

Photocoupler

KODENSHI

KPC3020 • KPC3021 • KPC3022 • KPC3023

These Photocouplers consist of a Gallium Arsenide Infrared Emitting Diode and a Silicon NPNPN Phototriac in a 6-pin package.

FEATURES

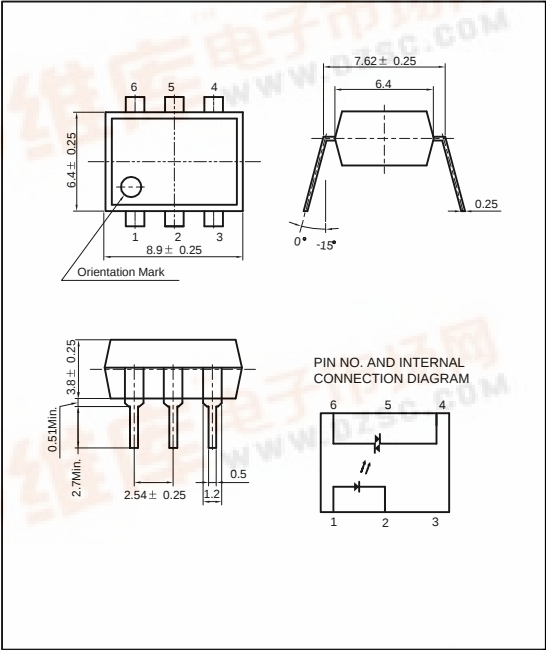
- Peak Off-state Voltage : Min.400V
- On-state Current : Max. 100mA
- Electrical Isolation Voltage : AC5000Vrms
- Trigger LED Current
- UL Recognized File No. E107486

APPLICATIONS

- Office Machine
- Household Use Equipment
- Triac Driver
- Solid State Relay

DIMENSION

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Parameter		Symbol	Rating	Unit
Input	Forward Current	IF	50	mA
	Reverse Voltage	VR	5	V
	Peak Forward Current *1	IFP	1	A
	Power Dissipation	PD	100	mW
Output	Peak Off-state Voltage	VDRM	400	V
	On-state RMS Current	IT(rms)	100	mA
			50	
	Peak Nonrepetitive Surge Current *2	Isurge	1.2	A
	Power Dissipation	PD	150	mW
Input to Output Isolation Voltage *3		Viso	AC5000	Vrms
Storage Temperature		Tstg	-55~+100	
Operating Temperature		Topt	-40~+100	
Lead Soldering Temperature *3		Tsol	260	
Total Power Dissipation		Ptot	330	mW

