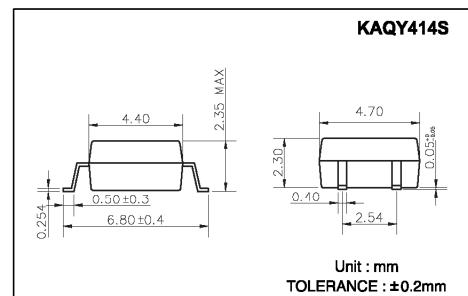


Features

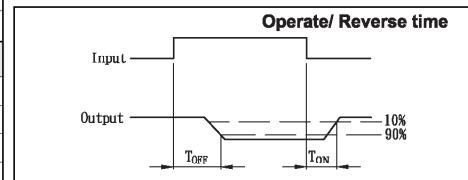
1. Normally Close, Single Pole Single Throw
2. Control 400VAC or DC Voltage
3. Switch 130mA Loads
4. LED control Current, 5mA
5. Low ON-Resistance
6. dv/dt, >500V/ms
7. Isolation Test Voltage, 1500VACrms



Absolute Maximum Ratings

(Ta=25°C)

Emitter (Input)	Detector (Output)
Reverse Voltage.....	5.0V
Continuous Forward Current.....	50mA
Peak Forward Current.....	1A
Power Dissipation.....	100mW
Derate Linearly from 25°C.....	1.3mW/°C
General Characteristics	
Isolation Test Voltage.....	1500VACrms
Isolation Resistance	Storage Temperature Range.... -40°C to +125°C
Vio=500V, Ta=25°C.....	Operating Temperature Range... -30°C to +85°C
Total Power Dissipation.....	Junction Temperature..... 100°C
Derate Linearly from 25°C.....	Soldering Temperature, 2mm from case, 10 sec..... 260°C



Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Emitter (Input)						
Forward Voltage	VF	IF =10mA		1.2	1.5	V
Operation Input Current	FOFF	VL =±20V, IL ≤5uA		5		mA
Recovery Input Current	FON	VL =±20V, IL =100mA, t =10ms	0.2			mA
Detector (Output)						
Output Breakdown Voltage	VB	IB=50uA	400			V
Output Off-State Leakage	TOFF	VT =100V, IF =0mA	0.2	2		uA
I/O Capacitance	Ciso	F =0, f =1MHz	6			pF
ON Resistance	Ron	IL =100mA, IF =10mA	40	50		Ω
Reverse (ON) Time	TON	IF =10mA, VL =±20V	0.6	1.5		ms
Operate (OFF) Time	TOFF	t =10ms, IL =±100mA	0.3	1.0		ms

Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY414S		1b	AC/DC	—	

Data Curve

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

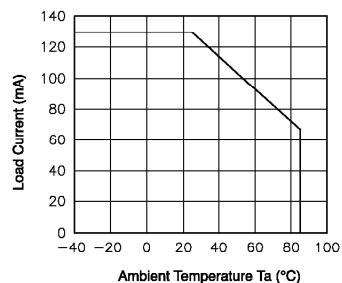


Fig.2 On resistance vs. ambient temperature
Across terminals 3 and 4 pin
LED current: 0mA
Continuous load current: 130mA(DC)

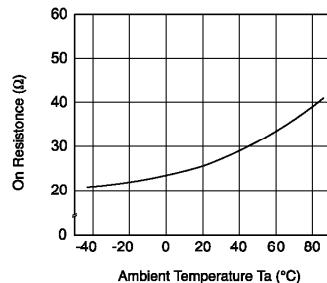


Fig.3 Operate (OFF) time vs. ambient temperature Load voltage 400V(DC)
LED current: 5mA
Continuous load current: 130mA(DC)

