

KPC2020 • KPC2021 • KPC2022 • KPC2023

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

FEATURES

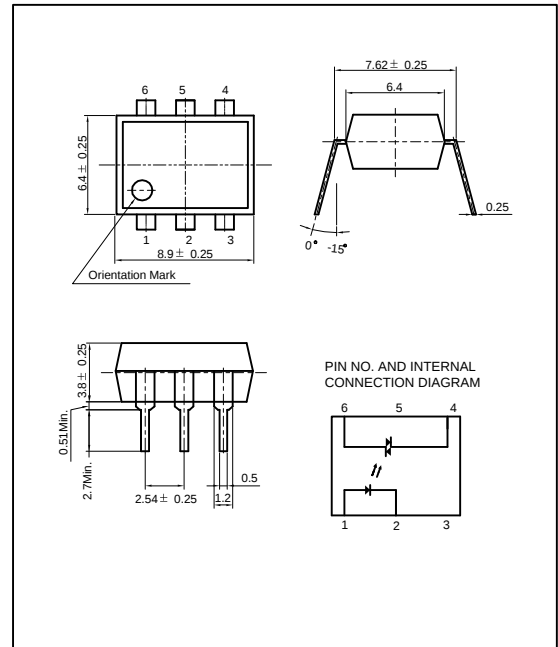
- Peak Off-state Voltage : Min.400V
- On-state Current : Max. 100mA
- Electrical Isolation Voltage : AC2500V_{rms}
- Trigger LED Current
- UL Recognized File No. E107486

APPLICATIONS

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

DIMENSION

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 °C)

Parameter		Symbol	Rating	Unit
Input	Forward Current	I _F	50	mA
	Reverse Voltage	V _R	5	V
	Peak Forward Current ^{*1}	I _{FP}	1	A
	Power Dissipation	P _D	100	mW
Output	Peak Off-state Voltage	V _{DRM}	400	V
	On-state RMS Current	I _{T(rms)}	100	mA
			50	
	Peak Nonrepetitive Surge Current ^{*2}	I _{surge}	1.2	A
	Power Dissipation	P _D	150	mW
Input to Output Isolation Voltage ^{*3}		V _{iso}	AC2500	V _{rms}
Storage Temperature		T _{stg}	-55~+100	
Operating Temperature		T _{opr}	-40~+100	
Lead Soldering Temperature ^{*3}		T _{sol}	260	
Total Power Dissipation		P _{tot}	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

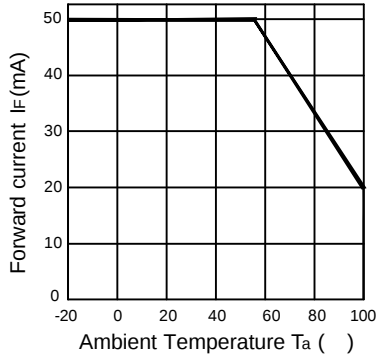
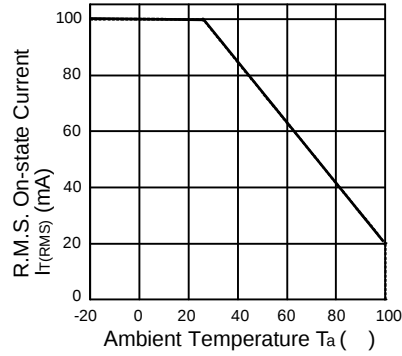
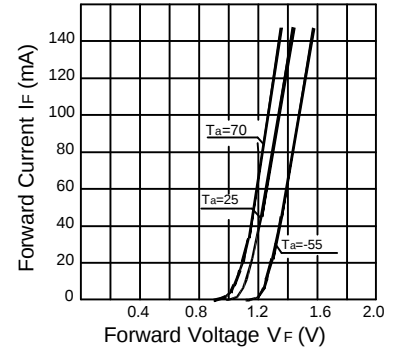
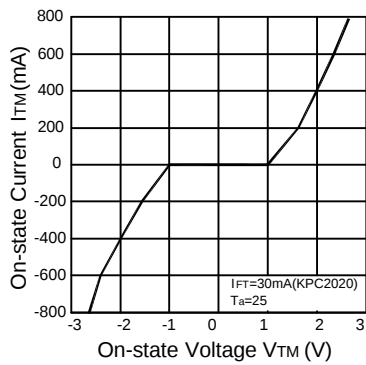
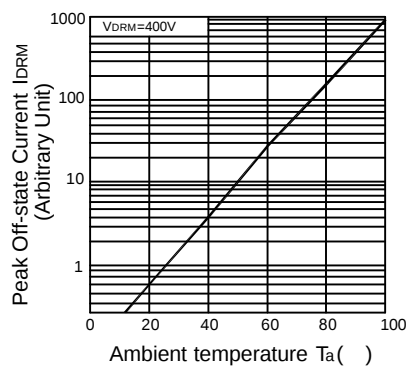
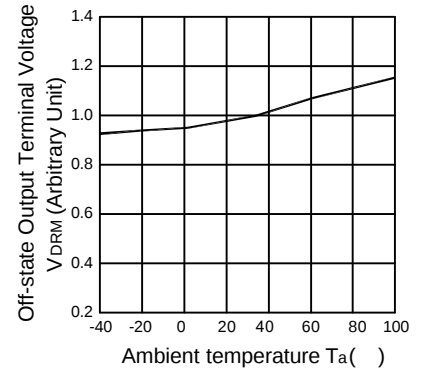
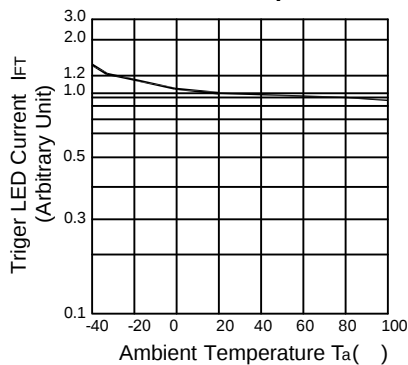
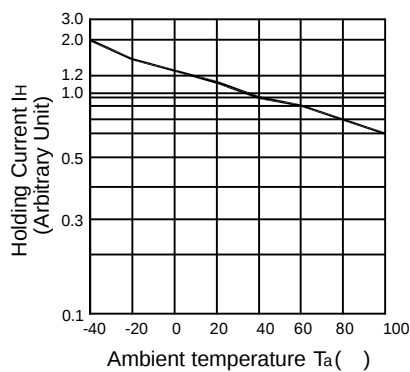
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ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 , 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 Rese Off-state Voltage ^{*5}	dV/dt	I _F =0, V _{CE} =10V	-	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	-	1	-	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.

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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