*1. Input current with 100μs pulse width, 1% duty cycle

*2. 100μs pulse, 120 pps

*3. Measured at RH=40~60% for 1min

*4. 1/16 inch form case for 10sec



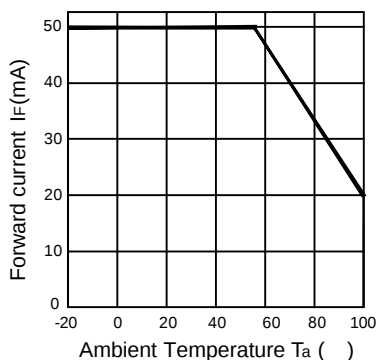
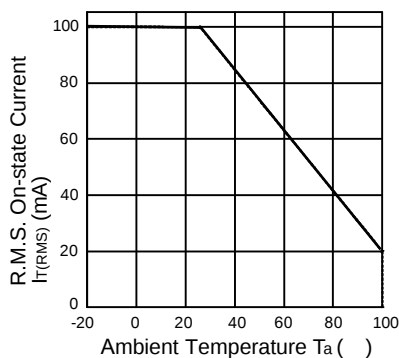
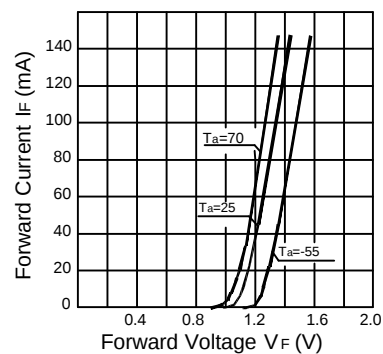
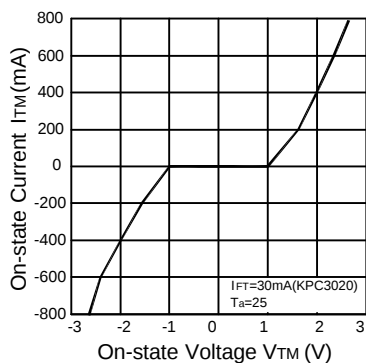
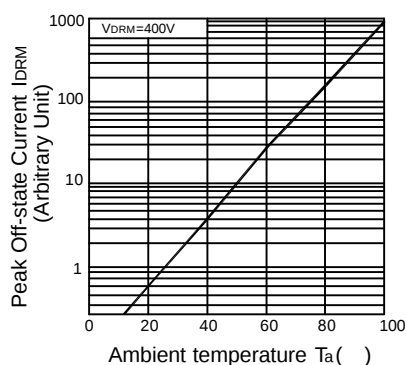
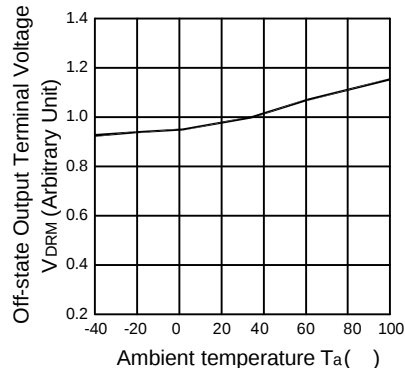
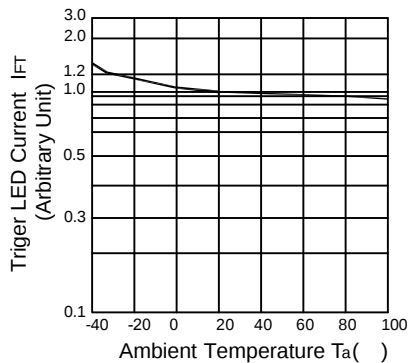
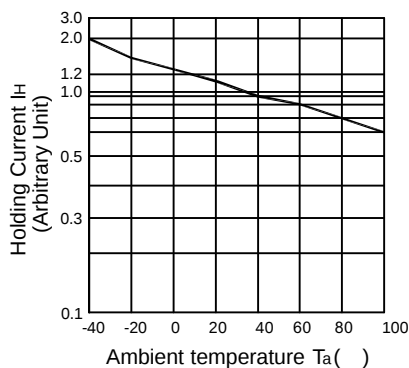
KPC3020 • KPC3021 • KPC3022 • KPC3023
ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C, unless otherwise noted)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit.
Input	Forward Voltage	V _F	I _F =10mA	-	1.15	1.30	V
	Reverse Current	I _R	V _R =5V	-	-	10	mA
	Capacitance	C _T	V=0, f=1MHz	-	30	-	pF
Output	Peak Off-state Current	I _{DRM}	V _{DRM} =400V	-	10	100	nA
	Peak On-state Voltage	V _{TM}	I _T =100mA	-	1.4	3	V
	Holding Current	I _H		-	100	-	μA
	Critical Rate Of Rise Off-state Voltage ^{*5}	dV/dt		-	100	-	V/μs
Coupled	Trigger LED Current	I _{FT}	V _T =3V		15	30	mA
				-	8	15.0	
					5	10.0	
					3	5.0	
	Input-Output Capacitance	C _{IO}	V=0, f=1MHz	-	0.6	-	pF
	Input-Output Isolation Resistance	R _{IO}	RH=40~60%, V=500V	-	10 ¹¹	-	Ω

^{*5}. Input Voltage=0, the frequency of V_{in} is increased until the Phototriac just turns on.

KPC3020 • KPC3021 • KPC3022 • KPC3023

Forward Current vs.
Ambient TemperatureR.M.S. On-state Current vs.
Ambient TemperatureForward Current vs.
Forward VoltageOn-state Current vs.
On-state VoltagePeak Off-state Current vs.
Ambient TemperaturePeak Off-state Voltage vs.
Ambient TemperatureTrigger LED Current vs.
Ambient TemperatureHolding Current vs.
Ambient TemperatureNormalized LED Current vs.
LED Current Pulse Width