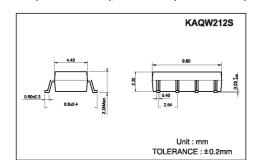
UL 1577/ UL 508 (File No.E108430), FI EN60950 (File No.FI13698)

### **Features**

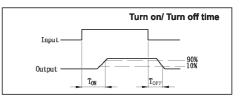
- 1. Normally Open, Single Pole Single Throw
- 2. Control 60V AC or DC Voltage
- 3. Switch 400mA Loads
- 4. LED control Current, 5mA
- 5. Low ON-Resistance
- 6. dv/dt, >500V/ms
- 7. Isolation Test Voltage, 1500VACrms



## **Absolute Maximum Ratings**

(Ta=25°C)

Emitter ( Input )	Detector ( Output )					
Reverse Voltage5.0V	Output Breakdown Voltage±60V					
Continuous Forward Current50mA	Continuous Load Current±400mA					
Peak Forward Current1A	Power Dissipation500mW					
Power Dissipation100mW						
Derate Linearly from 25°C1.3mW/°C						
General Characteristics						
Isolation Test Voltage1500VACrms	Storage Temperature Range40°C to +150°C					
Isolation Resistance	Operating Temperature Range30°C to +85°C					
Vio=500V, Ta=25°C≥10 <sup>10</sup> Ω	Junction Temperature100°C					
Total Power Dissipation550mW	Soldering Temperature,					
Derate Linearly from 25°C2.5mW/°C	2mm from case, 10 sec260°C					



### **Electro-optical Characteristics**

(Ta=25°C)

•						(1a=25 C
Parameter	Symbol	Conditions	Min.	Тур.	Max.	Unit
Emitter (Input)						
Forward Voltage	VF	IF=10mA		1.2	1.5	V
Operation Input Current	IFON	VL =±20V, IL =100mA, t =10mS			5	mA
Recovery Input Current	IFOFF	VL =±20V, IL≤5uA	0.2			mA
Detector (Output)						
Output Breakdown Voltage	VB	Iв=50uA	60			٧
Output Off-State Leakage	ITOFF	VT =60V , IF =0mA		0.2	1	uA
I/O Capacitance	Ciso	IF =0, f =1MHz		6		pF
ON Resistance	Ron	IL =100mA, IF =10mA		0.83	2.50	Ω
Turn-ON Time	Ton	IF =10mA, VL =±20V		0.2	1.5	ms
Turn-Off Time	Toff	t =10ms, IL =±100mA 0.3 1.5		1.5	ms	

## **Schematic and Wiring Diagrams**

Туре	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQW212S	2 7 7 8 8 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2a	AC/DC	-	(1)Two independent 1 Form A use  Vw

#### **Data Curve**

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

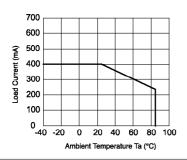


Fig.2 On resistance vs. ambient temperature Across terminals 5,7 and 6,8 pin LED current: 5mA Continuous load current: 400mA(DC)

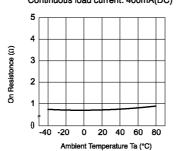


Fig.3 Turn on time vs. ambient temperature Load voltage: 60V(DC) LED current: 5mA
Continuous load current: 400mA(DC)

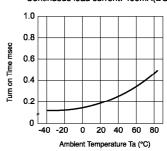
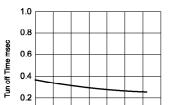


Fig.4 Turn off time vs. ambient temperature LED current: 5mA; Load voltage: 60V(DC) Continuous load current: 400mA(DC)



20 40 60

Ambient Temperature Ta (°C)

80 100

Fig.5 LED operate vs. ambient temperature Load voltage: 60V(DC)
Continuous load current: 400mA(DC)

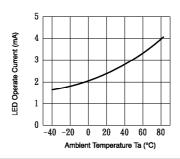


Fig.6 LED turn off current vs. ambient temperature Load voltage: 60V(DC)

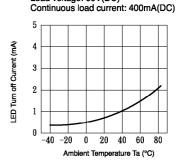


Fig.7 LED dropout voltage vs. ambient temperature LED current: 5 to 50mA

0

0 – -40

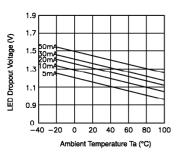


Fig.8 Voltage vs. current characteristics of output at MOS FET portion Measured portion: across terminals 5,7 and 6,8 pin Ambient temperature: 25°C

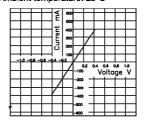


Fig.9 Off state leakage current Across terminals 5,7 and 6,8 pin Ambient temperature: 25°C

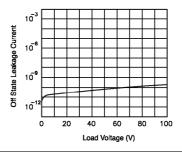


Fig.10 LED forward current vs. turn on time Across terminals 5,7 and 6,8 pin; Load voltage: 60V (DC); Continuous load current: 400mA (DC); Ambient temperature: 25°C

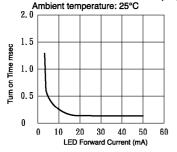


Fig.11 LED forward current vs. turn off time Across terminals 5,7 and 6,8 pin; Load voltage: 60V (DC); Continuous load current: 400mA (DC); Ambient temperature: 25°C

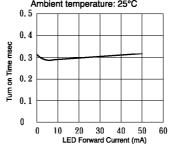
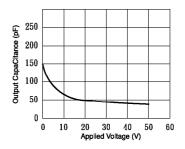


Fig.12 Applied voltage vs. output capacitance Across terminals 5,7 and 6,8 pin Frequency: 1MHz Ambient temperature: 25°C



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