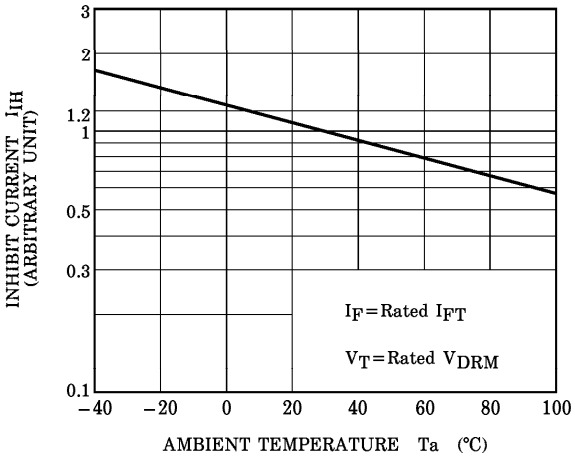
NORMALIZED V_{DRM} – Ta



NORMALIZED V_{IH} – Ta



NORMALIZED I_{IH} – Ta



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