

# cosmo High Voltage, Solid State Relay-MOSFET Output **KAQY212/212A**

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

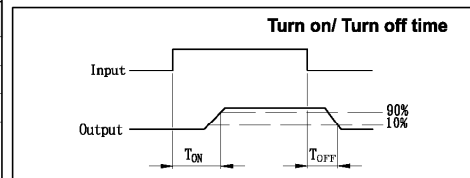
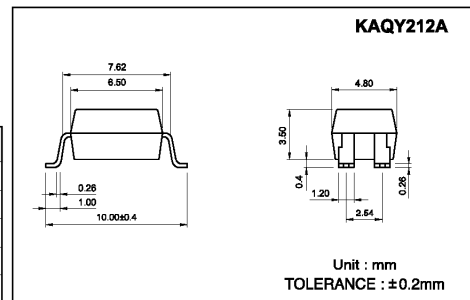
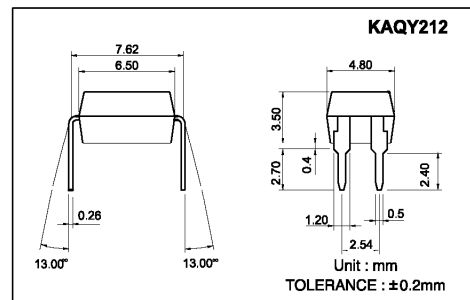
## Features

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, 3750VACrms

## Absolute Maximum Ratings

(Ta=25°C)

Emitter ( Input )	Detector ( Output )
Reverse Voltage..... 5.0V	Output Breakdown Voltage..... ±60V
Continuous Forward Current..... 50mA	Continuous Load Current..... ±400mA
Peak Forward Current..... 1A	Power Dissipation..... 500mW
Power Dissipation..... 100mW	
Derate Linearly from 25°C..... 1.3mW/°C	
<b>General Characteristics</b>	
Isolation Test Voltage..... 3750VACrms	Storage Temperature Range... -40°C to +150°C
Isolation Resistance	Operating Temperature Range... -40°C to +85°C
Vio=500V, Ta=25°C..... ≥10 <sup>10</sup> Ω	Junction Temperature..... 100°C
Total Power Dissipation..... 550mW	Soldering Temperature,
Derate Linearly from 25°C..... 2.5mW/°C	2mm from case, 10 sec..... 260°C



## Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
<b>Emitter (Input)</b>						
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA		1.2	1.5	V
Operation Input Current	I <sub>FON</sub>	V <sub>L</sub> = ±20V, I <sub>L</sub> = 100mA, t = 10mS			5	mA
Recovery Input Current	I <sub>FOFF</sub>	V <sub>L</sub> = ±20V, I <sub>L</sub> ≤ 5uA	0.2			mA
<b>Detector (Output)</b>						
Output Breakdown Voltage	V <sub>B</sub>	I <sub>B</sub> = 50uA	60			V
Output Off-State Leakage	I <sub>TOFF</sub>	V <sub>T</sub> = 60V, I <sub>F</sub> = 0mA		0.2	1	uA
I/O Capacitance	C <sub>ISO</sub>	I <sub>F</sub> = 0, f = 1MHz		6		pF
ON Resistance	R <sub>ON</sub>	I <sub>L</sub> = 100mA, I <sub>F</sub> = 10mA		0.83	2.5	Ω
Turn-On Time	T <sub>ON</sub>	I <sub>F</sub> = 10mA, V <sub>L</sub> = ±20V		0.2	1.5	ms
Turn-Off Time	T <sub>OFF</sub>	t = 10ms, I <sub>L</sub> = ±100mA		0.3	1.5	ms

## Mos Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring Diagrams
KAQY212 & KAQY212A		1a	AC/DC	—	

## Data Curve