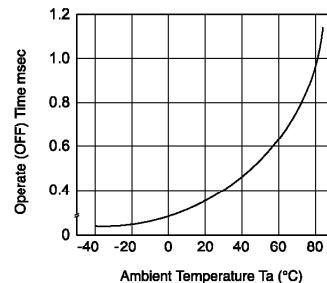


Fig.4 Reverse (ON) time vs. ambient temperature; LED current: 5mA;
Load voltage: 400V(DC)
Continuous load current: 130mA(DC)

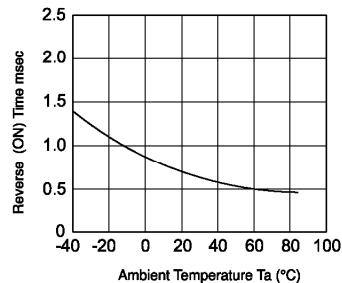


Fig.5 LED operate (OFF) vs. ambient temperature
Load voltage: 400V(DC)
Continuous load current: 130mA(DC)

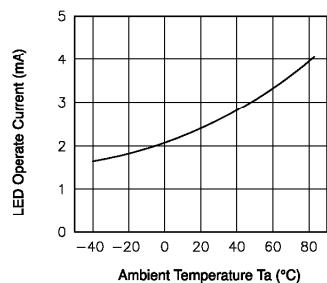


Fig.6 LED reverse (ON) current vs. ambient temperature
Load voltage 400V(DC)
Continuous load current: 130mA(DC)

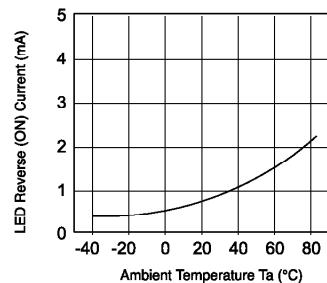


Fig.7 LED dropout voltage vs. ambient temperature
LED current: 5 to 50mA

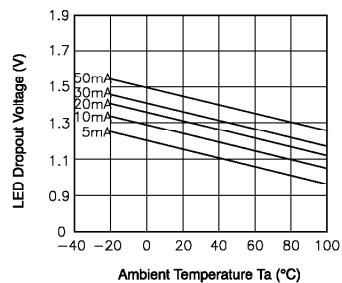


Fig.8 Voltage vs. current characteristics of output at MOS FET portion
Measured portion: across terminals 3 and 4 pin
Ambient temperature: 25°C

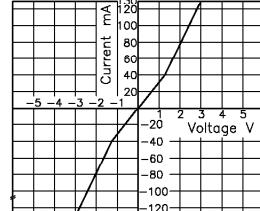


Fig.9 Off state leakage current
Across terminals 3 and 4 pin
Ambient temperature: 25°C

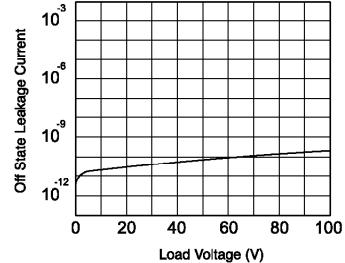


Fig.10 LED forward current vs. operate (OFF) time
Across terminals 3 and 4 pin;
Load voltage: 400V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

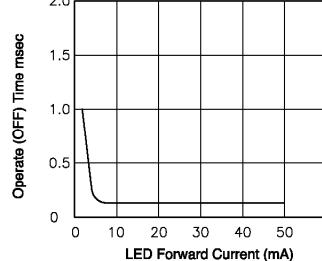


Fig.11 LED forward current vs. reverse (ON) time
Across terminals 3 and 4 pin;
Load voltage: 400V (DC);
Continuous load current: 130mA (DC);
Ambient temperature: 25°C

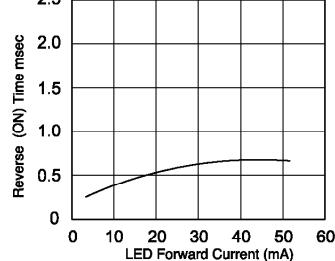


Fig.12 Applied voltage vs. output capacitance
Across terminals 3 and 4 pin
Frequency: 1MHz
Ambient temperature: 25°C

