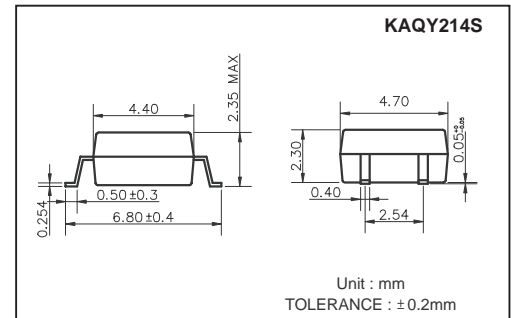


Features

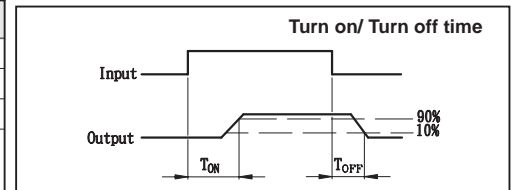
1. Normally Open, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6. dv/dt , >500V/ms
7. Isolation Test Voltage, 1500VACrms



Absolute Maximum Ratings

($T_a=25^\circ\text{C}$)

Emitter (Input)		Detector (Output)	
Reverse Voltage	5.0V	Output Breakdown Voltage	$\pm 400\text{V}$
Continuous Forward Current	50mA	Continuous Load Current	$\pm 130\text{mA}$
Peak Forward Current	1A	Power Dissipation	500mW
Power Dissipation	100mW		
Derate Linearly from 25°C	1.3mW/ $^\circ\text{C}$		
General Characteristics			
Isolation Test Voltage	1500VACrms	Storage Temperature Range	-40°C to $+125^\circ\text{C}$
Isolation Resistance		Operating Temperature Range	-30°C to $+85^\circ\text{C}$
$V_{io}=500\text{V}$, $T_a=25^\circ\text{C}$	$\geq 10^{10}\Omega$	Junction Temperature	100°C
Total Power Dissipation	550mW	Soldering Temperature,	
Derate Linearly from 25°C	2.5mW/ $^\circ\text{C}$	2mm from case, 10 sec	260°C

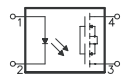
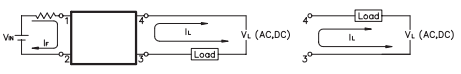


Electro-optical Characteristics

($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Emitter (Input)						
Forward Voltage	V_F	$I_F = 10\text{mA}$		1.2	1.5	V
Operation Input Current	I_{FON}	$V_L = \pm 20\text{V}$, $I_L = 100\text{mA}$, $t = 10\text{ms}$			5	mA
Recovery Input Current	I_{FOFF}	$V_L = \pm 20\text{V}$, $I_L \leq 5\mu\text{A}$	0.2			mA
Detector (Output)						
Output Breakdown Voltage	V_B	$I_B = 50\mu\text{A}$	400			V
Output Off-State Leakage	I_{TOFF}	$V_T = 100\text{V}$, $I_F = 0\text{mA}$		0.2	1	μA
I/O Capacitance	C_{ISO}	$I_F = 0$, $f = 1\text{MHz}$		6		pF
ON Resistance	R_{ON}	$I_L = 100\text{mA}$, $I_F = 10\text{mA}$		20	30	Ω
Turn-On Time	T_{ON}	$I_F = 10\text{mA}$, $V_L = \pm 20\text{V}$		0.3	1.0	ms
Turn-Off Time	T_{OFF}	$t = 10\text{ms}$, $I_L = \pm 100\text{mA}$		0.7	1.5	ms

Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY214S		1a	AC/DC	A	

Data Curve

Fig.1 Load current vs. ambient temperature
Allowable ambient temperature:
-40°C to +85°C

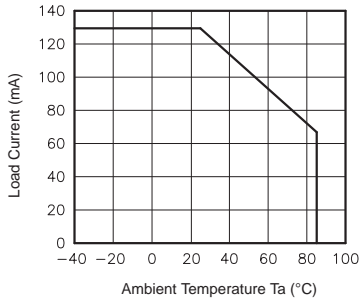


Fig.2 On resistance vs. ambient temperature
Across terminals 3 and 4 pin
LED current: 5mA
Continuous load current: 130mA(DC)

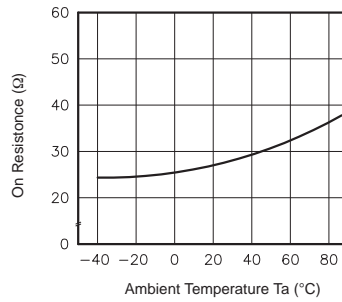


Fig.3 Turn on time vs. ambient temperature
Load voltage: 400V(DC)
LED current: 5mA
Continuous load current: 130mA(DC)

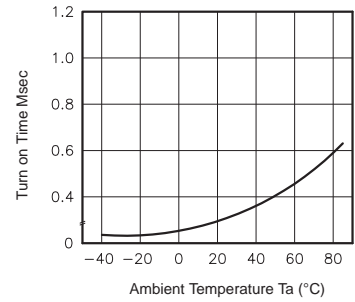


Fig.4 Turn off time vs. ambient temperature
LED current: 5mA; Load voltage:
400V(DC)
Continuous load current: 130mA(DC)

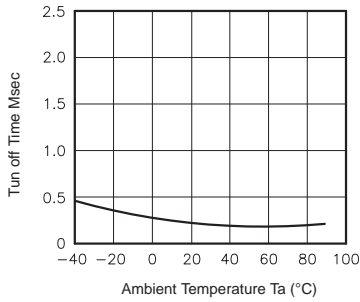


Fig.5 LED operate vs. ambient temperature
Load voltage 400V(DC)
Continuous load current: 130mA(DC)

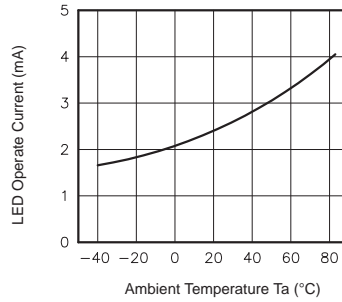


Fig.6 LED turn off current vs. ambient temperature
Load voltage 400V(DC)
Continuous load current: 130mA(DC)

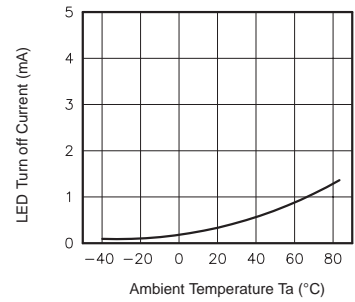


Fig.7 LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA

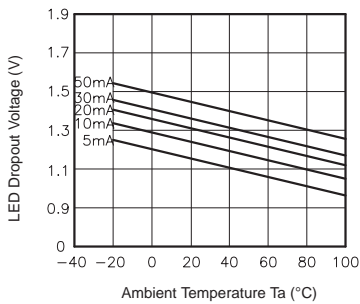


Fig.8 Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C

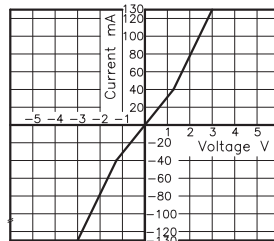


Fig.9 Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C

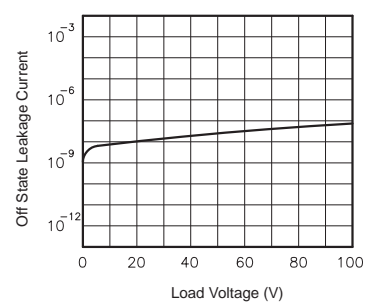


Fig.10 LED forward current vs. turn on time
Across terminals 3 and 4 pin;
Load voltage: 400V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

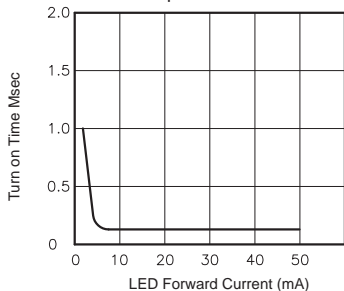


Fig.11 LED forward current vs. turn off time
Across terminals 3 and 4 pin;
Load voltage: 400V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

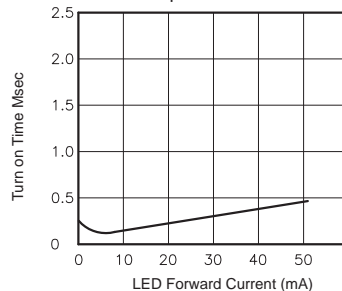
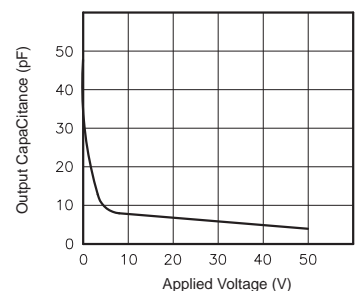


Fig.12 Applied voltage vs. output capacitance
Across terminals 3 and 4 pin
Frequency: 1MHz
Ambient temperature: 25°C



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Datasheets for electronics components.